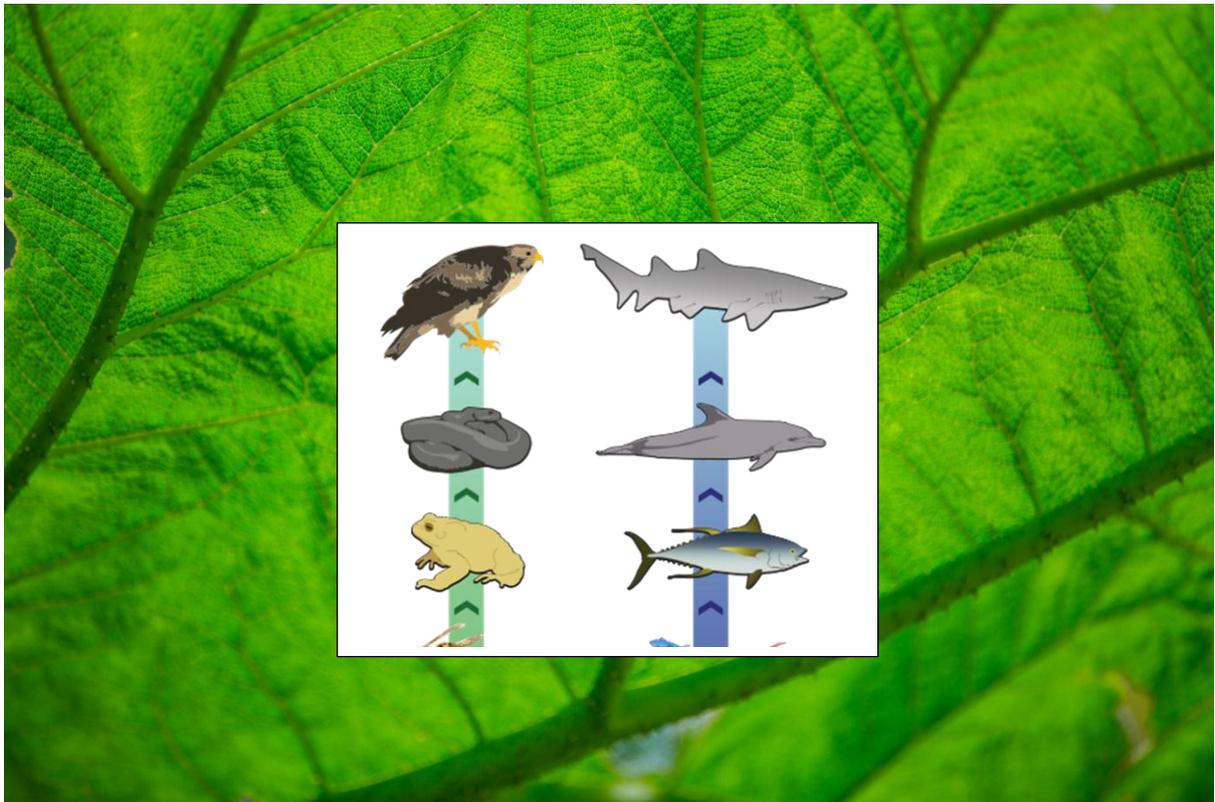


ENGLISH FOR LIFE SCIENCES



**TAMIL NADU STATE COUNCIL FOR HIGHER EDUCATION
(TANSCHE)**

PREFACE

This textbook on Professional English envisioned under the leadership of the Honorable Chief Minister of Tamilnadu, Thiru. Edappadi K.Palaniswami by the Honorable Minister for Higher Education Thiru. K.P. Anbalagan, and Principal Secretary to Government, Department of Higher Education, Selvi. Apoorva, I.A.S., is a pioneering venture and strategic intervention in higher education in Tamil Nadu. It has been prepared with the unstinted support of Thiru. K.Vivekanandan, I.A.S. Member Secretary, TANSCHÉ (Tamil Nadu State Council for Higher Education)

Tamil Nadu has the distinction of having the highest GER (Gross Enrolment Ratio) of 49%, in higher education in the country: this figure attests to the efforts of the government to empower the youth of the state by enhancing access to higher education.

After duly examining the challenges faced by students in learning their subjects and with a vision to equip them to compete in a global scenario, four textbooks, *English for Physical Science*, *English for Life Sciences*, *English for Arts and Social Sciences* and *English for Commerce and Management* have been prepared.

As language is an essential tool with regard to the learning process, a textbook which uses subject/discipline based content to leverage language learning is an ideal approach and fulfills the dual objective language proficiency and professional competence.

This book is bound to fulfill its destiny as teachers and students work in tandem: teachers as facilitators and learners as highly motivated stakeholders.

PROFESSIONAL ENGLISH FOR LIFE SCIENCES

OBJECTIVES:

- To develop the language skills of students by offering adequate practice in professional contexts.
- To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year physical sciences students
- To focus on developing students' knowledge of domain specific registers and the required language skills.
- To develop strategic competence that will help in efficient communication
- To sharpen students' critical thinking skills and make students culturally aware of the target situation.

LEARNING OUTCOMES:

- Recognise their own ability to improve their own competence in using the language
- Use language for speaking with confidence in an intelligible and acceptable manner
- Understand the importance of reading for life
- Read independently unfamiliar texts with comprehension
- Understand the importance of writing in academic life
- Write simple sentences without committing error of spelling or grammar

(Outcomes based on guidelines in UGC LOCF – Generic Elective)

NB: All four skills are taught based on texts/passages.

UNIT 1: COMMUNICATION

Listening: Listening to audio text and answering questions

- Listening to Instructions

Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion

Writing: Developing a story with pictures.

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION

Listening: Listening to process description.-Drawing a flow chart.

Speaking: Role play (formal context)

Reading: Skimming/Scanning-

Reading passages on products, equipment and gadgets.

Writing: Process Description –Compare and Contrast
Paragraph-Sentence Definition and Extended definition-
Free Writing.

Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

Listening: Listening to interviews of specialists / Inventors in fields
(Subject specific)

Speaking: Brainstorming. (Mind mapping).
Small group discussions (Subject- Specific)

Reading: Longer Reading text.

Writing: Essay Writing (250 words)

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

Listening: Listening to lectures.

Speaking: Short talks.

Reading: Reading Comprehension passages

Writing: Writing Recommendations
Interpreting Visuals inputs

Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS

Listening: Listening comprehension- Listening for information.

Speaking: Making presentations (with PPT- practice).

Reading : Comprehension passages –Note making.
Comprehension: Motivational article on Professional Competence,
Professional Ethics and Life Skills)

Writing: Problem and Solution essay– Creative writing –Summary writing

Vocabulary: Register specific - Incorporated into the LSRW tasks

Group: 2 - LIFE SCIENCES

UNIT - 1 COMMUNICATION

Listening

- Listening to audio/ video text and answering questions
- Listening to instructions

Speaking

- Pair work and small group work

Reading

- Comprehension passages- Differentiate between facts and opinions

Writing

- Developing a story with pictures

Vocabulary

- Register specific (Incorporated into the LSRW tasks)

UNIT 1

Communication

Language and communication are not the same. But they are part of any speech community. People who share a language for communication is considered a speech community. You use English for academic purposes in your university for learning. You along with your college mates and your teachers make the academic community. The way you express your views to your teacher is different from how you speak with your family members at home. This differentiated use of language is called 'register' in any language. In language parlance it is called socio-linguistics i.e. the use of language in the social context. Your language use with friends and relatives for casual communication is called Basic Interpersonal Communication. But your use of language for academic purposes is termed as Academic Communication.

1. LISTENING

Aim:

1. To understand the concept and the use of the words in context as discussed in the passage.
2. To develop the skill of listening for information to facilitate effective learning.



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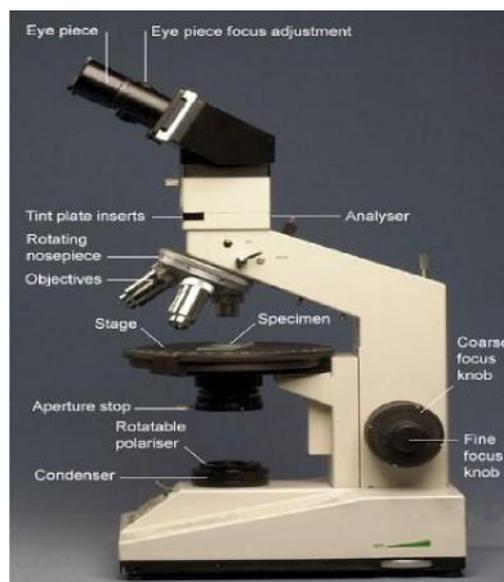
Pre-Listening•

1. What is an instruction?
2. Why are instructions to be listened to?
3. What is the purpose of following instructions?
 - An instruction is an order or detailed information about how something should be done.
 - Listening carefully to the instructions is a vital part of any communication.
 - A strict adherence to the instructions will help the listener produce the desired result.

Listening•

Your teacher will read the following instructions that are necessary to use a microscope.

Listen to the instructions carefully and notice their sentence structure.



Source: <https://docplayer.it/docs-images/101/150716167/images/9-0.jpg>

Instructions to Use a Microscope

1. *Turn* the Rotating Nosepiece to set the lowest power Objective Lens into position.
2. *Place* the microscopic Slide on the Stage of the microscope.
3. *Fasten* the Slide with the Stage Clips on the Stage.
4. *Turn* the Focus Knob to move the Stage upward.
5. *Look* through the Eyepiece and move the Focus Knob for the image to come into focus.
6. *Adjust* the Condenser.
7. *Move* the Slide until the sample is clearly viewed.
8. *Use* the Focus Knob to focus the sample.
9. *Readjust* the Condenser for the clearest image.
10. *Do not touch* the lenses with your fingers.

Discussion:

Notice the words given in *Italics* in the above instructions (*Turn, Place, ...*). These are the root forms of Verbs (action words).

The root forms of the verbs are used for framing instructions.

The sentences that begin with the base verbs are called Imperative Sentences.

The imperative sentences are direct and are used to give instructions.

'You' is the implied subject of Imperative Sentences.

The root form of the Verb (V) is followed by the Object (O) pattern while framing an instruction.

Example: Take the book.

V O

Do not / Don't is used before the root verb for framing a negative instruction.

Example: **Do not touch the electric wire.**

Sequential order should be followed while giving instructions.

Instructions should be specific and clear.

It is impolite to use instructions to the people in authority.

To make an instruction polite, the word 'please' can be used.

Example: Please pass the book. / Sit down, please.

Imperatives

Imperative is a type of sentence. It has its common usage in our everyday life. If something is defined as imperative, on a general note, it is to be understood as something important and requiring immediate action.

To brief its usage, Imperative sentences come as

- Instruction (Use gloves in the lab.)
- Request (Plant trees.)
- Advice (Read research articles on abiogenesis.)
- Command (Sell sugar-free products.)
- Invitation (Please join for the trip.)

By its usage, it can be called as directives because it tells people what to do. These sentences usually end with a period/ full stop (.); occasionally it ends with an exclamation mark (!)

Structure

Imperative sentences begin with a verb

Subject is not implied remains hidden second person

Practice Sentences

1. Be careful.
2. Do not cross the street on the red light.
3. Speak slowly, please.
4. Don't drink this water.
5. Drive carefully.
6. Don't forget to feed the hamster.

7. Buy two syringes in the pharmacy.
8. Water the flowers.
9. Do not dissect with naked hands.
10. *Dilute the concentrated acid slowly.*

Post-Listening:

TASK 1:

Discuss in pairs and complete the following instructions that are to be followed while working in the laboratories by choosing the appropriate root forms of Verbs given within brackets.



Source:

https://lh3.googleusercontent.com/MtkNE6niP_hwRImAuznpYa7IFHR5Y7pVmwzdiLgfT9iiCvEXS35ud2SNfaP3MZslb_gr5A-s128

(Rinse, Wear, Arrange, Dispose, Handle, Do not,
Clean, Dilute)

1. lab coat before entering the lab.
2. eat in the lab.
3. the concentrated acids in the presence of your professor.
4. glassware with care.
5. apparatus before and after the experiment.
6. the spills immediately.

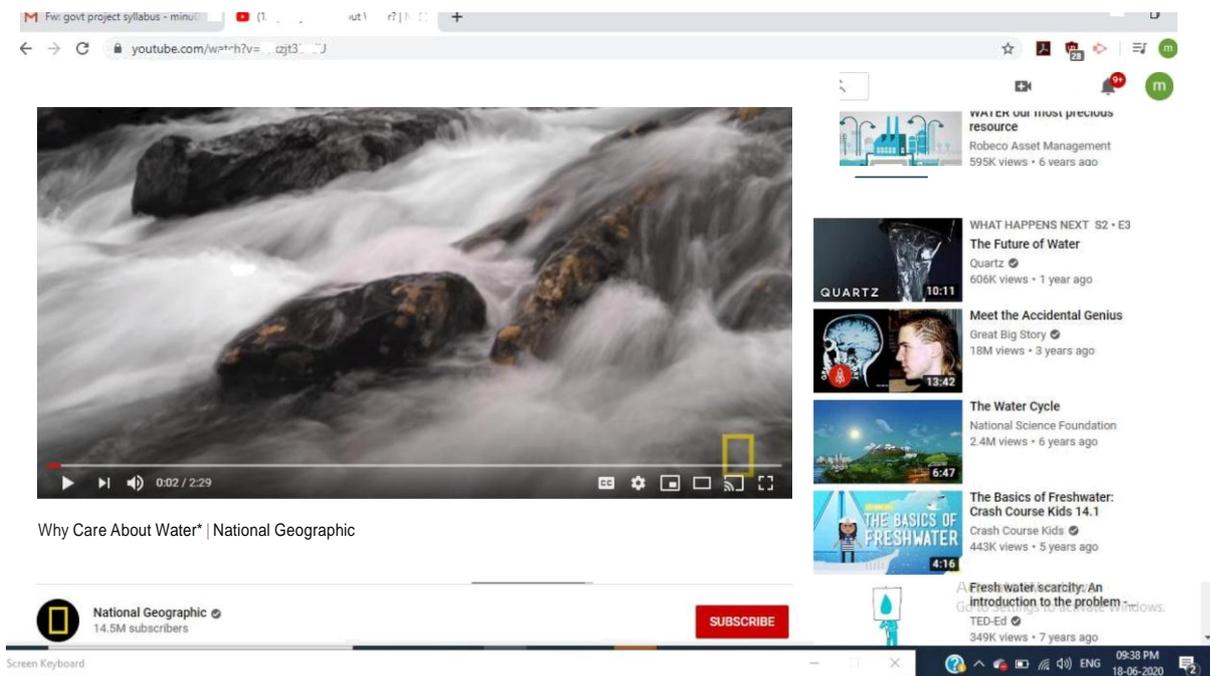
7. waste in the dustbin.

8. apparatus in order after the experiment is over.

TASK 2: Listen to the video documentary that highlights the importance of water for the lives on the earth. Write FIVE instructions to conserve water.

Why Care about Water? - National Geographic Channel

<https://www.youtube.com/watch?v=Fvkzit3b-dU>



Transcription of the video:

Why Care about Water?

Water is the basis of life and only a tiny share of all the water on Earth is fresh and renewed by the water cycle. If you took all the water in the world and put it into a gallon jug, less than one teaspoon of it would be available to us. We are overusing it. We are over tapping rivers and we are over pumping groundwater. We live at a time in history where over a billion people don't have access to safe drinking water and over three billion people have no access to sanitation.

Water is a global issue but it's also a very local issue. We forget that we live on hydrosphere and that all of our water resources are connected. Water that runs in the Ganges could also end up in the Hudson or could fall over the plains of Africa or could make a cup of tea in the Queen's palace. To support the average American lifestyle today it takes about twice the global average.

The great American lawn is a great example of one of the myriad ways that we take water for granted. We can't continue to flaunt our water.

Agriculture is something that we really need to give thought to. 70% of all the water we extract from rivers, lakes and aquifers goes to irrigated agriculture.

To some extent we are using some of tomorrow's water to meet today's food demands. Large number people I talked to are shocked when they learn that

the Colorado, the mighty force of nature no longer reaches the sea. There is a

look of shock in most people's faces. At the Delta, it literally runs dry. We are using and abusing our water resources in ways that are completely

unsustainable and unless we think about it that way and start taking action at an individual level then I don't really see how we'll be able to overcome so

many of the issues that we are going to face with in the next 50 years and this is our time in history to do something about it.

Five Instructions to Conserve Water:

1.

2.....

3.....

4.....

TASK 3: Listen to the given Video documentary and match the following words with their meaning:

- | | | |
|----------------|---|---|
| 1. Hydrosphere | - | A unit of liquid |
| 2. Gallon | — | All the waters on the earth's surface |
| 3. Sanitation | - | A body of permeable rock which can contain and transmit groundwater |
| 4. Aquifers | | A source of supply, support, or aid |
| 5. Resource | | The process of keeping places clean and healthy |

2. SPEAKING

The most effective way to communicate is through speech. Speaking is a skill and an important mode of communication. It takes place in the form of conversation. Through speech we can express our feelings, ideas and points of view to others. It's important to be effective at both speaking and listening by depending on the situation you are in or the person you are talking to. There are two ways of conversation. (i) formal (ii) informal. formal conversation is speaking with an unknown person or an official. informal conversation is a talking between friends, relatives, elders or persons whom we know.

1. Here is a model dialogue between a patient and nutritionist and infer how formal conversation is used:

Nutritionist: Qtr. Bose could you follow this diet for the next two months?

Patient : Yes ma'am, I think I can follow because I'm determined to do so.

Nutritionist: You need to take food rich in protein and vitamins.

Patient Ok ma'am. Can I consume dairy products?

Nutritionist No Mr. Bose you must avoid milk and milk products.

Patient What can I take instead of milk?

Nutritionist You ought to take veggies, greens and pulses.

Patient : Sure ma'am. / will include them in my diet.

Nutritionist : You could include some small amount of red meat too.

Patient : Ok. Can I take fish?

Nutritionist : Yes you can include.

Patient : Niay I know what else can be taken?

Nutritionist : Here is a diet plan for a week. You would be able to feel the difference in a month.

Patient : Thank you ma'am. /t might work for me this time I hope.

Task 1: Pair work-Develop a conversation between a professor and student regarding a new robotic machine that waters plants and discuss how it works.

Modals

One can understand our mood in the way we express our feelings both in writing and in speaking. Certain words while used make the listener or reader understand moods and emotions. We do this by using modal auxiliaries.

The modal verbs of English are auxiliary verbs used mostly to express modality such as possibility, obligation, etc. They can be distinguished from other verbs by their defectiveness and by their neutralization. They are also called as *Modal Auxiliaries*

By Learning Modals we can:

- Define and identify modal auxiliaries.
- Learn how and when to use modal auxiliaries.

Modal verbs are:

*can, could,
may, might, must,
shall, should,
will and would.
used to
need to
dare to*

Here is an easy table that makes to understand Modals in a better way:

Modal Auxiliary	Use	Modal Auxiliary + Main Verb
	Expresses an ability or possibility	I can lift this forty-pound box. (ability) We can embrace green sources of energy. (possibility)
	Expresses an ability in the past; a present possibility; a past or future permission	I could beat you at chess when we were kids. (past ability) We could bake a pie! (present possibility) Could we pick some flowers from the garden? (future permission)
	Expresses uncertain future action; permission; ask a yes-no question	I may attend the concert. (uncertain future action) You may begin the exam. (permission) May I attend the concert? (yes-no questions)
	Expresses uncertain future action	I might attend the concert (uncertain future action—same as <i>may</i>)
	Expresses intended future action	I shall go to the opera. (intended future action)
	Expresses obligation; ask if an obligation exists	I should mail my RSVP. (obligation, same as <i>ought to</i>) Should I call my mother? (asking if an obligation exists)
	Expresses intended future action; ask a favor; ask for information	I will get an A in this class. (intended future action) Will you buy me some chocolate? (favor) Will you be finished soon? (information)
	States a preference; request a choice politely; explain an action; introduce habitual past actions	I would like the steak, please. (preference) Would you like to have breakfast in bed? (request a choice politely) I would go with you if I didn't have to babysit tonight. (explain an action) He would write to me every week when we were dating. (habitual past action)
	Expresses obligation	We must be on time for class.

ought to	Expresses obligation	I ought to mail my RSVP. (obligation, same as may)
need to	Expresses obligation	I need to finish this on time. (obligation, same as ought to)
dare to	Expresses boldness, challenge etc	I dare to take this risk (boldness, challenge)

Task 2: Fill in the blanks with suitable modal verbs.

- _____ I get in the car?
- 5 It _____ rain tonight.
- _____ I be allowed to join the company?
- You _____ study for the exam.
- 4 I _____ not speak another word.

(Hints: dare, must, will, might, can)

Task 3: Change the modals underlined by choosing a more suitable one from the list.

- I think it should rain tomorrow morning
- Will I borrow a compass from you?
- Shall you be able to visit me tomorrow?
- You will go now.
- I could finish it by evening.

(Hints: will, might, may, can, could)

2. Here is a model dialogue for informal conversation between friends who meet after a long time:

3itesh: Hi, Aparna. How are you? It has been long since we met.

Aparna: Hi, Jitesh. I am good. How are you? Very happy to meet you.

3itesh: I am sure you have completed your Graduation. What are you doing now?

Aparna: I did UG in Bio Chemistry in Chennai. I am working in a Diagnostic Centre in Adyar.

3itesh: That's good.

Aparna: What about you? I remember you joining Engineering at ABC college.

3itesh: Yes, I completed Electronics and Communication Engineering. I got selected in Campus Interview and waiting to join in CTS, Chennai.

Aparna: Congratulations! I am on my way to Adyar to report for duty at 8'o clock.

3itesh: Ok. We will keep in touch. Bye for now.

Aparna: Sure. Convey my regards to your parents.

3itesh: Sure. Good luck. Bye.

Task 4: Small group work-Start an informal conversation among your friends in small groups regarding making plans for a get-together.

3. READING

LSRW is an order of activity with regard to any language skills. Here 'R' refers to READING. It is considered as a good source of self-education. One of the important elements of reading is the interaction between language and thought. Sir Francis Bacon, Father of English Essays, once said

/teac/ not l:a contradict: and con 'Ute¿ nor to he/7ev'e and take for granted¿ nor to find talk and discourses but l:a weigh and consrcfer

The purpose of reading is not to put forth opposite views or forcibly refuse others' point. It is also not to believe as such and go ahead as if it is true; Similarly reading is not just to get points for any discourse. Instead, a proper reading should result in weighing the concept thoroughly and considering it as a source of information.



Source: <https://www.Dxfuel.com/en/free-photo-emsxt>

Reading is a skill. So it can be taught, nurtured, practised and developed over a period of time. Book is a fundamental source of reading. Again, as said by Sir Francis Bacon,

Some books are to be tasted, others to be swallowed, and some few to be read wholly, and with diligence and attention; some are to be read only in parts, others to be read, but not curiously.



Source: <https://www.pxfuel.com/en/free-photo-xnrvo>

Pre-reading task: Learning New words and Concepts

What is molecular biology?

Has ever an Indian Biologist won a Nobel Prize?

What is synthetic gene?

Who is Har Gobind Khorana?

'ACKAGE J-Professor Har Gobind Khorana



Born
on 9th

January, 1922(Raipur, Punjab, British India) -Died on 9th December, 2011(Concord, Massachusetts, United States) Khorana was one of the first scientists to demonstrate the role of nucleotides in protein synthesis and helped crack the genetic code. He also helped develop custom-designed pieces of artificial genes and methods that anticipated the invention of the polymerase chain reaction (PCR) process, a biochemical technology used to amplify a single or a few copies of a piece of DNA.

Education

Khorana received his first four years of education from a village teacher while sitting under a tree. After this Khorana attended D.A.V. High School in the near-by city of Multan (now West Punjab) and then applied to study English literature and chemistry at the Government College in Lahore which was affiliated to Punjab University. In the end he decided to study chemistry and received his bachelor's degree in 1943. Two years later he had completed a master's degree at the same institution.

In 1945 Khorana gained a Government of India fellowship to undertake a doctorate in England which he intended to use to study insecticides and fungicides. He landed up, however, studying the chemistry of melanins under the supervision of Roger J.S. Beer at Liverpool University. It was the only doctoral placement the Indian High Commission office in London could find him. Khorana completed his doctorate in 1948.

Career

From early on Khorana did not stick to the rigid boundaries of disciplines and his work was to take him across the fields of chemistry, biology and physics. This was unusual for scientists of his generation. Whenever he undertook a new

project Khorana secured time in other laboratories so that he could master the techniques he needed to carry an idea forward.

As soon as he finished his doctorate, based on the importance of German scientific literature, Khorana decided he would benefit from pursuing his post-doctoral research in a German-speaking country. To this end he spent 11 months in Zurich between 1948 and 1949 at the Organic Chemistry Laboratory at the Swiss Federal Institute of Technology (ETH) where he researched alkaloid chemistry with Vladimir Prelog. Khorana greatly valued the philosophy and work ethics Prelog passed on to him during this time.

Khorana unfortunately had to cut short his visit to Switzerland because he had no stipend and his savings were running out. Thereafter, Khorana returned to the Punjab in order to fulfil the requirements of his Indian government scholarship. He found it difficult, however, to find a job because of the upheaval caused by the recent partition of British India.

What came to his rescue was the offer of a fellowship at Cambridge University. This he secured through the help of the Cambridge based scientist G.W. Kenner whom he had met in Zurich. In 1950 Khorana returned to England with money scraped together by his extended family to pay for his ship's passage. Over the next two years Khorana worked alongside Alexander Todd trying to define the chemical structures of nucleic acids. This was an exciting time to be in Cambridge because Fred Sanger was then in the process of sequencing insulin, the first protein to be sequenced, and Max Perutz and John Kendrew were performing the first x-rays of myoglobin and haemoglobin. Such work inspired Khorana to start looking at proteins and nuclear acids.

In 1952 Khorana was offered a position in Vancouver to start a new non-academic research laboratory based on a recommendation by Todd to Gordon M. Shrum, head of the British Columbia Research Council. While the laboratory in Vancouver had very little in the way of facilities, Khorana treasured the freedom the job gave him to pursue his own research. He soon launched a number of projects researching phosphage esters and nucleic acids. Such work necessitated him developing methods to synthesise short oligonucleotides. His publication of these techniques soon attracted the attention of notable biochemists, such as Arthur Kornberg and Paul Berg, who were eager to visit him to learn from him and gain his reagents.

In 1960 Khorana moved to the Enzyme Institute at the University of Wisconsin-Madison where he began working on the genetic code and chemical synthesis of a transfer RNA gene. During this time he and his colleagues determined how the synthesis of proteins is controlled by nucleotides in nucleic acids. In 1970 Khorana transferred to the Massachusetts Institute of Technology where he began investigating the molecular mechanism that governs the cell signalling pathways of vision. This was a topic he pursued until his retirement in 2007.

Achievements

In 1968 Khorana was awarded the Nobel Prize for Physiology or Medicine with Marshall W. Nirenberg of Cornell University and Robert W. Holley of the National Institutes of Health. This they were awarded for their elucidation of the genetic code and its function in protein synthesis. Khorana's work confirmed Nirenberg's finding that the chemical composition and function of a new cell is determined by how the four nucleotides are arranged on the spiral 'staircase' of a DNA molecule. He also demonstrated that the nucleotide code is always transmitted in groups of three, called codons, and that these codons instruct the cell to start and stop the production of proteins. Khorana was also one of the first to outline the possibility of gene manipulation. This he did before any individual genes had been characterised from any organism.

Khorana is also credited with having devised techniques for the creation of synthetic DNA oligonucleotides, which provided a building block for the creation of artificial genes and primers and templates for DNA polymerase. This work laid the foundation for the development of the polymerase chain reaction (PCR), a technique that enables the amplification of small fragments of DNA to billions of copies within a matter of hours.

In 1976 Khorana and his colleagues at MIT achieved the first synthesis of an artificial gene in a living cell. Their method of chemically synthesising genes helped facilitate controlled, systematic studies of how genetic structure influences function.

Alongside his Nobel prize, Khorana was awarded the Louisa Gross Horwitz Prize from Columbia University and the Lasker Foundation Award for Basic Medical Research in 1968; the Willard Gibbs Medal of the Chicago section of the American Chemical Society, in 1974; the Gairdner Foundation Annual Award, in 1980; and the Paul Kayser International Award of Merit in Retina Research, in 1987. In 2007 the University of Wisconsin-Pladison, the Government of India and the Indo-US Science and Technology Forum founded the Khorana Program in Khorana's honour to facilitate the exchange of students between the university and Indian research institutions.

TASK1:

Read the passage and describe any two characteristics of the scientist Har Gobind Khorana. Justify why you consider them as his predominant characteristics: you can discuss with your friend and arrive at a consensus on your view.

Discuss in groups and comment on the scientific contribution of the scientist to the field of genetic code and gene manipulation.

Explain the Nobel Laureate's dedication to the science of gene.

Explain to your friend what you know about gene manipulation. You can even google search for further knowledge.

Google search link: <https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/genetic-manipulation>

TASK 2: Facts and Opinions

Interpretation is an essential part of reading. While feeling happy about the Indian origin (undivided India under British rule) of the Nobel Laureate, Har Gobind Khorana, don't you feel sad that we have lost our Scientist to another country?

- Say about your conviction to work in our country or to work abroad after completing your education. Ask for your friend's opinion and inform the class.
- What is your opinion on 'brain drain'? Can you justify the facts that influenced the scientist leave India for better opportunities?

TASK 3:

Match the expressions with their meanings (One word substitutes are good for expressions. They make your speech short and to the point without elaborating much.)

1. pioneer - a famous person viewed as a symbol of some idea
- visionary — chemicals used to destroy fungus
 - icon — chemicals used for killing insects
 - siblings — scientist who studies the chemistry of living things
 - testament - long walk in the country
 - landmark — exceptionally talented
 - insecticides - brothers and sisters born to the same parents
 - fungicides - a person who plans for the future with great imagination
 - Retirement — journey to a holy place for religious reasons
 - Pilgrimage - a person who is the first to develop certain area of knowledge
 - Hiking - proof of something
 - Stipend — an experienced person who advises and helps someone with less experience over a period of time
 - Biochemist — something that is clear and distinct from others

- Mentor - stopping to work because one has reached a particular age

. Extraordinary - an amount of money regularly paid monthly to someone to live on

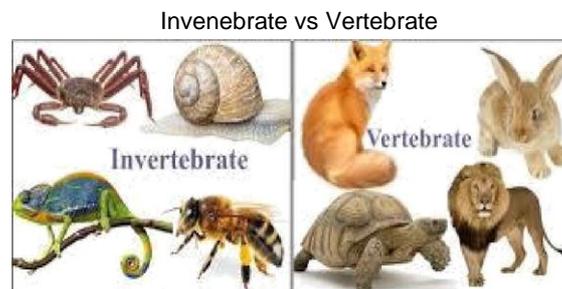
TASK 4:

***My Favourite Scientist*. Each one can prepare and deliver a one-minute speech on any Scientist.**

PASSAGE 2 -V'ertebrate or invertebrate?

Scientists who study the animal kingdom classify animals into different groups, based on different characteristics. Some characteristics scientists study are: what makes up the animal's skin, such as hair or scales whether animals give birth to live babies or lay eggs whether mothers feed their babies milk from their own bodies whether animals are warm-blooded or cold blooded.

Another key characteristic that scientists study is whether animals have a backbone. Animals that have a backbone are called vertebrates. Humans are vertebrates. Place your hand on the back of your neck until you feel a bump. Now, rub your hand up and down the middle of your back. Do you feel bumpy bones that run in a row down your back, from your neck down to your waist? That's your backbone. Another name for a backbone is a spine. The backbone or spine wraps around and protects an important part of your body called the spinal cord. The spinal cord is a bundle of nerves. Messages travel up and down your spinal cord from your brain to other parts of your body. This is the way that your brain sends signals telling the other parts of your body what to do.



Many other animals also are vertebrates. All mammals, reptiles, fish, and birds have a backbone, so they are all vertebrates. They have some type of spinal cord, too.

Animals with a backbone come in all different shapes and sizes. Apes, rhinos, horses, rabbits, bats-and yes, rats and humans, too-are all mammals and vertebrates. Lizards, turtles, snakes, and crocodiles are reptiles and vertebrates. Huge sharks and tiny goldfish are also vertebrates. Small hummingbirds and large eagles are vertebrates, too.

But there are many more animals that do not have a backbone. Animals without a backbone are called invertebrates. Insects are the largest group in the animal kingdom. Insects are also the largest group of invertebrates. Insects include flies, wasps, beetles, cockroaches, ladybugs, and butterflies. Other kinds of invertebrates include earthworms and spiders.

Source: <https://images.app.goo.gl/dVyOgBMC7Zamwe9o6>
<https://youtu.be/mRidGna-V4E>

This text is adapted from an original work of the Core Knowledge Foundation.

Task 1:

List out new words you learn in the above passage and find their **meanings**

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Source: <https://4.files.edl.io/9d86/05/18/20/063351-7b4f1401-ac8e-4752-9a97-f6d7e987f248.odf>

Task 2:

Find the vertebrates (V) and invertebrates (IV) and mention it in the circles given:





Source: <https://4.files.edl.io/9d86/05/18/20/063351-7b4f1401-ac8e-4752-9a97-f6d7e987f248.pdf>

Task - 3

Word puzzle: Search and write the words you found out in the table given below:

E	C	H	I	N	O	D	E	R	M
X	T	O	N	E	H	R	G	A	O
O	A	Z	S	W	B	I	S	M	L
S	R	L	E	T	C	B	L	P	L
K	T	U	C	Z	G	R	I	H	U
E	H	N	T	U	R	E	A	I	S
L	R	G	L	O	M	P	N	B	K
E	O	S	F	R	A	H	S	I	S
T	P	G	O	R	M	S	D	A	E
O	O	W	I	N	M	I	V	N	G
N	D	I	Q	L	A	F	R	O	G
R	E	P	T	I	L	E	Z	K	S
O	C	T	O	P	U	S	N	M	T

VERTEBRATES	INVERTEBRATES
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.

10.	10.
-----	-----

Task 4: Find out the type of species which is mentioned below with the help of a **dictionary**

1. Newt -
2. Amphibian -
3. Echinoderm -
4. Arthropod -
5. Molluscs —

Task 5: Match **the following**:

S. No	Who am I?	I am a/an
1.	I have five arms but neither have blood nor brain. I live in sea.	Spider
2.	I have eight legs but don't have antennae.	Dog
3.	I am a domestic animal. A friend of police and enemy for thieves.	Lion
4.	I am the king of the jungle. I belong to cat family.	Earthworm
5.	I live inside the soil. I do not have, eyes, arms or legs.	Starfish

4. UWRITING

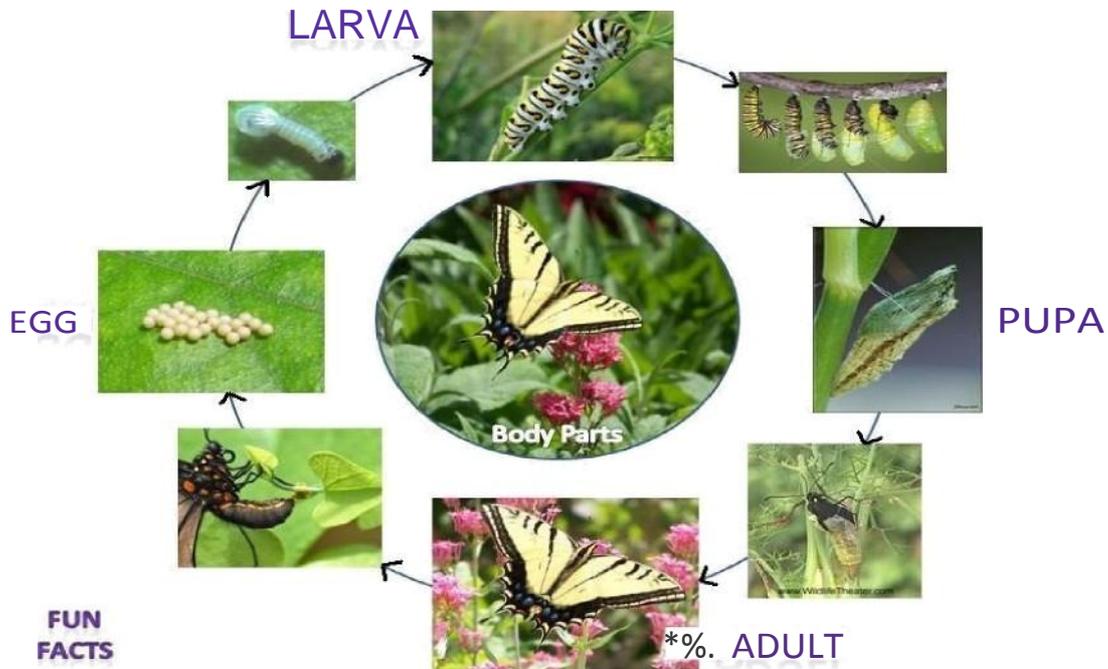
Pictures are usually considered to be a forerunner of true writing. Picture writing is defined as recording of events or expression of messages, actions or facts. A picture writing is a great way to convey your message quickly to an audience. It is easy to understand the information and difficult concepts. Pictures help us to connect what we observe with reason and link concepts with words. Pictures are not mere decoration or illustration of the text. They enhance the writing with emotions. Pictures share passions, fears, sadness, hardships and joys and help us understand ourselves better and find commonality with others.

A good picture writing should contain correct pictures related to the content. Look at all the pictures and describe them exactly. Understand the gist of the content given. Take notes on each picture. Start writing the content picture

by picture. Use literal speech and active verbs. Conclude the write up according to the last picture.

PASSAGE - Butterfly's Life Cycle / Butterfly Metamorphosis

Let's explore a butterfly's life cycle in detail, including all four stages of life



The Butterfly's Life Cycle

All butterflies have "complete metamorphosis. To grow into an adult they go through 4 stages: egg, larva, pupa and adult. Each stage has a different goal - for instance, caterpillars need to eat a lot and adults need to reproduce. Depending on the type of butterfly, the life cycle of a butterfly may take anywhere from one month to a whole year.

The First Stage: The Egg

Body /?y Eggs on a leaf

A butterfly starts life as a very small, round, oval or cylindrical egg. The coolest thing about butterfly eggs, especially monarch butterfly eggs, is that if you look close enough you can actually see the tiny caterpillar growing inside it. Some butterfly eggs may be round, some oval and some may be ribbed while others may have other features. The egg shape depends on the type of butterfly that laid the egg.

Butterfly eggs are usually laid on the leaves of plants, so if you are actively searching for these very tiny eggs, you will have to take some time and examine quite a few leaves in order to find some.

The Second Stage: The Larva (Caterpillar)

Butterfly Caterpillar

When the egg finally hatches, most of you would expect a butterfly to emerge, right? Well, not exactly. In the butterfly's life cycle, there are four stages and this is only the second stage. Butterfly larvae are actually what we call caterpillars. Caterpillars do not stay in this stage for very long and mostly, in this stage all they do is eat.

When the egg hatches, the caterpillar will start his work and eat the leaf they were born onto. This is really important because the mother butterfly needs to lay her eggs on the type of leaf the caterpillar will eat — each caterpillar type likes only certain types of leaves. Since they are tiny and cannot travel to a new plant, the caterpillar needs to hatch on the kind of leaf it wants to eat.

Caterpillars need to eat and eat so they can grow quickly. When a caterpillar is born, they are extremely small. When they start eating, they instantly start growing and expanding. Their exoskeleton (skin) does not stretch or grow, so they grow by “moulting” (shedding the outgrown skin) several times while it grows.

The Third Stage: Pupa (Chrysalis)

Caterpillar Becoming a Chrysalis

The pupa stage is one of the coolest stages of a butterfly's life. As soon as a caterpillar is done growing and they have reached their full length/weight, they form themselves into a pupa, also known as a chrysalis. From the outside of the pupa, it looks as if the caterpillar may just be resting, but the inside is where all of the action is. Inside of the pupa, the caterpillar is rapidly changing.

Mozzarch Caterpillar Becoming a Chrysalis

Now, as most people know, caterpillars are short, stubby and have no wings at all. Within the chrysalis the old body parts of the caterpillar are undergoing a

remarkable transformation, called 'metamorphosis,' to become the beautiful parts that make up the butterfly that will emerge. Tissue, limbs and organs of a caterpillar have all been changed by the time the pupa is finished and is now ready for the final stage of a butterfly's life cycle.

The Fourth Stage: Adult Butterfly

Butterfly Emerging from a Chrysalis

Finally, when the caterpillar has done all of its forming and changing inside the pupa, if you are lucky, you will get to see an adult butterfly emerge. When the butterfly first emerges from the chrysalis, both of the wings are going to be soft and folded against its body. This is because the butterfly had to fit all its new parts inside of the pupa.

Watch a Monarch Hatching

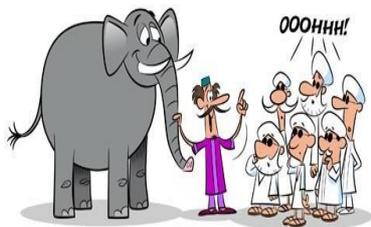
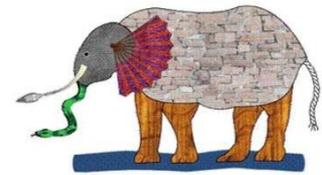
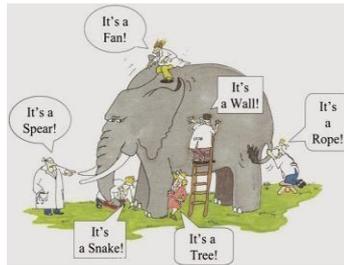
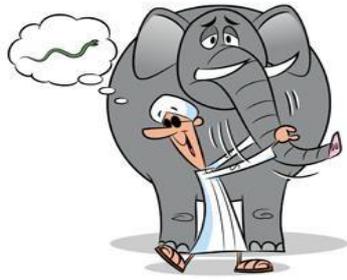
As soon as the butterfly has rested after coming out of the chrysalis, it will pump blood into the wings in order to get them working and flapping — then they get to fly. Usually within a three or four-hour period, the butterfly will master flying and will search for a mate in order to reproduce.

When in the fourth and final stage of their lives, adult butterflies are constantly on the look out to reproduce and when a female lays their eggs on some leaves, the butterfly life cycle will start all over.

Task 1: Write a paragraph on the given passage on Butterfly's Life Cycle.

Task 2: Narrate a story with the pictures given below. In the land of India, there was a fable told of six blind men who were taken to an elephant and asked to describe what the animal looked like.





Source: <https://www.youtube.com/watch?v=waToWktB7ag>
<https://www.youtube.com/watch?v=jivWeOrCaeI>
<https://www.youtube.com/watch?v=aB-F-yVLbA>

Group: 2 - LIFE SCIENCES

UNIT - 2

DESCRIPTION

Listening

- Listening to process description-drawing a flow chart

Speaking

- Role play (formal context)

Reading

- Skimming and scanning
- Reading passages on products, equipment and gadgets

Writing

- Process description
- compare and contrast
- Single sentence and extended definition/ Free writing

Vocabulary:

- Register specific (Incorporated into the LSRW tasks)

Unit 2

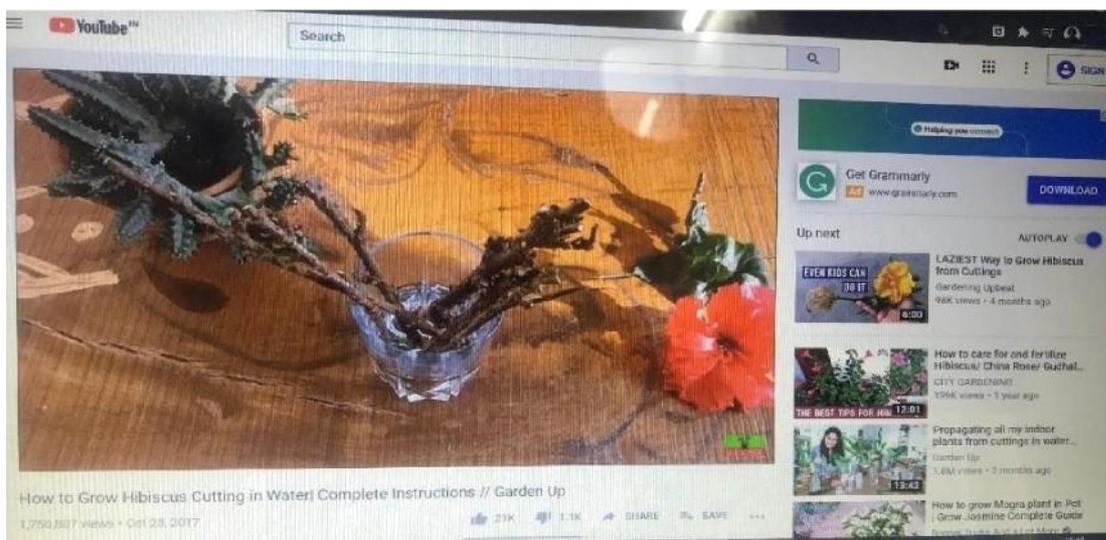
Description

1. Listening

What is listening? Listening is a conscious process. It is better than hearing which is more or less a mere physical process and done as an unconscious act. Listening requires your complete involvement mentally and physically using your faculties like auditory, mental and visual. It is not a passive activity but an active process of decoding the communicated message in accordance with the speaker's language use. Listening to correct English regularly helps you strengthen your spoken English with regard to accent, pronunciation of words with correct stress, intonation and modulations in tone and ultimately fluency too.

The following YouTube link will give an opportunity to listen to a content rich video that tells you how to grow a hibiscus sapling, as a step by step process.

<https://www.youtube.com/watch?v=GCeUfp2p89s>



Listening Comprehension

Initially you can check your understanding with the transcription given in the video. To make you familiar with it, the transcription is given below.

Transcript of the Video

Hey guys! A lot of you many times have requested to do more of videos on flowering plants I have been able to do much of them so I thought of collaborating with a gardening enthusiast and a very successful YouTuber 'Urban Gardener'. Today, he's going to share a trick on how you can start growing a hibiscus plant in water from a cutting. Now, to him-

Hello friends, today we will learn how to start growing a hibiscus in water which is a very simple way to propagate hibiscus.

- Take 4 to 5 semi hardwood cuttings or semi ripe cuttings like this.
- Prepare the cuttings by removing all the leaves with the help of a secateurs and trim to 4 to 6 inches long.
- Make a cut at about 45 degree angle just below the nodes; these are the nodes; they may occur just below the node like this. This allows the largest surface area to absorb water.
- Properly prepare all cuttings in the same manner.
- Take a glass and fill it with water till three inches from the bottom.
- Take the cuttings and scratch a little to expose the inner layer from one or two sides. This increases the area from which roots will be produced.
- Dip all the cuttings in the water.
- Keep the glass in partial shade and after 3-4 days new roots will start to develop from the wounded part of the cuttings.
- After 9 days your cuttings will look like this.
- These are the new roots that are forming at this stage; you can plant this cutting.
- Take a well-drained pot and fill it with the potting mix; for potting mix take 50% normal garden soil 30%organic compost and 20% fine sand

make a hole in the centre and just place the cutting in the middle and gently push the soil against the stem to provide support.

- Keep the pot in a bright location where it can get filtered sunlight and after 45 days your cutting will look like this; you can see the new leaves and after two months your cutting will look like this.
- If you want to catch more videos on urban gardening don't forget to subscribe to his channel.
- Link to the channel is in the description box I will see you next week.

Listen again and again till you recognise the words and their meaning. You need not recognise all the words but you must understand the overall meaning. Now try to answer the questions.

TASK 1

Answer the following questions

1. What is the process about?
1. What is the first step in the process?
2. What is the second step in the process?
3. What is the third step in the process?
4. What is the tool used in the process?

TASK 2

Write the gist of the video in a paragraph and give a title

Post- listening

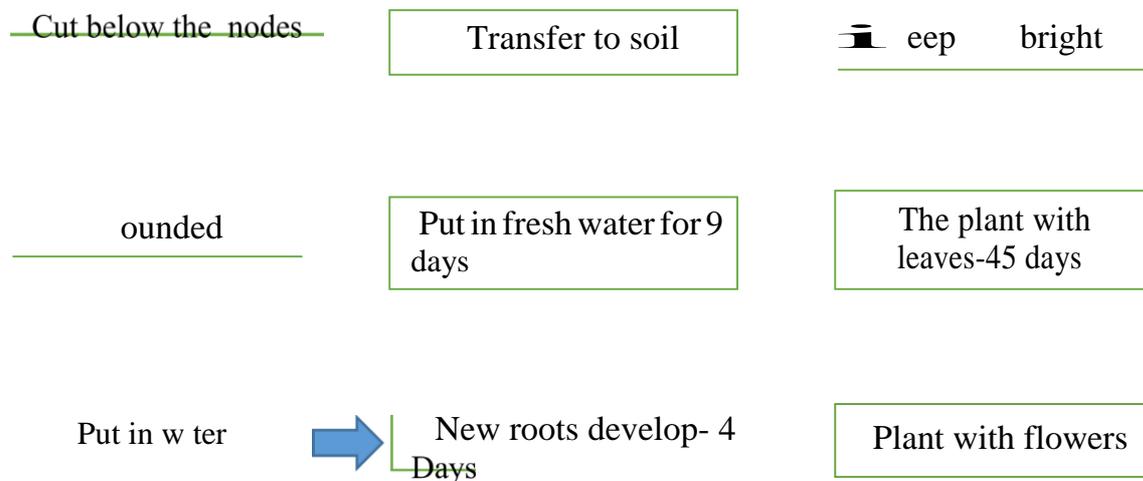
The step by step process of growing a hibiscus plant can be illustrated in a Flow Chart.

Definition:

A flow chart shows the process of production or purification of something through successive stages from the initial to final stage. Initial stage is the starting point of the process and it is also called input stage and the finishing point is called output stage. The flow chart illustrates the process in rectangular boxes and arrows to denote the link between the processes – the sequential steps. It is expressed in impersonal passive voice in present tense; only the action is important not the person who does it.

The process is illustrated in a flow chart.

GROWING A HIBISCUS PLANT



DESCRIBING A PROCESS

How to describe a process is discussed here?

Description of the process is either done by you or by somebody else. Only the action is important and not the one who does it. So the impersonal passive voice should be used in the present tense for describing the action.

Example:

The stem is wounded at the lower end with a sharp knife.

1. It is put in a glass of water for four days.

TASK 3

Describe the process of growing the hibiscus plant in your own words and write in a paragraph (150 WORDS)

2. Speaking

Role Play:

Role-play is an effective speaking activity. It is a technique that allows students to explore imaginary realistic situations by interacting with each other. For instance, 'at the restaurant', 'checking at the airport', 'looking for lost property' etc., are all possible role plays. The joy of role play is reflected, when the students imagine themselves to 'become' anyone as they like for a short time! For example, as a President, the Queen, a millionaire, a pop star. The choice is endless! This allows them to improve their speaking skills and get the liberty to use the language in an interesting manner.

Role play also helps the students to develop different strategies in a supported environment. Through this, a student can put him or her in different situations and act accordingly to the character assigned. This will help them develop and understand the situation from the opposite point of view.

TASK - 1 Role play

Let's have a role play between a Botany teacher and a student. The teacher has given homework to the students to explain about a flower with botanical description. A student in the class explains a flower named Petunia with detailed and interesting facts to the teacher and his classmates.

Teacher: Hello students! Hope each one of you is excited to speak about your favourite flower.

Class: Yes ma'am! !!

Teacher: Can anyone describe why you like flowers?

Saran (student), *tells his wish to the teacher that he wants to speak about a flower that impressed him a lot.*

Teacher: Yes, Saran, you can answer my question.

Saran: Thank you ma'am. Usually I am very fond of flowers. They are attractive and appealing to see. They have a wide variety of designs and colours. It is an astonishing sight to behold. Some have wonderful fragrance that spreads aroma wherever they are placed. The world would be uninteresting without their delightful faces and lovely floral odour.

Teacher: Good, go ahead. What is your favourite flower?

Saran: I like many flowers, but amongst them I admire a flower named PETUNIA. I saw this flower in a place named "Miracle Garden" when I happened to visit Dubai during my summer vacation.



Teacher: Oh! That's interesting. Tell us about the flower Petunia.

Saran: Petunia is a genus of 20 species of flowering plants of South American origin. It is in the shape of a trumpet.

Teacher: How are they pollinated?

Saran: Petunias are generally insect pollinated.

Teacher: What is the process for cultivation?

Saran: Petunias can tolerate relatively harsh conditions and hot climates, but not frost. They need at least five hours of sunlight every day and flourish in moist soil and conditions of low atmospheric humidity. Its flowers bloom profusely from early summer until frost. The plant grows well in temperate climates and does not tolerate shade.

Teacher: Is there any possibility to grow this flower plant at home?

Saran: Yes, of course. They are best grown from seed. Petunia species are mostly annual herbs. Watering once a week should be sufficient in most regions. Hanging baskets and other containers need more frequent watering.

Teacher: When can we see the maximum growth?

Saran: Maximum growth occurs in late spring. Applying fertilizer monthly or weekly, depending on the variety will help the plant grow quickly.

Teacher: Does it have fragrance? What are the uses of Petunia?

Saran: The flower is extremely fragrant and has a number of medicinal uses for digestive disorders, coughs and colds. It can also be given as a strengthening tonic for seniors and children.

Teacher: Do you have any questions to ask about the flower Petunia?

Class: No ma'am.

Teacher: Wow! That's a wonderful and interesting piece of information about Petunia. Can you share the pictures of Petunia that you took in Miracle Garden to the class?

Saran: My pleasure ma'am. Thanks for giving me an opportunity to speak about this attractive flower.

Speaking Activity:

Task 1:

Role Play: Interview with a famous scientist.

The students can be put in pairs and groups to have dialogue between an interviewer and a celebrity in the field of Science. The teacher can monitor the students' use of grammar and language. This activity allows students to improve their creativity and speaking fluency.

Source:

<https://pxhere.com/en/photo/818489>

<https://pxhere.com/en/photo/646747>

<https://www.thompson-morgan.com/p/miniunia-kabloom-mixed/t57171TM>

<https://www.youtube.com/watch?v=YsDQus56GbM>

TASK - 2

Let's have a role play between the class monitor and the classmates. The class teacher has informed about an educational tour to Ooty. All the students are excited and happy. The class representative has been given

the responsibility of collecting the details and clearing the doubts of his classmates.

Rushil: Dear friends, as we have been already informed about our educational tour, our class teacher has assigned me the responsibility of explaining about the tour event in detail. If you have any doubts, please let me know.

3inisha: Can you tell us the sight-seeing places that we are going to visit within three days?

Rushil: Day 1, we will visit the places within the city limits. They are Botanical Garden, which is right in the heart of beautiful scenic hill station, Ooty Lake, Rose Garden.

Shiva: How do we commute from Chennai to Ooty?

Rushil: There is no direct train from Chennai to Ooty. However, we can take a direct train from Chennai Central Station to Mettupalayam Railway Station (**Nilagiri** express). It takes around 10 hours. From Mettupalayam to Ooty we will take a bus and reach the hotel.

Kumari: How much do we have to pay for this tour?

Rushil: As of now, the estimation is Rs. 1500/- per head.

Santosh: Where are we going to stay?

Rushil: In Hotel Tamil Nadu.

Veena: What are the things to be taken for the trip?

Rushil: Sweaters, mufflers, woollen leg warmers are enough and some essential things according to your requirement.

Sreeman: Do we follow the same way of transportation from Ooty to Chennai?

Rushil: Yes, again from Ooty to Mettupalayam, we will travel by bus and from there we will reach Chennai by Nilagiri Express.

Shafia: Can you tell us when the last date to confirm this tour is?

Rushil: Sure. Dear friends, hope I have answered all your doubts. Can I get the names of the interested students by Friday so that it will be easy for our teachers to make the necessary arrangements.

Class: Sure Rushil.

Rushil: Thank you!!!

Task 3: Ask the students to pick the roles they want to play like shop keeper-customer, doctor-patient, police-thief etc.

3. Reading

Reading is not just a leisure activity because it has its own techniques too. Skimming and scanning are the techniques employed while reading. These two are not just techniques for reading but also the best reading strategies depending on the purpose.

Skimming

Skimming is a way in which one reads at a faster rate to get the general idea about the text without paying heed to the intentional and detailed meaning of the text.

Example -When one reads the text only in order to understand the thesis statement, in one or two lines.

Skimming is achieved by *reading that text only* which is considered to be relevant.

Skimming requires a lower understanding of word recognition than compared to scanning.

Procedure -The introductory paragraph and the concluding paragraph are read very carefully. You should also search for headings and subheadings to get a good grasp of the idea.

Scanning

Scanning refers to the technique when one looks into the document or the text provided for searching some specific text such as some keywords.

Example -It may be applied to the real-life example of a dictionary, wherein one looks for a specific word meaning or a directory wherein one searches for the phone number of someone.

Scanning requires one to have a *look at the whole document* quickly at least once.

Scanning requires a higher understanding of word recognition compared to skimming.

Procedure -You should search for headings and subheadings to get a good grasp of the idea, as to where your required detail will be found.

Skimming and scanning, therefore, are two very different strategies for speed reading. They are used for different purposes, and they require different reading skills, but they are very significant to go about reading comprehension.

Read the following passage on *Ultrason4 Scanning Machine* for your practice:



Image source: <https://www.radiologyinfo.org/gallery-items/images/radiologist-doing-sonogram.jpg>

Ultrasound imaging uses sound waves to produce pictures of the inside of the body. It is used to help diagnose the causes of pain, swelling and infection in the body's internal organs and to examine a baby in pregnant women and the brain and hips in infants. It's also used to help guide biopsies, diagnose heart conditions, and assess damage after a heart attack.

Ultrasound is used to help physicians evaluate symptoms such as pain, swelling, infection. Ultrasound is also used to blockages to blood flow (such as clots), narrowing of vessels, tumours and congenital vascular malformations, reduced or absent blood flow to various organs, such as the testes or ovary, increased blood flow, which may be a sign of infection.

Ultrasound is safe, non invasive, and does not use ionizing radiation. It is safe and painless. Ultrasound imaging is also called ultrasound scanning or sonography.

The Equipment:

Ultrasound scanners consist of a computer console, video display screen and an attached transducer. The transducer is a small hand-held device that resembles a microphone.

Procedure:

The technologist applies a small amount of gel to the area under examination and places the transducer there. The gel allows sound waves to travel back and forth between the transducer and the area under examination. The ultrasound image is immediately visible on a video display screen that looks like a computer monitor. The computer creates the image based on the loudness (amplitude), pitch (frequency) and time it takes for the ultrasound signal to return to the transducer.

Ultrasound imaging is based on the same principles involved in the sonar used by bats, ships and fishermen. When a sound wave strikes an object, it bounces back, or echoes. By measuring these echo waves, it is possible to determine how far away the object is as well as the object's size, shape and consistency. This includes whether the object is solid or filled with fluid.

Limitations:

Ultrasound waves are disrupted by air or gas. Therefore, ultrasound is not an ideal imaging technique for the air-filled bowel or organs obscured by the bowel. Ultrasound is not as useful for imaging air-filled lungs, but it may be used to detect fluid around or within the lungs. Similarly, ultrasound cannot penetrate bone, but may be used for imaging bone fractures or for infection surrounding a bone.

Source: An excerpt from

<https://www.radiologyinfo.org/en/info.cfm?pg=genus>

Reading Descriptions

Reading descriptions helps the readers visualize the content or messages provided by the author in the book. The tone, mood of the author is well established in descriptive writing. Reading such descriptions makes the readers enjoy every detail such as sight, sound, smell, taste and other feelings the author describes. Reading descriptions helps the reader connect with the text. The lucid description helps the reader get to the point of the author. While reading descriptions the reader gets into the author's world.

How reading description helps the reader?

To :

- Understand the themes, settings and purpose of the text
- Acquire language and vocabulary used by the author
- Read texts with similar themes
- Evoke interest for further reading
- Use the acquired vocabulary with regard to their discipline.

PASSAGE 2: Bio-Diversity

What Happened to the Reptiles?
By Zai Whitaker
(Adapted and abridged from the original short story)



It happened a long, long time ago, he began. So long ago that there were no schools and no teachers. Children lived in caves with their parents and helped them to collect fruit and berries from the forest. At that time, there were no tigers or panthers or elephants in Pambupatti forest. There were only reptiles, many kinds of reptiles. Now you know what reptiles are. Snakes, crocodiles, turtles, lizards.

Every month, the reptiles of Pambupatti had a big meeting. The president of these meetings was Makara, the biggest crocodile of the forest.

All the animals thought he was very important. When someone is strong and powerful, you know, it is difficult not to go along with what he says or does. "Brothers and sisters," he began. All the reptiles, even the beautiful king cobras, stopped talking. Makara continued his speech. "I have decided that we don't need the tortoises! I have told them not to come today.

And by the following Tuesday, they were all gone. At first the animals were sad, but then they realised that what Makara had said was true. There was more food, more water and more space for them! But soon, a strange smell began to fill the forest. It was the smell of rot — rotting fruit on the ground, rotting animals in the river. This was what the tortoises used to eat. And even Makara had to go about holding his nose with his big claws. In the following months Makara sent the snakes and the lizards.

But now, when life should have been wonderful for the crocodiles of Pambupatti, all kinds of awful things began to happen. To begin with, the rats grew bolder by the day. They became so fearless that they jumped and turned somersaults on the crocodiles' backs! And there were too many frogs. They seemed to be growing larger and there was no one to eat them but the crocodiles. These huge frogs began to eat the baby crocodiles. And the insects! Now that the lizards were gone, there were millions of them, growing bigger and nastier by the day. Makara sent urgent messages all over the place for the tortoises, snakes and lizards to come back to Pambupatti

In two months, the forest was back to normal. The rats disappeared and the insects and the smell and the world finally went back to its familiar old self.

Nature plays an important role in helping mankind. Bio-diversity is an essential factor for all living things to enjoy life on Earth. One creature depends on another. Man should not mar nature.

Moral: Live and let live.

TASK:

Answer the following questions

- **Where did the story take place?**
- List the reptiles mentioned in the story.
- Who is the leader of the reptiles?
- What happened to the forest after chasing all the reptiles of the forest?
- Who pointed out the reason for the disaster that happened in the forest?
- How did the normalcy return to the forest?

4. Writing

COMPARE AND CONTRAST EXPRESSIONS

There are certain words or expressions in English to compare people or ideas to express how they are same. Similarly, there are certain words or expressions of contrast to highlight how people or ideas are different.

Words or Expressions used to Compare:

In the same way, Same as, Similarly, As well as, Both, Like, Likewise, Also, Too . .

Words or Expression used to Contrast:

Even though, On the other hand, Although, However, Unlike, Yet, But, Whereas, While, On the Contrary...

Read the given chart carefully. Compare and contrast Plant Cell and Animal Cell using the above expressions.

	Animal Cell	Plant Cell
Cell wall	Absent	Present cell loses
Shape	Round (irregular shape)	Rectangular (fixed shape)
Vacuole	One or more small macules (much smaller than plant cells).	One, large central vacuole taking up 90% of cell volume.
Centrioles	Present in all animal cells	Absent
Chloroplast	Animal cells don't have chloroplasts	Plant cells have chloroplasts because they make their own food
Plastids	Absent	Present
Plasma Membrane	only cell membrane	cell wall and a cell membrane
Lysosomes	Lysosomes occur in cytoplasm.	Lysosomes usually not present.
Cilia	Present	It is very rare

Source:

<https://i.pinimg.com/736x/0f/84/5a/0f845a9c2554516a7f243dca868ebe70>.

Definition and Sentence Definition

Definition

The main purpose of communication, be in any form is, to make things clear and understandable. When one has difficulty in understanding a word, he/she asks for an explanation. This, in formal tone is called “defining” or “definition”.

Definition of definition:

A statement expressing the essential nature of something

A statement of its meaning or the word/sign/symbol

We infer
two ideas
from the
above
stated

definition:

1. Definition is a statement i.e., it is a single sentence
2. Definition in single sentence would express only the most important quality of a term or an object

In regard to second inference, there arises a question- “what if one doesn’t understand something when stated in single sentence?”

Solutions are always easy: Extend the definition

First let us learn to define a term or an object in a single sentence and then learn extending the definition.

Single Sentence Definition

A single sentence definition is always precise. Hence it is otherwise called as formal definition. To formulate it, only three features are needed. Let’s learn it in three simple steps.

Step 1	Step 2	Step 3
term (anything that is to be defined)	<i>CIXSS</i> (what is it/to which category it belongs)	<i>Distinguishing feature</i> (its main purpose)
Laboratory	Place	conduct experiments

Endoscope	Instrument	look inside the body by the doctors
Hypnoanalysis	psychoanalytical technique	get information from a patient's unconscious mind
Melanin	Pigment	protect skin from sun damage
Dam	Barrier	restrict the flow of water
Anatomy	branch of natural science	structural organization of living things
Agronomist	Expert	soil management and crop production
Pollination	transfer pollen grains	create offspring
Prey	hunted living organism	food to eat
Carbohydrate	Nutrient	body's main source of energy
Hormone	chemical substance	regulate cellular activities

Once after identifying the class and use of the term put them in a full grammatical sentence as shown:

A laboratory is a place that is used to conduct experiments.

An endoscope is an instrument that doctors use to look inside the body.

To avoid: circle definition.

Circle definition uses the same term in its definition instead of simplifying and elaborating the term. Example: Incorrect- A pathologist is a person who studies pathology

Correct- A pathologist is a person who studies about diseases

TASK 1:

Using the table given above, attempt to write a single-sentence definition.

1. Hypnoanalysis

2. Melanin

3. Dam

4. Anatomy

5. Agronomist

6. Pollination

7. Prey

8. Carbohydrate

9. Hormone

10. Choose a term of your choice and write a single-sentence definition for it.

intended Det'inition

An extended definition begins with a single sentence definition and is then elaborated. This happens when defining a term or a thing requires explanation in more than a sentence. To make it clearly understandable, additional information are added to understand the whole concept. This in turn looks like a paragraph. The additional information may belong to any of the below category.

- Etymology :explaining the origin of the word
- History/ Background :elaborating its use
- Cause and Effect :discussing how it happened and what effects would it cause
- Description :listing all its parts and defining it
- Contrast :explaining how it differs from others of the same class
- Compare :explaining how it is similar to others in the same class
- Analogy :comparing it with a completely different item
- Examples :giving instances

Examples:

Vaccine: A vaccine is a substance that helps protect against certain diseases. They contain a weakened version of a particular microbe. It helps the immune system to recognize and destroy the disease causing microbe and prevents from future infection.

Anatomy: Anatomy is a branch of natural science which deals with structural organization of living things. It is an old science, having its beginnings in prehistoric times. It is characterized by a progressive understanding of the functions of the organs and structures of the human body.

Melanin: Melanin is a pigment that protects skin from sun damage. It is produced by the epidermis. It gives colour to skin and eyes.

TASK:

From each sentence given below recognize the term and write appropriate extended definition.

1. Sudha is myopic.

2. The doctor gave the boy a vaccination. (Choose any one term)

3. Fishes have scales. (Choose any one term)

4. The length of the internode decreased.

5. She explained greenhouse effect.

6. I saw a tractor.

7. She was born with umbilical cord wrapped around her neck.

7. She was born with umbilical cord wrapped around her neck.

A large, empty rectangular box with a thin black border, positioned below the second text block. It appears to be a placeholder for an image or a diagram.

Group: 2 - LIFE SCIENCES

UNIT - 3

NEGOTIATION STRATEGIES

Listening

- Listening to interviews of specialists/ inventors in their fields

Speaking

- Brainstorming (Mind mapping)

Reading

- Longer reading passages for comprehension

Writing

- Essay writing

Vocabulary

- Register specific (Incorporated into the LSRW tasks)

UNIT 3

1. Listening

Listening to Interviews:

Source <https://ohiostate.nressbooks.pub/writinofabulousfeatures/chapter/chapter-4-lets-interview/>

Are interviews, simply asking questions and getting answers? The true interview skills come from asking the right questions for the right sources and gathering all of the information your reader needs and wants to know.

What is an interview actually?

An interview can be defined as an interaction between two people, where questions are asked to elicit information. They are the key, quite simply, to information transmission, be it social, formal or business. That is why journalists use interviews every day to find and report the news that keeps a society informed.

What can we develop by listening to interviews?

- Acquire a good communication skill and vocabulary.
- Identify the facts of the interview.
- Determine what information you need from the interview.
- Determine what kind of sources you need to get that information from.
- Find sources for a story and who can provide the answers you need.
- Working out when and where to meet those sources.
- Conceptualizing a mix of open-ended and closed questions to get the information you need.
- Asking questions in a way that they can get the facts you need and result in at least some good, usable quotes.
- Getting information down quickly and accurately.
- Selecting which facts and quotes best present information you need.

The video link given below is an interview with a famous Mexican chemist. Listen to the interview and find out how the conversation goes on.



Davos 2015- An insight an Idea with Mario Molina

Source: https://www.youtube.com/watch?v=iGf4TGHO_Jc

Task 1:

Dr. Mario J. Molina is a Nobel Laureate (1995) from Mexico. Dr. Mario and his friend Sherwood Rowland were the first to find that CFCs (Chloro Fluoro Carbons) affect the ozone layer and it's the sole reason for its depletion. Listen to this interview and write down a paragraph of 100 words on how Dr. Mario found how climate is affected due to CFCs and the solution for the problem.

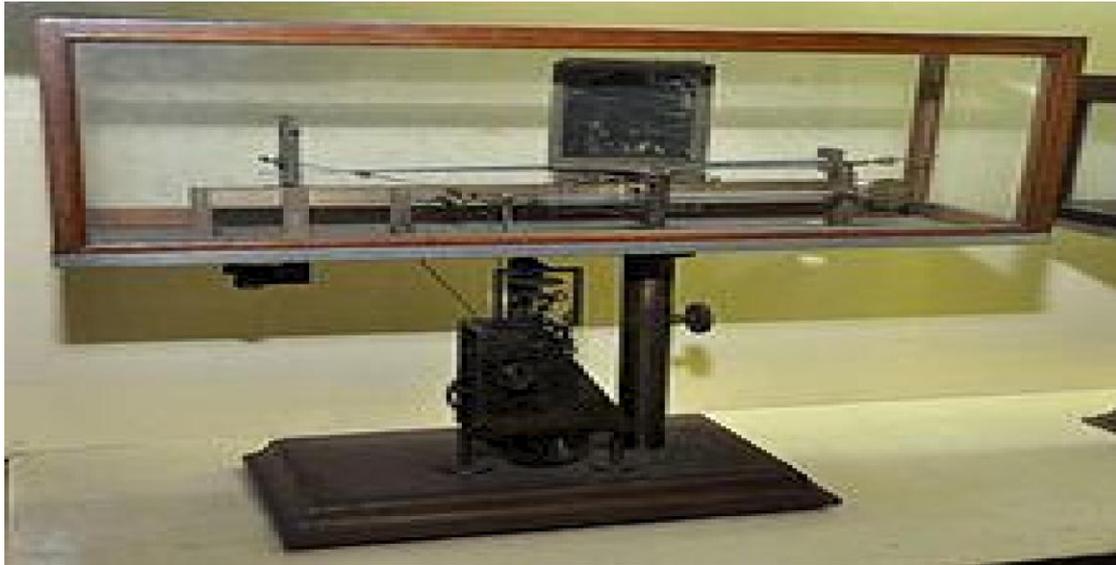
Task 2:

Can we see how plants feed themselves? Can we listen to their heart beat? What! do plants have heart? Yes, it is true as Sir J.C. Bose proved it by his invention "**The Crescograph**". The passage given is an extract from an essay "J.C. Bose"

which is a part taken from *Alcloos /fox/leys* travelogue collections “**testing Pilate**”. Read out loud the given passage and listen to it and answer the questions below.

The Crescograph

(Originally adapted from the essay “J.C.Bose” by Aldous Huxley)



Source: Wikimedia commons

The experimenter is curious and has special talent. Armed with a tea canister and some wire, with silk, a little sealing wax and two or three jam — pots, Faraday marched forth against the mysterious powers of electricity. He returned in triumph with their captured secrets. It was just a question of suitably juxtaposing the wax, the glass jars, and the wires. The mysterious powers couldn't help surrendering. So simple — if you happened to be Faraday. And if you happened to be Sir 1. C. Bose it would be so simple, with a little clockwork, some needles and filaments, to devise machines that would make visible the growth of plants, the pulse of their vegetable 'hearts', the twitching of their nerves, the processes of their digestion. It would be so simple — though it cost even Bose long years of labour to perfect his instruments.

At the Bose Institute in Calcutta, the great experimenter himself was our guide. Through all afternoon we followed him from marvel to marvel. We watched the

growth of a plant being traced out automatically by a needle on a sheet of smoked glass; we saw its sudden, shuddering reaction to an electric shock. We watched a plant feeding; in the process it was exhaling minute quantities of oxygen. Each time the accumulation of exhaled oxygen reached a certain amount, a little bell, like the bell that warns you when you are nearly at the end of your line of typewriting, automatically rang. When the sun shone on the plant, the bell rang often and regularly. Shaded, the plant stopped feeding; the bell rang only at long intervals or not at all. A drop of stimulant added to the water in which the plant was standing set the bell wildly tinkling, as though some record breaking typist were at the machine.

In one of the laboratories we were shown the instrument which records the beating of a plant's 'heart'. By a system of levers, similar in principle to that with which the self — recording barometer has made us familiar, but enormously more delicate and sensitive, the minute pulsations, which occur in the layer of tissue immediately beneath the outer rind of the stem, are magnified — literally millions of times — and recorded automatically in a dotted graph on a moving sheet of smoked glass. Bose's instruments have made visible things that have been hitherto impossible to see, even with the aid of the most powerful microscope.

Task3:

1. Whose experiment is talked about in the beginning of the passage?
2. Where is Bose Institute located?
3. What did they encounter in Bose's lab?
4. How did the instrument record the beating of plant's heart?
5. How did the plant feed itself?
6. How is the growth of the plant recorded?

2. SPEAKING

Brainstorming



Image Source: <https://www.flickr.com/photos/143716469MNO6/45479649134>

Brainstorming is a process carried out to generate ideas within a group which is done in the initial stages of a project. It paves way to unleash many creative ideas in a non-judgemental environment. An effective brainstorming session will last anywhere between 15 and 45 minutes. An ideal time frame would be 30 minutes. The size of a group may vary from four to eight members.

Instructions to be followed during brainstorming:

1. Articulate the research topic clearly to the group members.
2. Encourage the generation of creative ideas.
3. Accept every idea discussed in the group.
4. Do not abstain from any idea.
5. Do not criticize or evaluate ideas.
6. Try to build upon the ideas.
7. Record ideas accurately.
8. Evaluate the brainstorming session.

Mind Mapping:

Mind Mapping is one of the effective forms of Brainstorming. A mind map gives a visual representation to our ideas and concepts. This visual tool will

help us structure our ideas in an enhanced way. The visual representation of ideas will promote a better analysis, comprehension and synthesis of the ideas. The use of different words, images, colours to highlight or to differentiate the ideas will give a visual appeal to our thought.

Mind Map can be created on a paper or digitally using different visual mapping softwares. There are many websites that help us construct mind map digitally.

Example:

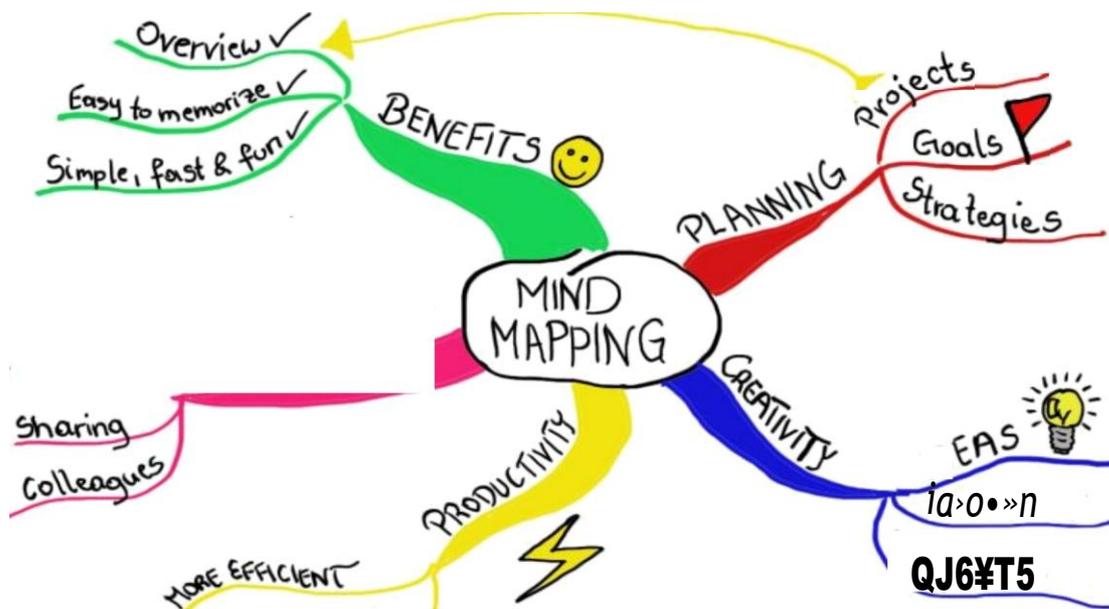


Image Source: <https://www.active-talents.com/en/mind-mapping-course-18-september-2018-nice/>

Instructions to generate a Mind Map:

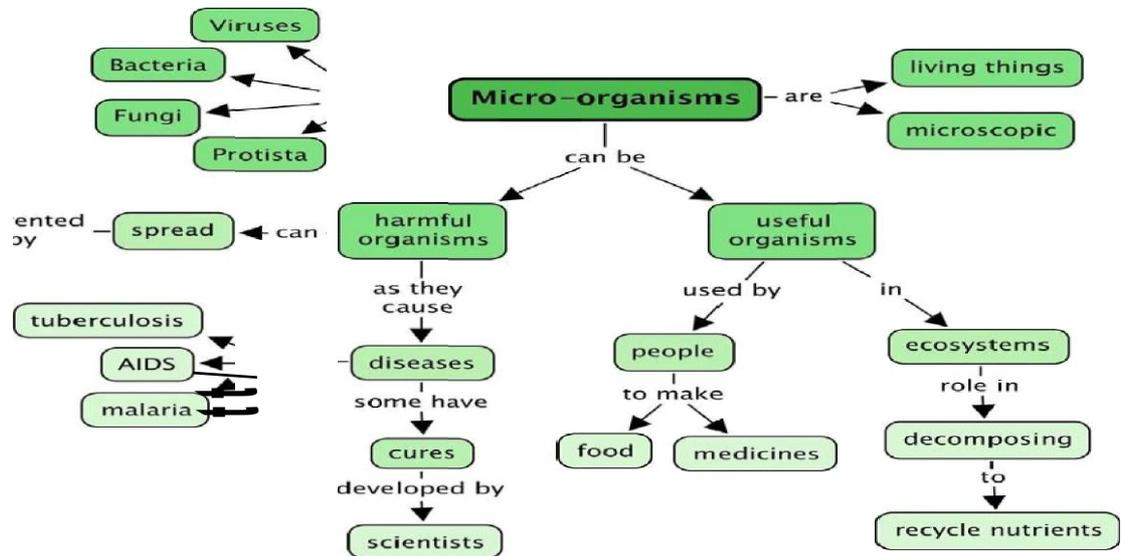
1. Write the research topic in the centre of a blank sheet.
2. Jot down the sub topics around the research topic.
3. Repeat the same process for generating the associated ideas to the subtopics.
4. Do not filter out ideas.
5. Keep the topics and ideas as short as possible.
6. Determine how the ideas are associated with the subtopics and how the subtopics are linked to the given research topic.
7. Identify the relationships between the ideas and between the subtopics and the research topic with lines or arrows.

8. Use of images and different colours will add effect to your mind map.
9. Reorganise the ideas using the identified relationships.

Mind Map: Micro-Organisms

Image Source:

<https://www.flickr.com/photos/121935927@N06/13537347284>



Task 1: Sketch mind maps for the following:

1. Food Adulteration
2. Protein rich diet
3. Role of Microbes in human welfare

Small Group Discussion



Image Source: <https://webstockreview.net/imaoes/conversation-clipart-oroup-work-1.nno>

A small group discussion allows everyone in the group to contribute their ideas for others to reflect upon. In other words, it follows the democratic guidelines that give opportunity to all to exchange their ideas as per the direction of the Moderator. Brewer in *13 Proven Ways to Get Your Message Across* says, “Its (Small Group Discussion) goals are to spark new thought and concept exploration, encourage analysis of factual information, and develop open-mindedness toward new attitudes and beliefs, so as to accept the opinions of others.”

Steps to be followed:

1. The Moderator must initiate the discussion by announcing the topic and its background information to make the topic familiar to the participants.
2. The Moderator must explain the objective and the purpose of the discussion to the participants.
3. If the topic is unfamiliar to the participants, the Moderator should give some time to the participants to do a little research about the topic.
4. Once the discussion begins, the Moderator should stimulate the discussion by asking various questions related to the objective of the topic.
5. Each and every participant in the group should contribute ideas.
6. When the ideas are articulated by the participant, it should be analyzed and evaluated by others in the group.
7. Every Small Group Discussion should end with summarizing the ideas discussed and recorded.

Reframe Disagreements in Constructive Ways

Source: <https://uni.edu/-reineke/ouidelin.htm#What /o2OHappens>

Say This	Instead of This
I don't think I agree. Could you explain?	That doesn't make sense at all.
I disagree because' I see it differently because	Wow! That is ever drub.
I think we should check our notes and the original assignment.	That is not what the teacher asked us to do.
It might be better to Have you considered	You are dead wrong.
Does everyone agree?	Let's vote on it.
I understand how you feel, but I think you might consider also ...	That really offends me!

Advantages of Small Group Discussion:

1. A small group will facilitate the participants to gel easily with others which in turn will help them discuss without fear.
2. It allows all the participants to contribute their ideas.
3. The moderator can easily identify the participant who needs assistance.

Disadvantages of Small Group Presentations:

1. Time Consuming
2. If unchecked by the Moderator, the discussion might move away from its right track.

GM seeds: the debate, and a sowing agitation

← → ↻ indianexpress.com/article/explained/gm-seeds-the-debate-a-sowing-agitation-6452999/

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GM seeds: the debate, and a sowing agitation

In the current kharif season, farmers would undertake mass sowing of GM seeds for maize, soyabean, mustard brinjal and herbicide tolerant (Ht) cotton, although these are not approved.

Written by [Parthasarathi Biswas](#) | Pune | Updated: June 12, 2020 12:56:06 pm

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Genetic engineering aims to transcend the genus barrier by introducing an alien gene in the seeds to get the desired effects. (File Photo)

Last week, Shetkari Sanghatana — the farmers' union founded by the late leader Sharad Joshi — announced fresh plans in its agitation for use of genetically modified seeds. In the current kharif season, farmers would undertake mass sowing of GNI seeds for maize, soya bean, mustard, brinjal and herbicide tolerant (Ht) cotton, although these are not approved. Farmers had carried out a similar movement last year, too.

What are genetically modified seeds?

Conventional plant breeding involves crossing species of the same genus to provide the offspring with the desired traits of both parents. Genetic engineering aims to transcend the genus barrier by introducing an alien gene in the seeds to get the desired effects. The alien gene could be from a plant, an animal or even a soil bacterium.

Bt cotton, the only GM crop that is allowed in India, has two alien genes from the soil bacterium *Bacillus thuringiensis* (Bt) that allows the crop to develop a protein toxic to the common pest pink bollworm. HtBt, on the other, cotton is derived with the insertion of an additional gene, from another soil bacterium, which allows the plant to resist the common herbicide glyphosate.

In Bt brinjal, a gene allows the plant to resist attacks of fruit and shoot borer. In DMH-11 mustard, developed by Deepak Pental and his colleague in the South Campus of University of Delhi, genetic modification allows cross-pollination in a crop that self-pollinates in nature.

Across the world, GM variants of maize, canola and soya bean, too, are available.

What is the legal position of genetically modified crops in India?

In India, the Genetic Engineering Appraisal Committee (GEAC) is the apex body that allows for commercial release of GNI crops. In 2002, the GEAC had allowed the commercial release of Bt cotton. More than 95 per cent of the country's cotton area has since then come under Bt cotton. Use of the unapproved GM variant can attract a jail term of 5 years and fine of Rs 1 lakh under the Environmental Protection Act, 1989.

Why are farmers rooting for GM crops?

In the case of cotton, farmers cite the high cost of weeding, which goes down considerably if they grow HtBt cotton and use glyphosate against weeds. Brinjal growers in Haryana have rooted for Bt brinjal as it reduces the cost of production by cutting down on the use of pesticides.

Unauthorised crops are widely used. Industry estimates say that of the 4-4.5 crore packets (each weighing 400 gm) of cotton sold in the country, 50 lakh

are of the unapproved HtBt cotton. Haryana has reported farmers growing Bt brinjal in pockets which had caused a major agitation there. In June last year, in a movement led by Shetkari Sanghatana in Akola district of Maharashtra, more than 1,000 farmers defied the government and sowed HtBt cotton. The Akola district authorities subsequently booked the organisers.

Environmentalists argue that the long-lasting effect of GNI crops is yet to be studied and thus they should not be released commercially. Genetic modification, they say, brings about changes that can be harmful to humans in the long run.

What is the movement about?

The Sanghatana has announced that this year they are going to undertake large-scale sowing of unapproved GM crops like maize, HtBt cotton, soya bean and brinjal across Maharashtra. Farmers who plant such variants will put up boards on their fields proclaiming the GNI nature of their crop. Anil Ghanwat, President of the union, has said this action will draw attention to the need for introduction of the latest technology in the fields. He said farmers will not be deterred by any action taken against them by the authorities.

Source: <https://indianexpress.com/article/explained/om-seeds-the-debate-and-a-sowino-agitation-6452999/>

Reference:

Brewer, Ernest w. *13 Proven Ways to Get Your Message Across: The Essential reference for Teachers, Trainers, Presenters and Speakers.* **California: Corwin Press, Inc, 1997.**

Task 2:

Read the News Article on Genetically Modified (GM) Crops. Divide the class into small groups of six and discuss the advantages and disadvantages of Genetically Modified (GM) Crops. One person in the group will act as the moderator of the discussion.

3. READING

Reading is a great habit, which can change human life significantly. It can entertain, amuse, and enrich people with knowledge and experiences. All aspects of life are learnt through reading and writing. Reading helps you build your repertoire of vocabulary, grammar and ability to organise your ideas for oral and written presentations. Reading and writing are inter related skills. That is why we say good writers are good readers.

Now, read to understand the given passage as a whole; try to understand the new vocabulary in the context. Do not refer to dictionary very often.

PASSAGE J-THE BASIC MACRONUTRIENTS AND MICRONUTRIENTS

There are many essential plant nutrients, but they can be divided into two general groups based on the quantities of the nutrient needed for a healthy plant: the macronutrients, which are required in relatively large amounts, and the micronutrients, which are sometimes required in only trace amounts. This separation of macronutrients and micronutrients is a useful idea for tracking the importance of various minerals to plant nutrition.

There are six basic macronutrients required virtually by all plants: nitrogen (N), phosphorus (P), potassium (K), sulphur (S), calcium (Ca), and magnesium (Mg). These are the main elements, apart from carbon (C), hydrogen (H), and oxygen (O), which are not considered plant nutrients. For each macronutrient, there is a set of properties that must be considered, namely:

- The functions of the element in the plant
- The original sources of the element in the natural world (other than decaying matter from other organisms) and the nutrient's abundance or availability
- The forms of the nutrient available to the plant
- The likelihood of deficiency in a plant

- The specific effects of deficiency

Micronutrients are the essential elements required by plants in relatively low concentrations. Micronutrients form a coherent group, including eight core elements: iron (Fe), sodium (Na), chlorine (Cl), boron (B), manganese (Mn), zinc (Zn), copper (Cu), and molybdenum (Mo). Some scientists consider silicon (Si) a micronutrient. Though, not known to be essential, it is accumulated by plants and used in the plant body at a fairly high concentration. Cobalt (Co) is an essential micronutrient for plant species that form root nodules. Additionally, nickel (Ni) is a micronutrient that, while essential, is virtually never limiting or deficient in the natural world. In the rare cases when it is limiting, symptoms include reduction in leaf size, cupping of the leaf, and reduced vegetative growth. It is also a component of a single enzyme, urease. When grown without nickel, plants fail to produce urease in sufficient quantity and can suffer effects of accumulating toxic quantities of urea in the cells. Plants need micronutrients in low enough concentrations that the relative likelihood of deficiency is far less than for the macronutrients.

Task 1:

I. Answer the following questions in your own words:

1. What are macro and micro nutrients?
2. What is the source of macro and micro nutrients?
3. List the macronutrients and the micronutrients.
4. What is the difference between macro and micro nutrients?
5. Enumerate the consequence of the micronutrient nickel deficiency in a plant.

II. Find the one-word **substitute in the passage for the following:**

- a. a substance that provides nourishment essential for the maintenance of life and for growth.
- b. a solid, naturally occurring inorganic substance.

III. Inferential understanding: (Find the words from the passage)

- a. Macro and micro nutrients are the _____required for plant nutrition.
- b. Plants require less of_____than _____

IV. Say whether the following statements are correct.

- a. Macro and micro nutrients are grouped on the basis of quantities of their need for a healthy plant.
- b. Silicon is a micronutrient found in large concentration in plant bodies.
- c. Cobalt is an essential macronutrient.

TASK 2:

- a. With your understanding of the above passage prepare a tree diagram of nutrients required for a healthy plant.

PASSAGE 2- Fashion Trends

Clothing in India varies depending on the different ethnicity, geography, climate and cultural traditions of the people of each region of India. In a country like India, variety of attire can be spotted. In current days, colours for each occasion are also brought into practice due to the mass availability of materials and swift labouring of designing the clothes. It has a diversity in terms of weaves, fibres, colours and material of clothing. India's recorded history of clothing goes back to the 5th millennium BC in the Indus valley civilization where cotton was spun woven and dyed. Dhoti wrap is a predecessor to the modern sari. Likewise, trends in clothing have been changing from time to time.

Initially Romans and Egyptians showed great interest in fashion and spent a lot of effort and currency on it. The court decided the fashion. During 17th century the working class people started imitating the aristocrats at an

affordable price. Gradually, the clothing during this period reflected the social standing of the wearer. The traders and merchants and the aristocrats differed by the choice of their clothing. The Industrial Revolution in Britain that took place from 1760 to 1840 greatly helped the textile manufacturing to flourish by bringing machines for production and tailoring. Until then weaving, embroidery, cutting, stitching was only hand-crafted by skilled craftsmen and seamstress. Knitted and woven fabric of fine gauge were started to be produced by these machines. Thus, the invention of sewing machine in the year 1790 enabled speedy manufacturing of garments with less labour. The mechanised mass production of textiles meant clothing became more widely available and cheaper. Yet, at the same time it was made easy to meet the designers' need.

Only after this, fashion became a stigma to showcase a personal style. Around 20th century, even the common mass adopted fashion in a larger scale. This changed a great deal in fashion history. The introduction of synthetic fibre, the availability of cheaper and much practical clothes are the main reasons for this change. This denotes that following fashion trends was really expensive during past-time.

During the La Belle Epoque period dresses were extravagantly decorated and no woman was able to dress on her own because of many layers and petticoats under the gown. Fashion magazines and Cinema industry are the greatest impacts for the spread of new trends in fashion. Designers and boutique brands are all over the world now. In many Asian countries, local designers can charge a small fortune for exclusive bridal wear, wedding attire and other formal wear apart from regular wear. Thus, history shows us that changes in costume often took place at times of social and economic change.

Task 1:

Read the passage again and answer the questions that follow:

1. Is fashion closely interlinked with the history of the world?

2. What is embroidery?

3. Infer what is style.

4. Infer what is fashion.

5. Why were fashion dresses most welcomed by the masses?

6. Initially common people only wore plain clothes often. How do you find it in 20th century?

7. What could be the reason that 20th century became the abode of fashion styling by every country?

8. When did the Industrial Revolution take place?

9. How did Industrial Revolution help textile industry?

10. What does the word 'mechanised' refer to?

4. WRITING

Essay Writing

Why learn the skill of writing an essay?

What do you do with information gained through a class lecture or by reading articles and books or browsing the internet? Do you verify its legitimacy? Do you dig in deep to confirm the data analysed and statistical 'facts' presented? We live in a time of misinformation where fake news travels fast through social media. While information is power, misinformation is an utter disaster. It can ruin people's lives and career. Therefore, it is our responsibility to learn how best information can be used to build lives and benefit the society.

Information, when properly utilized gets transformed into knowledge. The key learning of how to process information into knowledge can be learnt through the timeless art of essay writing. Who writes an essay in this age of digital communication you may ask? But the fact is, every scientific progress and development that ever existed was written as a research paper.

You may be brilliant in comprehending the world around you. Innovation can ooze from your very being. But, unless you learn how to present your thoughts and creative ideas in the form of a well composed essay, all your brilliance may only be a former shadow that will soon disappear into the night. So buckle up.

Let us journey through the process of converting information into knowledge through essay writing.

First things first

Before you begin to write your essay you need to ask yourself three questions: To whom am I writing? Why am I writing? What am I going to say? Bearing these questions in mind will keep your writing focused and avoid digressions.

Form and content

A well composed essay has a beginning, middle and an end or an introduction, the body of the essay and a conclusion. What you are going to say will be your core or the central idea. This should appear in the first paragraph which is the introductory paragraph. Why? This will set the purpose of your essay and will attract your reader. So you need to make this part as interesting and captivating as possible. The introductory paragraph sets the reader in anticipation for what is to follow. So make sure that you include the main points of discussion in this paragraph.

The rest of the composition will focus on expanding, explaining, arguing, comparing, contrasting, describing or substantiating your core idea through valid points that you had already mentioned in the introductory paragraph. To make things smooth for your readers, you will have to devote one paragraph for one idea. Depending on the word limit you may have the required number of paragraphs. Remember the golden rule of paragraph writing: One idea is equal to one paragraph.

Give leverage to your writing by adding quotations in order to substantiate your statements. Provide examples, facts, quotations and any other form of proof that can validate a stronger emphasis to your ideas. Leave your emotions bottled up for the time being and focus on how you may evolve objectivity in your writing. Then you can sprinkle the flourish of your emotions in subtle places to add the element of pathos wherever appropriate. This will connect your essay with your readers.

Read and reread your essay and check if the cohesive devices are put to good use. Check for coherence within each paragraph, i.e. check if each paragraph explains one idea. If your essay looks like a seed slowly grown into a tree then it is good to go. If you feel it looks like a flower garden trampled upon and all over the place then you would have to go over your ideas to see how you have developed them. Reinforce and summarize your arguments at the end of every paragraph in one sentence so that it will provide that connectivity and seamless flow of thoughts. Edit your essay and proofread it to avoid gaining negative popularity among your critics.

Now that you have journeyed your readers through the body of the essay you need to gently let them dock. Otherwise you have lost the readers in an ocean of ideas not knowing where it all leads to. Compose a conclusion that will enable your reader to retrace your ideas and connect it to the core idea with which your journey began. You need to gently lead them on to the shore where they will relish memories of a pleasant journey with you. At the end of this endeavour you would have gained the skill to transform information into knowledge. This is the learning outcome of the essay writing process.

PASSAGE 1- Essay on Conservation of Nature

Introduction

Nature has provided us numerous gifts such as air, water, land, sunlight, minerals, plants, and animals. All these gifts of nature make our earth a place worth living. Existence on Earth would not be possible without any of these. Now, these natural resources are present on Earth in plenty. Unfortunately, the necessity of most of these has increased extremely over the centuries due to growth in the human population.



What is Conservation of Nature?

Conservation of nature means the preservation of forests, land, water bodies, and minerals, fuels, natural gases, etc. And to make sure that all these continue to be available in abundance. Thus, all these natural resources make life worth living on Earth. Life would not be imaginable without air, water, sunlight as well as other natural resources present on the earth.

Thus, it is essential to conserve these resources in order to retain the environment integral. Here is a look at the types of natural resources existing on Earth and the ways to conserve these:

Types of Natural Resources:

Renewable Resources: These are resources such as air, water, and sunlight that refill naturally.

Non-Renewable Resources: These are resources like fossil fuels and minerals that do not restock reform very slowly.

Biotic: These originate from living beings and organic material like plants and animals.

Abiotic: These come from non-living things and non-organic material. These comprise air, water, and land as well as metals like iron, copper, and silver.

Natural resources are also categories such as actual resources, reserve resources, stock resources and potential resources based on their development stage.

How to Conserve Nature and Its Resources?

Many of the natural resources are being used at a faster rate when compared to their speed of production. There is so a necessity for conservation of nature and the natural resources it offers. Here are some of the ways in which these resources can be conserved.

Reduce Water Consumption

Water is available in abundance on Earth. This is one of the reasons people do not consider much before using it. However, if we keep using it at this speed. In future, we may not be left with as much of it. Therefore, simple things such as turning off the tap while brushing or reusing the leftover water to water the plants can help in this direction.

Reduce Usage of Electricity

Use only as much energy as you require. It is thus advised to limit the use of electricity. Simple habits such as turning off the lights before leaving your room, turn off the electric appliances after use. Switching to energy-saving fluorescent or LED bulbs can make a change.

Restrict Usage of Paper

Paper manufacturing depends only on trees. Increasing the use of paper means encouraging deforestation. This is one of the key reasons for concern in today's world. Always ensure you use only as much paper as necessary. Stop taking print outs and use e-copies instead to do your bit.

Use Newer Agricultural Methods

The government must be aware of the methods such as mixed cropping and crop rotation. Also, the government should teach the minimum use of pesticides, insecticides. Appropriate use of manures, bio-fertilizers, and organic fertilizers by the farmers must be taught and encouraged.

Spread Awareness

Spreading awareness about the conservation of nature is always a necessary step. It can be achieved only when more and more people understand its importance and the ways in which they can help. Besides this, it is essential to plant more and more trees. It is necessary to contribute towards lowering air pollution. We must use shared transport and employ rainwater harvesting systems to conserve nature.

Conclusion

Nature comprises of everything that surrounds us. The trees, forests, rivers, rivulets, soil, air are all part of nature. Keeping nature and its resources is integral as it is very important for the continuation of life on earth. It would be difficult to imagine life on earth, which has a spoiled natural environment.

Therefore, taking appropriate steps to conserve nature in its untouched form is the need of the hour. It must be a priority for the human race. Only human beings with their power and ability can save nature in its purest forms.

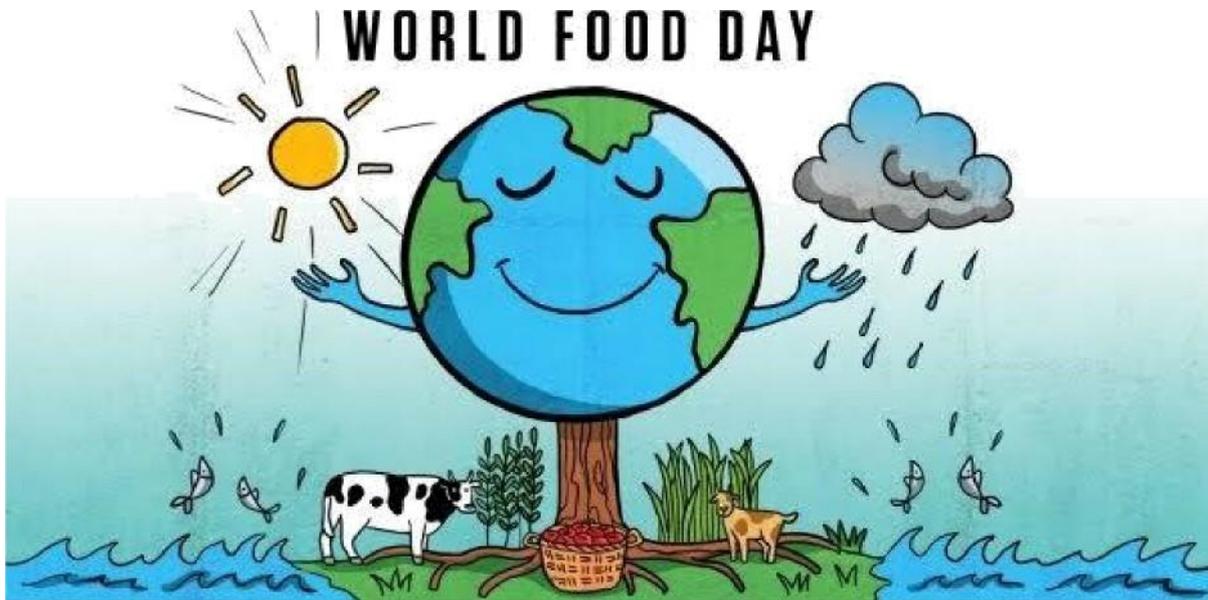
Source:

<https://www.toppers.com/guides/essays/essay-on-conservation-of-nature/>
<https://www.youtube.com/watch?v=HvrmAdicEbY>

Activity:

- Write an autobiographical essay on 'I am a butterfly' or 'I am a lion'
- Write an essay on how ocean pollution harms marine creatures.

PASSAGE 2- HEALTHY DIET



World Food Day 2019: FAO calls for healthy diet to build zero-hunger world

The United Nations body noted that people around the world were either suffering from obesity or food insecurity. People globally should eat healthy diet for a zero hunger world, the United Nations (UN) Food and Agriculture Organization (FAO) has said in a booklet that it released ahead of World Food Day on October 16.

Shifting to a healthier diet by eating more seasonal fruits and vegetables and reducing the consumption of junk food could help in meeting the 'zero hunger' goal of the UN-mandated Sustainable Development Goals, the document said. Over 820 million people — approximately one in nine people around the world — were hungry and malnutrition affected one in every three people, the FAO noted. The world was facing a crisis of extremes, the UN body said, with many affected by obesity and others by food insecurity.

Humans have become more obese with their diets shifting from seasonal, mainly plant-based and fibre-rich dishes, to high-calorie diet, rich in refined starches, sugar, fats, salt, processed food and often marked by excessive consumption of meat, according to FAO.

This was due to globalisation, urbanisation and income growth, it added. People spent less time preparing meals at home and cooked food and packed food were available at just a mouse click.

On the other hand, many people globally were suffering from food insecurity, a situation in which people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. “But food security in our times isn’t only a matter of quantity. It’s also a question of quality. Unhealthy diets have now become a leading risk factor for disease and death worldwide. There is an urgent need to make healthy and sustainable diets affordable and accessible to everyone,” the FAO document stated.

Farm to fork

To make a change, all key stakeholders need to join hands and make the shift, the FAO said. Over 30,000 edible plant species are known to humanity, out of which, only 200 are cultivated at the farm level. At the end of the day, 50 per cent of humans’ calorie intake comes from just eight major crops namely wheat, maize, rice, barley, beans, groundnut, maize, potatoes, and sorghum.

At the farm level, more seasonal, indigenous crops need to be cultivated to meet nutritional needs, the booklet said. In India, this is already being done as millets have become a superfood and are believed to fight against food insecurity. Private industries need to produce products with less sugar, salt and fat, the booklet added.

In this case, India is still waiting for the red-label regulation from the Food Safety and Standards Authority of India (FSSAI). On the other hand, though, FSSAI has mandated that food products should not contain more than three per cent

industry-made trans-fat from January 2021. By 2022, FSSAI plans to bring the trans-fat level down to two per cent.

Another factor that could help in fighting food insecurity is less wastage of food. The State of Agriculture report published by FAO on October 14, 2019, stated that “globally, around 14 per cent of the world's food is lost after harvesting. Around 60 per cent of the total micronutrients are lost because of wastage of fruits, vegetables, and animal-based products at various levels after harvest”.

If these losses could be avoided by providing more infrastructure and new technologies, 60 per cent of micronutrient losses would be saved. To reduce the amount of food waste entering landfills, a new strategy is being followed by city-dwellers around the globe which is called the community fridge. Similarly, a new strategy needs to be brought in at each stage of the food market chain post-harvest.

Task 1: Write an essay on the main ideas explained in the passage on 'Healthy Diet'.

Task 2

Communication becomes expressive and aesthetic with the use of language in certain contexts. Stylistic and figurative use of language is part of social and cultural aspect of any language. For example, take collocations and idioms in English : the term collocation refers to set of words that regularly seem within the same context. On the contrary, the term idiom means an expression which functions as one unit and whose meaning cannot be found out from its separate components. Such expressions found in the passage have to be understood in the context for better understanding.

Explain the following collocational and Idiomatic use of vocabulary

- 1. Healthy diet**
- 2. Zero Hunger World**
- 3. fibre-rich dishes,**
- 4. high-calorie diet**

5. Farm to fork
6. stakeholders
7. Seasonal crops
8. Indigenous crops
9. Food waste entering landfills
10. Food market chain

Group: 2-LIFESCIENCES

UNIT - 4

PRESENTATION SKILLS

Listening

- Listening to lectures

Speaking

- Short talks/ speeches

Reading

- Comprehension passages

Writing

- Recommendations
- Interpreting visual inputs

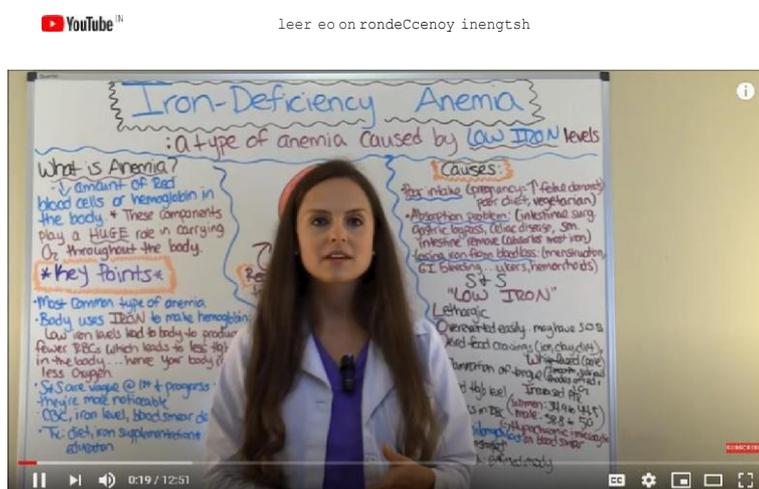
Vocabulary

- Register specific (Incorporated into the LSRW tasks)-

1. Listening

Listen to the video using the link given below. It's a lecture by a Professional who explains what iron deficiency is, its causes, diagnosis and treatment for the deficiency.

Iron Deficiency- Anaemia



Iron Deficiency Anemia Treatment, Nursing, Pathophysiology, Symptoms w/ Nursing Interventions

<https://www.youtube.com/watch?v=Q3b-Vsh5NEo>

Here is the lecture transcription:

Iron deficiency anaemia is a type of anemia caused by low iron levels in the body. Anaemia is a condition where there is a low amount of red blood cells or hemoglobin in the body. Red blood cells and hemoglobin are responsible for the transport of oxygen throughout the body to the tissues and organs. Iron is responsible for making hemoglobin. When iron levels are low in the

body red blood cells and hemoglobin do not work properly which leads the patient to feel symptoms of lethargy, pallor, tachycardia, weird food cravings (ice, clay, dirt), inflammation of the tongue (glossitis), nail changes such as koilonychia (spoon-shape of the nails) etc. Treatment for iron-deficiency anemia includes iron supplementation, increasing iron in the diet with foods rich in iron (such as egg yolks, red meats, poultry, shellfish, fish, legumes, seeds etc), and prevention. The causes of iron-deficiency anemia include poor intake of iron (as with pregnancy, vegetarian diet, or malnourishment), blood loss (GI bleed, menstruation), or absorption issues (as with Celiac disease, GI surgery etc). It is diagnosed with complete blood count (CBC), iron level, or blood smear to assess the RBC which may appear hypochromic (pale) and microcytic (small)

What is Anaemia? Anemia is a decreased amount of red blood cells or hemoglobin in the body. These components play a huge role in carrying **oxygen throughout** the body. If you are low in RBCs or hemoglobin, your body won't receive enough oxygen to function properly.

Key **Points** about Iron-Deficiency Anaemia:

- Most common type of anaemia (there are various types)
- Body uses IRON to make **hemoglobin**
- Low levels of iron lead the body **to produce** fewer red blood cells which leads to less hemoglobin in the body. Hence, your body receives less amounts of oxygen.
- Signs and symptoms are vague at first and as it progresses the signs and symptoms become more noticeable
- A blood test such as a CBC (complete blood count) or iron level will help the doctor detect anaemia.

- Women who are childbearing age may be plagued with this due to heavy menstruation or pregnancy and people with poor digestion (intestinal issue) or poor intake of iron.
- Treatment includes: incorporating more iron in the diet, taking iron supplements, and prevention.

Let us practice some Listening Activities:

Syllabification:-

Words are made of letters. Each letter has a sound. But in a word the sounds are pronounced in a different way. Words are to be pronounced by their components. These components are made by small parcels of letters which prominently take a vowel to make a sound of it.

Try pronouncing the following words with pauses shown by the strokes.

1. I/ron - Di syllabic word
2. De /fi/ci/en/cy - Penta syllabic word
3. Cli/ni/cal - Tri syllabic word
4. Treat/ment- Bi syllabic word
5. Pha/go/cy/tose- Tetra syllabic word

So it is understood that words can be mono syllabic or poly syllabic.

Task 1:

Syllabify the following words:

Crucial

Absence

Reduction

Associated

Hypochromic

Task 2:

Read the following comprehension passage related to anaemia and answer the questions.

Poverty, malnutrition and famine are self-explanatory causes of anemia in the multitude of people living with iron deficiency in developing countries, especially children and pregnant women. In addition, a cereal-based diet decreases iron bio availability because phytates in grains sequester iron in a poorly absorbable complex.

Other common causes in developing countries include hookworm infections and schistosomiasis, which cause chronic blood loss. Strict vegan and vegetarian diets, mal absorption and chronic blood loss resulting from heavy menstrual losses are well-known causes of iron-deficiency anemia in developed countries. Chronic blood loss from the gastrointestinal tract, including occult blood, especially in male patients and elderly patients, may reveal the presence of benign lesions, angio dysplasia, or cancer.

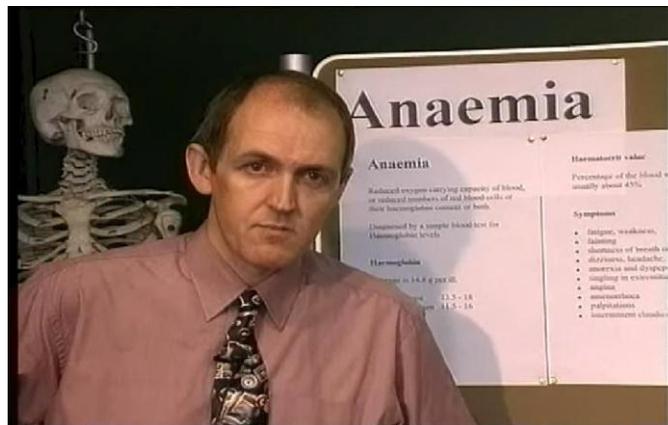
Answer the following questions:

1. What are the causes of anemia in developing countries?
2. What is the meaning of the term 'sequester'?
3. Which are the causes of blood loss?
4. List out the causes of iron-deficiency anemia in developed countries.
5. What may reveal the presence of benign lesions, angio dysplasia, or cancer?

Task 3:

Given below is a lecture by Dr. John Campbell in You Tube. Using the link listen to his lecture and take notes

[.https://www.youtube.com/watch?v=Dh9tj67TE](https://www.youtube.com/watch?v=Dh9tj67TE)



Anaemia Part 1

30,880 views · Jun 4, 2007



2. SPEAKING

Short speech:

As University students, each pupil will have to deliver seminars and presentations in one's subject area. These could be achieved by practicing short speech of 2-5 minutes. This practice will gradually help any student present his or her ideas comfortably in the seminars and other presentations.

Let us learn step by step.

Step 1: Choose a topic that you feel comfortable with.

Step 2: Get familiarized with the topic by doing a background study (this will help in making you more comfortable with the topic).

Step 3: Know the types of speech that can be delivered to present any idea.

Types of speech	Purpose
Persuasive	To make your audience accept what you believe
Informative	To give information on the chosen topic
Cause and Effect	To explain the phenomena
Problem and Solution	To state the problem and to propose/suggest a solution

Now we are clear about which type to choose to deliver our idea.

Step 4: Frame a preparation outline of the topic.

A preparation outline is where you write your content in full sentences. It helps you to be organized.

Step 5: Don't add too many ideas. Limit it because you are preparing a short speech.

Step 6: Find supporting points for your chosen ideas.

Step 7: Write what you have planned to deliver. This will help you shape the Introduction, the Body and the Conclusion of the speech.

Step 8: Read it aloud. If you sound like a person talking, then you are ready to rehearse.

Additionally, prepare a speaking outline. Speaking outline carries your keywords and phrases on note cards to have speaking sequence.

While rehearsing

(first with your written notes, then with your note cards)

Do not read

Speak like you are
having a
conversation

Relate it to you and
rehearse

To ensure that everyone listens to you, concentrate on your tone and pauses as well.

Practice short speech preparation

Topic: Eating healthy in busy lifestyle

Purpose: To inform audience how to prefer healthy food

Introduction:

How many of you want to be healthy?

How many of you find it difficult in finding healthy food routine because you are always busy? Most of us are.

Today we will discuss on how each of us can incorporate healthy eating into our lifestyle even if we are busy.

Body:

I Healthy choice- packing lunch

- Can choose in variety than in restaurants
- Less expensive
- Less time-consuming varieties are available
 1. Fire free cooking
 2. Fruits
 3. Can prepare the night before for convenience and time management

II Wise choice-if eating out

- Identify the restaurants that have healthier choices in their menu
 1. Salads
 2. baked foods
 3. Fruits
 4. Low-carb options
- Make choices that are better
 1. Ask to hold mayo and other fattening sauces
- Choose broiled or grilled instead of fried

III Keep healthy snacks to save you from hunger

- Whole grain cereal bars
- Nuts
- Fruits
- Yogurt smoothies
- Water-lots of it

Conclusion

Today we have looked into various available options for healthy intake in our busy schedule. We took a minute or two to really think on packing healthy food from home and choosing healthy items from menu cards. Let us not miss our easy to carry nutritious snacks that help us a lot in maintaining our size too. And thus a busy life style can very well have space for healthy eating.

This is how a worked out written copy of your short speech would appear.

Practice videos: watch Ted and Tedx talks on your favourite topics and understand how their speech is short and organized. These talks are presented for a minimum of 3 minutes to 18 minutes for a short presentation.

YouTube links for reference on short speech:

<https://youtu.be/ayegWKPJTK8>

<https://youtu.be/VISODMuL8Ow>

<https://youtu.be/MfxPXvYEglU>

<https://youtu.be/iPNXUHwKFJo>

Task 1 :

Work-out a short speech on the topic given below

Chocolate is a psycho addictive food

Purpose: _____

Introduction

Body

I _____

Supporting points

II _____

Supporting points

III _____

Supporting Points

Conclusion

Task 2

Develop your speaking skill in an organized way by training yourself with Just-A—Minute game.

The steps are the same. The number of supporting points are reduced.

The topics are:

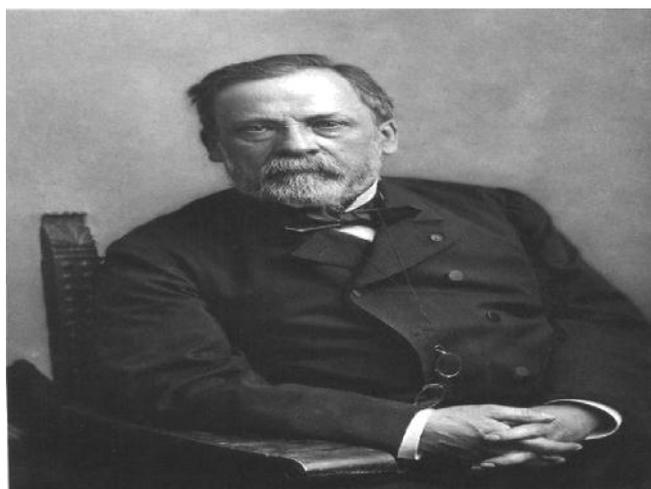
1. Why are monkeys so good at climbing trees? (informative)
2. The Animal Welfare Act of 1996 is outdated and needs to be revised (persuasive)
3. Frustrations of colour-blind people. (informative)

3. Reading

Reading is a vital means to learn any language. In the process of reading, one understands the meaning of any given text either factually or by making inferences. It depends on the readers' interaction with the given text. This understanding while reading is called reading comprehension.

It is not necessary to understand every word in order to grasp the meaning. Good reading means the ability to process chunks of language larger than single words. The context will help in comprehending.

PASSAGE 1-Era of Louis Pasteur vaccination



Pasteur

Pasteurwissenschaftliches Institut in Bordeaux

In 1879 in France, Louis Pasteur was studying the bacterium that causes a disease of chickens called fowl cholera. Pasteur possessed a culture a culture of this bacterium that, when injected into chickens, consistently caused an infection that killed them. One afternoon he told his assistant, Charles Chamberland, to infect some birds with the culture. Since it was late in the day and he was about to go to vacation, Chamberland decided to

postpone the experiment until he returned. As a result, the chickens eventually received an injection of the bacterial culture that had remained in the bench for several weeks. The inoculated chickens remained healthy. Pasteur then decided to inject these chickens with a second dose of bacteria from the fresh bacterial culture. To Pasteur's surprise, the birds survived this second dose without becoming ill. Pasteur, with remarkable insight, recognized that this phenomenon was identical in principle to vaccination. By injecting his chickens with the aged culture of bacteria (a vaccine), he had protected them against disease caused by a fresh culture of the same organism.

Once he had established the general principle of vaccination, Pasteur tried to apply it to other infectious diseases. He first produced a vaccine against anthrax, a disease caused by a bacterium called *Bacillus anthracis*. Pasteur found that he could not make this organism safe by aging it on the laboratory bench, but he could do so by growing it at an unusually high temperature. Pasteur then conducted a public experiments that convincingly showed that administration of hi heated anthrax culture would protect sheep, cattle and goats against s subsequent lethal dose of anthrax bacteria. A few years later he developed an effective vaccine against rabies. He thus showed that the general principles of vaccination applied to diseases other than smallpox, and this approach could be used to protect animals and humans against other infections. Louis Pasteur can therefore be considered the founder of the science of Immunology.

Era of First Nobel Prize in medicine for production of antibodies

Pasteur, although remarkably successful in developing effective vaccines, had little concept of the mechanisms involved. He suggested that the organisms in the vaccines removed essential nutrients from the body and

thus prevented the subsequent growth of the disease-causing agent. It was in Berlin about ten years later, in 1900, that Emil von Behring and Shibasaburo Kitasato demonstrated that the protection induced by vaccination was not due to removal of nutrients but was associated with the appearance of protective factors in the blood. They called these factors antibodies.

The first Nobel Prize in medicine was awarded to Emil von Behring in 1901 for his work on the production of antibodies against toxins (antitoxins). Within a few years Paul Ehrlich had proved that antibodies could protect animals against foreign toxins other than those found in bacteria (in 1908 Paul Ehrlich was awarded Nobel Prize) and other German, Richard Pfeiffer, had shown that antibodies could clump and then destroy *Vibrio cholera* bacteria, the cause of cholera in humans. The demonstration that antibodies could make a suspension of bacteria clump was soon applied by Isidore Widal to the diagnosis of enteric disease such as typhoid fever. Thus serum from an infected individual would make the bacteria clump, whereas serum from an unaffected individual would not.

Synonyms

A synonym is a word or phrase that means exactly or nearly the same as another word or phrase in the same language, for example *shut* is a synonym of *close*.

- a person or thing so closely associated with a particular quality or idea that the mention of their name calls it to mind.
- **BIOLOGY**

a taxonomic name which has the same application as another, especially one which has been superseded and is no longer valid.

Example

- i. Novel - innovative, unique, singular, modernistic, contemporary
- ii. myth - legend, lore, fantasy, fiction, tradition
- iii. huge - monstrous, colossal, gigantic, enormous, tremendous
- iv. **survivor** - legacy, remnants, leavings, oddments, surplus
- v. determined - resolute, decisive, strong-willed, steadfast, resolved

Task 2

Give the synonyms of the following:

Resistant, mild, hazards, procure, eventually, procedure, technique, portrait, Persist, dissuade, enthusiasm, belief, phenomenon, insight, occasionally, adapt, eradicate, essential, remarkable, enteric, principle, subsequent, infect, inject, induce.

Task 3

Frame sentences **using the following** words:

adapt, eradicate, essential, remarkable, resistant, mild, hazards, occasionally, infect, inject.

Task 4

Collect information on vaccination and write a time-line

Task 5

Match column A with Column B

sl. No.	A	B	
1	Vaccination	a	following in time, order, or place
2	Antibody	b	the act of identifying a disease from its signs and symptoms
3	Variolation	c	very potent or effective
4	Culture(v)	d	a poisonous substance that is a specific product of the metabolic
5	Immune	e	a blood protein produced in response to and counteracting a specific antigen.
6	Lethal	f	the death of large numbers (as of people or animals)
7	Toxin	g	maintain (tissue cells, bacteria, etc.) in conditions suitable for growth.
8	Subsequent	h	not susceptible or responsive; having a high degree of resistance to a disease
9	Mortality	i	inoculation
10	Diagnosis	j	the deliberate inoculation of an uninfected person with the smallpox virus

PASSAGE J-Digestive System

Prof. Radha wanted to explain to her students the functions of the digestive system. Before the class, she penned down the functions as i) Ingestion ii) Digestion iii) Absorption iv) Egestion. She, then went to class, taught her students elaborately and asked them to write down the entire content of the class. The write-up of one of her students reads this way:

Food nourishes our body and influences our health by the nutrition it provides. Nutrition is relatively a new discipline of science that studies food and how the body uses it. Nutrients are substances in food which are carbohydrates, fats, proteins, vitamins, minerals and water. These are the fuels of our body which help us do our job just like any vehicle would need. The energy of these nutrients are measured in kilo calories. On food labels, 'calorie' actually refers to kilo calories (kcal).

The digestive system takes care of the body's need for its fuel. It is made of a group of organs that work together. It starts functioning the moment the food is put into our mouth. First, the salivary glands containing amylase moistens the food. Teeth gets involved in biting and grinding the larger chunks of food into smaller pieces. The tongue then pushes the food after forming it into a bolus, to the back of the mouth to swallow. Through esophagus the bolus reaches the stomach and reacts with gastric juices, mucus and enzymes making it into a soupy liquid. The soupy liquid enters the small intestine and remains there up to six hours. It is after this process, the nutrients pass into the circulatory system and are taken to where they are needed in the body. The ileum compacts the leftovers to pass through into the large intestine. The large intestine absorbs water from the waste material leftover and produce vitamin K and some B vitamins using the helpful bacteria that live in it. Now, all leftover waste is compacted and stored at the end of the large intestine called the rectum.

Task 1. Answer the following questions based on the reading passage.

(Go back to the passage to find your answers)

1. How does the food we take help us in nourishing our body and influencing our health?

The food we take in helps us in nourishing our body and influencing our health by the nutrients it provides.

2. What does the word bolus mean?

Bolus means a small rounded mass of a chewed food before swallowing.

3. Where is Vitamin K produced?

Vitamin K is produced in the large intestine

4. In which organ does the digestion end?

The digestion process ends in small intestine.

(Explanation: "The soupy liquid enters the small intestine and remains there up to six hours. It is after this process the nutrients pass into the circulatory system and are taken to where they are needed in the body." After staying for six hours, the nutrients are taken through the circulatory process. This indicates that the digestion is over and the body can absorb the nutrients)

5. What will happen to the leftovers in the rectum?

It would be pushed out of the body as it is needless.

(Explanation: Though it is not stated, the question demands to think to give it an answer)

The questions above require answers on various rubrics. The rubrics are giving direct answers, inferring answers, vocabulary answers and evaluative answers (thinking, rather than reproducing). The rubrics are mentioned so as to help you realise how reading helps in understanding a text.

4. Writing

Recommendations

Recommendations are suggestions that mildly inform a reader or a listener on certain procedures. A report on an accident usually gives recommendations to avert accidents. They make use of modals and impersonal passive voice structure as far as possible. The following is the list of Sentence Pattern with which recommendations could be framed.

Object — should be -i- verb (participle)

Object — must be — verb (participle)

Object — can be — verb (participle)

Object — need to be + verb (participle)

Object — ought to be + verb (participle)

Observe the sentence pattern of the recommendations (given in bold) in the passage on *How to use a laptop or personal computer*.

The laptop should be kept in a well-ventilated, cool environment. The fan grills on the sides, back, or bottom of the machine at any time should not be blocked because a laptop computer generates a lot of heat, especially when running the latest high-powered software. Too much heat may damage the internal circuitry.

The screen should be handled carefully. LCD screen should never be touched or played with. You may be thrilled to watch the waves generated by your finger against the screen, but LCD displays are fragile devices that must be cared for.

Only approved cleaning materials should be used to wipe the screen.

The rubber feet underneath must be maintained in good condition and should be checked if they are attached. This will prevent the device from sliding around accidentally.

Be careful with those drinks... If you need to have a drink while working or playing, be careful not to spill it. Your laptop computer could suffer the consequences from just a few drops of liquid poured in the right places.

Anti-virus protection is a must for the laptop/ Desktop. Security wise, an anti-virus program must be obtained to safeguard the system from virus attacks

Secondly, keep it updated! Buying an anti-virus one month and not updating it for the next six really negates its purpose. Your laptop computer could be exposed to hundreds and thousands of new viruses every month if it is not updated with anti-virus software.

Pop ups must be avoided. Pop-ups are particularly annoying on a laptop computer. Trying to close a bunch of windows without a regular mouse can be a nuisance. You'll want a pop-up blocker, such as the Google Toolbar (located at <http://tools.soosle.com>), to prevent these pop- up ads.

Always **firewall** should be **utilized** on Internet or network- enabled laptop computer. Even if you use Windows XP's built- in firewall (or purchase one from such companies as Norton), your security will greatly benefit from it.

Blocking out all the unnecessary ports and closing all the loopholes must be done to prevent a hacker or virus from freely entering the system's hard drive.

TASK:

Write *Eight* recommendations for the following contexts:

1. For reducing mosquito menace in your locality
2. For strengthening our immune system

VOICE: ACTIVE/ PASSIVE/IMPERSONAL PASSIVE VOICE

Note the following sentences

Ram cleans the room (Active Voice)

The room is cleaned by Ram. (Passive voice)

Both the sentences convey the same information that Ram cleans the room/ The room is cleaned by Ram.

When the form of the verb shows that the subject is active i.e. doing the work denoted by the verb, the verb is said to be in the active voice. (Sentence 1)

When the form of the verb shows that the subject is subjected to the action and that the subject is passive, the verb is said to be in the passive voice. (Sentence 2)

If you ask questions like - Is the room cleaned?

Your answer is - Yes, it is cleaned

Who cleans it? / Cleaned by whom?

It is cleaned by Ram

The by agent denotes the action is not done by the subject and the subject is receiver of the action.

You can change an active voice sentence **into a passive voice** sentence.

Example

The workers are demolishing the unauthorised structures. (Active)

The unauthorised structures are being demolished by the workers.
(Passive)

The cattle grazed the entire field. (Active)

The entire field was grazed by the cattle. (Passive)

Note: All active voice cannot be changed into passive voice in a sentence.

You can change only the verbs in the transitive i.e. the verb that has an object

- Ruby loves Latha. The structure of the sentence is: S+V--O

- Latha is loved by Ruby - The structure of the sentence is again : S +V+O — But the object of the verb love in the active voice sentence (Latha) has become subject of the second sentence and receives the action of love done by the object (Ruby)

Look at this sentence:

The baby sleeps — the action 'sleep' ends within the subject. It does not have an object. This sentence with an intransitive verb cannot be changed into Passive voice.

When the active voice of the verb is changed into passive voice:

The helping verbs denote the mood of the verb (is, was, are, were, has, had) and the past participle of the verb are used.

Example: is arrested, was written, are being worked, have been punished.

Impersonal Passive Voice

In this kind of passive voice the focus is on the action and not on the doer of the action. It does not have the 'by agent' to denote the doer of the action. The scientific and technical writings which report actions and the results mostly use this form of writing. (Example: The details are furnished as follows)

Find the difference in the expressions of information in the **following** sentences

Experienced drivers drive the superfast trains fast. (Active)

The superfast trains are driven fast by experienced drivers. (Passive)

the superfast *trains* are driven fast. *is/are* *Passive*)

INTERPRETATION

Communication can be both verbal and non-verbal. Non-verbal communication, is communicating with others using signs, body gestures and figures. Graphics, tables, pie chart, bar chart flow chart, and tree diagrams are extensively used in scientific and technical writings. Transcoding or interpreting them is understanding non-verbal communication.

TABULAR COLUMN/ TABLE

Language is a medium of communication. But it is difficult to be accurate about statistical information and many fail to understand the numerical representations in oral and written communication. But when the same information is tabulated in columns and rows it is easily understood. The tabular form avoids phrases and sentences; uses only words and numbers. By far, interpreting a table is easy. A table shows the data in columns for easy analysis and interpretation. It does not need any special skill to decode the information. It gives scope for comparing and contrasting the information given specifically either in numbers or words.

The following TASK will give you the reason why a table is understood in no time.

TASK: Interpretation

The following passage is an excerpt from Gerald Durrell's 'Animals for ever'

"People get worked up when a couple of thousand human beings per annum are killed on the roads of Great Britain. That is a tragedy of course - but few people know that two million wild birds are killed per annum on the roads, or that in a small area studied by a Danish scientist the number of road deaths were: hares 3,014; hedge-hogs 5,377; rats 11,557; various small mammals 27,834; birds 111,728; amphibians 32,820. These, of course, are only figures for the main roads; if you included the figures for the side roads they would probably be trebled. Now, if human beings were knocked down to that extent in any country in the world there would be such a shriek of protest, such an outcry, such a lamentation, that any government in power would be forced to make us give up the motor car as a means of locomotion and go back to the horse and cart. Not that I'm against the motor car per se, but you do see my point ?" *(https://www.gri)alvo.com/Gerald_Durrell/Animals_for_ever.htm*Gerald Durrell)

As urban dwellers we have very little knowledge about the wild animals except for certain information regarding their enjoying their natural habitats and straying into cities without being disturbed by human beings locked down during COVID — 19 Pandemic. Now that human beings are dying in millions, the whole world is mourning. It is because we sympathise with each other. It is sad that the extermination and road death of animals is not realised as a cause for grieving. Common man does not realise the extermination and death of animals. The detail given in the previous passage may be given in a table which can easily inform even an illiterate person about the plight of wild animals.

The data obtained from the given passage is tabulated as follows:

Sl. No.	Name of the animals	Animals died/annum
1.	Hares	3,014
2.	Hedge-hogs	5,377
3.	Rats	11,557
4.	Various small mammals	27,834
5.	Birds	1,11,728
6.	Amphibians	32,820
	TOTAL	1,92,33 0

TASK 2

Now, can you rewrite the data given in the table in a paragraph of 100 words? Also give a title to the paragraph.

Task 3. Interpret the following table and write about it in a paragraph (200 words)

Municipal solid waste collection and segregation at Source (Source: Solid Waste Management in India: ICRIER Report Jan 2019)

City	State	Population (in million)	Door to door collection from households(%)	Segregation at source (%)
Mumbai	Maharashtra	20.0	80	Nil
Delhi	-	19.1	39	2
Bengaluru	Karnataka	10.4	71	50
Chennai	Tamil Nadu	10.0	80	Nil
Hyderabad	Telungana	9.1	73	Nil

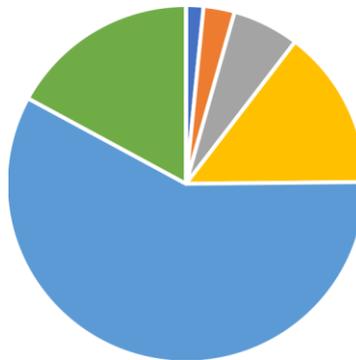
TASK 4

Pie Chart

A pie chart is a circular graph that represents data in percentile proportion to the whole. It makes easy understanding for even less educated people.

1. A Pie Chart:

Animals died/annum



(Corresponding data have to be entered in the respective places)

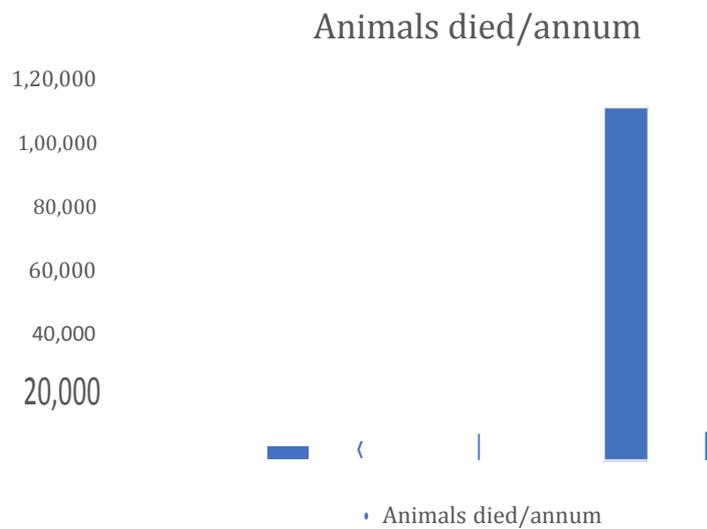
Bar Chart

A bar chart or bar graph presents data in bars that are of proportional length to the values they represent. The bars are plotted vertically or horizontally. They are best for grouped or disconnected data over a period of time.

The following bar chart illustrates the death of animals in a year in Great Britain. The wild animals like hares, hedge hogs, rats, various small mammals, birds and amphibians die caught under moving vehicles every year. The statistics made provides the following data. 3014 hares, 5377

hedge hogs, 11557 rats, 27834 various small mammals, 1,11,728 birds and 32820 amphibians die every year under wheels. If people are considerate to the animals the deaths of animals can be averted.

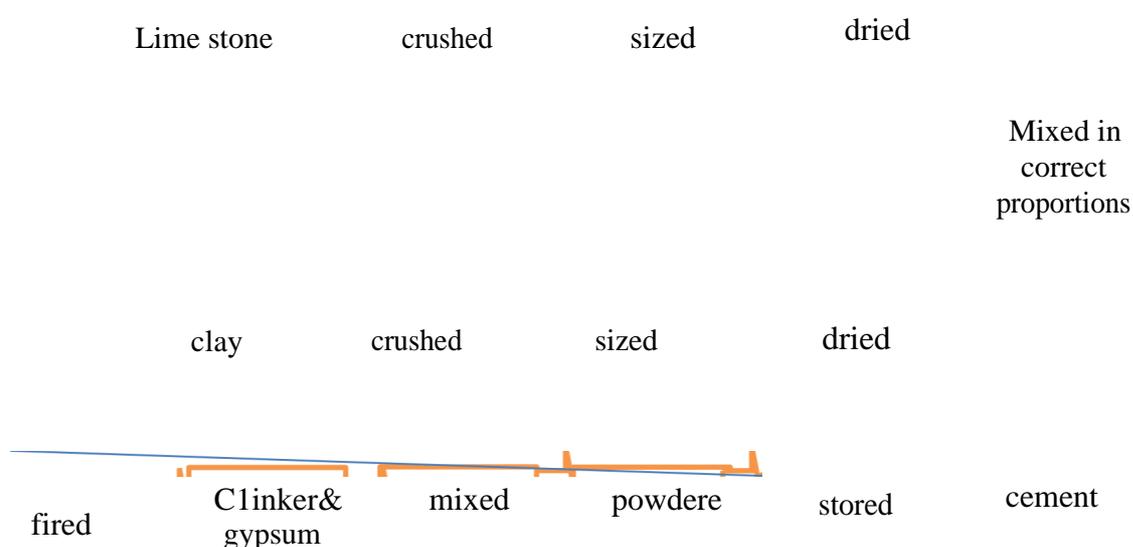
2. BAR CHART DEPICTING ANIMALS DEAD PER ANNUM -



3. FLOW CHART

The Process of Making Cement

Raw materials



A flow chart shows the sequential process of the production of certain things in steps for easy interpretation. While description of a process is to be written in a paragraph, use an introductory and a concluding sentence with proper sequential expressions and appropriate connectives. Note the use of impersonal passive voice and connectives like: Then, Similarly, now, thus. A model paragraph is given below.

The Process of Making Cement

A flow chart shows the sequential process of the production of certain things in steps for easy interpretation. The present flow chart describes the process of making cement. The two raw materials used in the process are lime stone

and clay. Lime stone is crushed, sized and dried. Then, it is stored in storage silos. Similarly, clay is crushed, sized, dried and stored in the storage basin. The crushed lime stone and clay are mixed in correct proportions. The formation is known as slurry. The slurry is fed into the rotary kiln where it is burnt at a high temperature (1000 to 1700° C). A chemical reaction takes place and clinkers are formed. Now gypsum is added to the clinker. The mixture is powdered and sent to the storage silos. The finished product is the cement. Cement thus produced is packed and sent for distribution.

Connectives and Linkers

Connectives and Linkers are used to connect and relate ideas, sentences and paragraphs. They play a crucial role in the construction of a paragraph as it help in the coherent flow of ideas and reveal the interaction of the ideas expressed.

Connectives connect two ideas in the sentence whereas Linkers establish the relationship between two ideas in sentences.

Connectives: and, also, as well as, besides, firstly, since, when, while, now, previously, especially, in fact, on the contrary, in specific, similarly, as a result, due to, so, accordingly, until, owing to, although, apart from, despite, as long as, among, however, yet, unless, although, for instance, such as, in the case of, finally ...

Examples:

Raj and David came home yesterday.

I enjoy travelling especially to historic places.

You can have the book as long as you want.

I finally left Chennai.

Linkers: Consequently, Therefore, Because of, In addition to, Originally, Unfortunately, Firstly, Conversely, Fortunately, Typically, In summary, To sum up, Generally, In this connection, In this Context, Besides, Such as, Regardless, As soon as ...

Examples:

I was sick during the study holidays. Consequently, I failed in my exams.

Generally, I like eating ice cream.

In this context, it becomes important to discuss about the disadvantages of technology.

To sum up, your resume is the representation of your social self.

Task 2:

Make 5 sentences using connectives/ linkers given above.

Group: 2 - LIFE SCIENCES

UNIT - S CRITICAL THINKING SKILLS

Listening

- Listening comprehension- Listening for information.

Speaking

- Making presentations (with PPT- practice)

Reading

- Comprehension passages
- Note making

Writing

- Problem and Solution essay
- Professional Competence and Ethics
- Summary writing

Vocabulary

- Register specific (Incorporated into the LSRW tasks)

fi. LISTENING

Pre-Listening:

Listening is a skill which helps one to collect information, understand and keep the material stored in one's memory.

Self-Check:

1. What is the function of catalyst?
2. What is enzyme?
3. What is the role of enzyme in your body?

Listening:

Listen to your teacher reading the following passage and comprehend it.

PASSAGE J -INTRODUCTION TO ENZYMES

Chemical reactions in biological systems hardly occur in the absence of a catalyst. The biological catalysts that catalyse the biological reactions are enzymes. Almost all bio chemical reactions in living things need enzymes. Even a reaction as simple as the hydration of carbon di oxide is catalysed by an enzyme.



In the absence of enzyme, the transfer of CO₂ from the tissues into the blood and then to the alveolar air would be incomplete. Carbonic Anhydride is the enzyme that catalyses this reaction. This is one of the fastest known catalysts for catalysing this reaction. Each enzyme molecule can hydrate 10⁵ molecules of CO₂ in one second. This catalysed reaction is 10⁷ times faster than the un-catalysed reaction.

There are approximately 1300 different enzymes found in the human cell. They are vital for life and serve a wide range of important functions in

the body, such as aiding in digestion and metabolism. Metabolic enzymes are an essential component for optimal cellular function and health. Enzymes are biologically active proteins found in all living cells. All enzymes are proteins, but all proteins are not enzymes. They significantly increase the rate of almost all the chemical reactions taking place within cells. The striking characteristics of all enzymes are their catalytic power and specificity. Some enzymes help break large molecules into smaller pieces that are more easily absorbed by the body. Other enzymes help bind two molecules together to produce a new molecule. Furthermore, the activity of many enzymes is regulated. In addition, some enzymes are intimately involved in the transformation of different forms of energy.

Enzymes are highly selective catalysts, meaning that each enzyme only speeds up a specific reaction. They are highly specific both in the reaction catalyzed and in their choice of reactants. The molecules that an enzyme works (reacts) with are called substrates. For example, Trypsin is quite specific in that it splits peptide bonds on the carboxyl side of lysine and arginine residues only. Many enzymes have been named by adding the suffix “-ase” to the name of their substrate or to a word/phrase describing their activity. Thus, the enzyme catalyzes the hydrolysis of urea is urease, and DNA polymerase is the enzyme that catalyzes the polymerization of nucleotide to form DNA. Before the specific reaction catalyzed by an enzyme was known, enzymes were named by their discoverers for a broad function. For example, an enzyme known to act in the digestion of foods was named pepsin, from the Greek word Pepsis, meaning, “digestion”.

The Role of Enzymes in the Digestive System

The foods we eat contain many complex molecules. These complex molecules should be broken down to simple molecules, for absorption in the body. Breaking down of large food molecules into small molecules is called chemical digestion. Chemical digestion could not take place without the help of digestive enzymes. Digestive enzymes speed up chemical reactions that break down large food molecules into small molecules. They

turn the food we eat into energy. Digestive enzymes are released or secreted, by the organs of the digestive system. These enzymes include proteases which digest proteins, and nucleases that digest nucleic acids. Important digestive enzymes include: (1) Amylase, produced in the mouth, which helps to break large starch molecules into smaller sugar molecules; (2) Pepsin, produced in the stomach, helps to break proteins into amino acids; (3) Trypsin formed in the pancreas also breaks down proteins; and (4) Pancreatic Lipase, produced in the pancreas, is used to break apart fats.

Enzymes Transform Different Kinds of Energy

In many biochemical reactions, the energy of the reactants is converted into a different form with high efficiency. For example, in photosynthesis, light energy is converted into chemical bond energy. In Mitochondria, the free energy contained in small molecules derived from foods is converted into free energy of adenosine triphosphate (ATP). The chemical-bond energy of ATP is then utilized in many different ways. These transformations of energy are carried out by enzyme molecules that are integral parts of highly organized assemblies.

Mechanism of Enzyme Action

The making and breaking of chemical bonds by an enzyme are preceded by the formation of an enzyme-substrate (ES) complex. The substrates bind to a specific region on the enzyme called the active site. As already mentioned, most enzymes are highly selective in their binding of substrates. Certainly, the catalytic specificity of enzymes depends largely on the specificity of the binding process. Furthermore, the control of enzymatic activity may also take place at this stage. The widely accepted theory for explaining the enzyme-substrate interaction is the lock-and-key model. In the lock-and-key model, the active site of an enzyme is exactly shaped to hold specific substrates. In the other model called induced-fit model, the active site and substrate do not fit perfectly together. But, both of them alter their shape to connect. In any case, the reactions that occur get accelerated by a million fold. Once the chemical reactions result in a new

product, it separates from the enzyme. The freed enzyme goes on to catalyse other reactions. For example, when the salivary enzyme amylase binds to a starch, it catalyses hydrolysis. The hydrolysis results in maltose or malt sugar. The maltose departs from the enzyme.

Post Listening:

Answer the following using your understanding of the above passage.

Task 1:

Fill in the blanks:

- 1) The catalysts in the biological reactions are called -----.
- 2) There are approximately----- different enzymes found in the human cell.
- 3) The striking characteristics of all enzymes are their -----and-----.
- 4) ----- enzymes speed up chemical reactions that break down large food molecules into small molecules.
- 5) The ----- results in maltose or maltose sugar.

Task 2:

Answer the following questions:

1. What is called chemical digestion?
2. Can chemical digestion take place without the help of digestive enzymes?
3. What is the role of amylase?
4. Name any two digestive enzymes.
- s. Where is pepsin produced?

Task 3:

Find the meaning for the following words using the dictionary:

- Catalyst
- Enzyme
- Hydrolysis
- Substrate
- Hydrate

2. SPEAKING

POWERPOINT SLIDE SHOW IN CLASSROOMS

PowerPoint Presentations came into the education scenario more than a decade ago. One of the cardinal principles of effective communication is the use of audio-visual aids. In times past, charts and models were used to capture the attention of listeners. With the advent of electronic media and advancement in computer programming and computer literacy, classrooms and lecture halls are equipped with facilities for PowerPoint Presentations. Pictures, videos, music, graphs can be included on the slides as required. For instance, heart beat can be depicted with an animated image of a heart. Video clips of events and phenomena can also be inserted onto a PowerPoint slide. PPTs can be created with voice over by recording narration for each of the slides. The running of the PPTs can also be set by recording a slide show with rehearsal timings. With audio recordings working in sync with the slides (pictures, videos, graphs, data and text) PowerPoint prove to make an indelible impact on listeners.

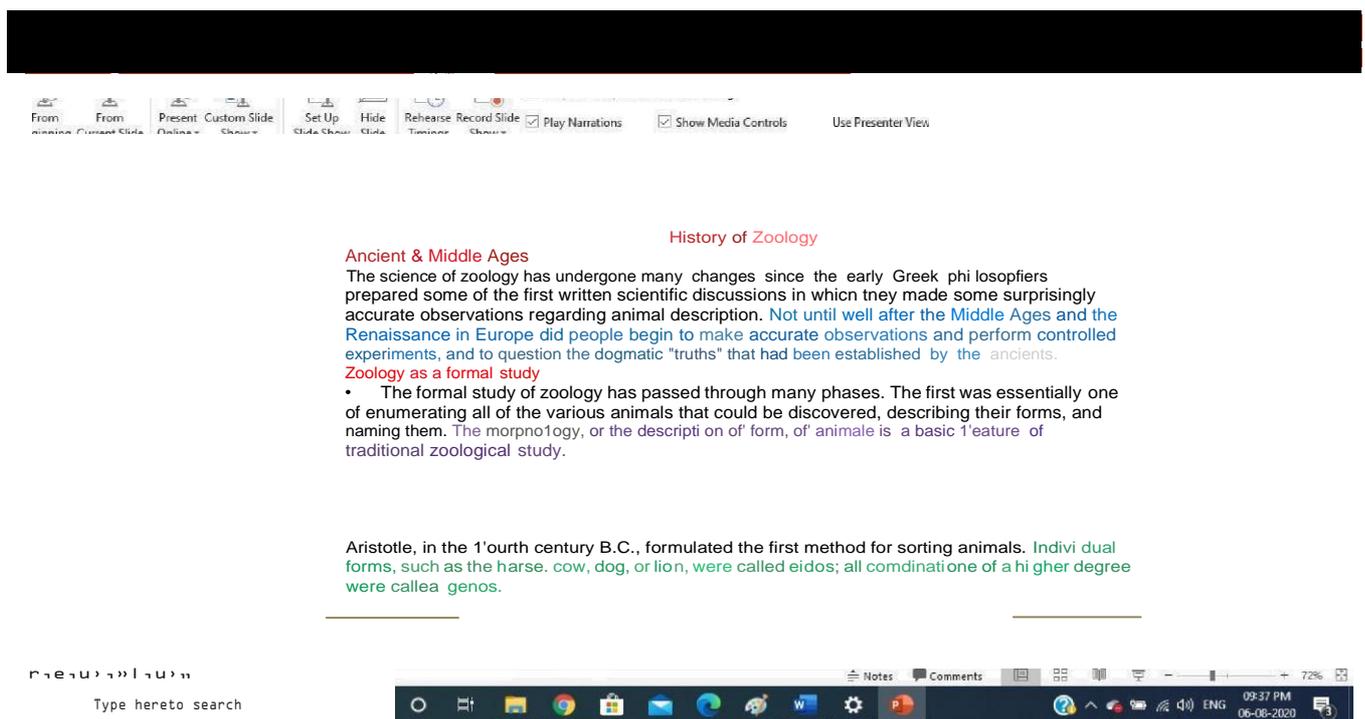
POWER POINT - DOs AND DON'Ts:

1. Do not put up too much of text (matter) on the slide. Only the point (not a whole paragraph)

2. Do not read what is on the slide. The slide is only a memory trigger. You should use it only to remind you/guide you as to the course of your speech
3. For a professional or academic presentation do not have designs or make it too colourful
4. Use pie charts and graphs when discussing any quantitative analysis
5. Use photographs or pictures when necessary. There is a saying, "A picture says a thousand words" Photos and pictures speak volumes.
6. When you complete your presentation, do a recap of all the points you have made in your power point

TASK 1:

Form small groups and identify the errors in the slide given. Also discuss how it can be improved.



The screenshot shows a PowerPoint slide titled "History of Zoology". The slide content includes:

Ancient & Middle Ages
 The science of zoology has undergone many changes since the early Greek philosophers prepared some of the first written scientific discussions in which they made some surprisingly accurate observations regarding animal description. Not until well after the Middle Ages and the Renaissance in Europe did people begin to make accurate observations and perform controlled experiments, and to question the dogmatic "truths" that had been established by the ancients.

Zoology as a formal study

- The formal study of zoology has passed through many phases. The first was essentially one of enumerating all of the various animals that could be discovered, describing their forms, and naming them. The morphology, or the description of form, of animals is a basic feature of traditional zoological study.

Aristotle, in the fourth century B.C., formulated the first method for sorting animals. Individual forms, such as the horse, cow, dog, or lion, were called eidos; all combinations of a higher degree were called genos.

The slide contains several text errors highlighted in red and blue. The red highlights include: "Ancient & Middle Ages", "Zoology as a formal study", "The formal study of zoology has passed through many phases. The first was essentially one of enumerating all of the various animals that could be discovered, describing their forms, and naming them. The morphology, or the description of form, of animals is a basic feature of traditional zoological study.", and "Aristotle, in the fourth century B.C., formulated the first method for sorting animals. Individual forms, such as the horse, cow, dog, or lion, were called eidos; all combinations of a higher degree were called genos." The blue highlights include: "Not until well after the Middle Ages and the Renaissance in Europe did people begin to make accurate observations and perform controlled experiments, and to question the dogmatic 'truths' that had been established by the ancients."

Task 2:

Choose a simple topic related to your subject and prepare a PPT to be presented in class.

3. READING

NOTE MAKING

Have you ever wondered how to collect information from class, connect ideas together and revise for exam in an easy way? Then try this important study skill — Note making.

Note-making is an advanced process that involves reviewing, synthesizing, connecting ideas from the lecture or reading and presenting the information in a readable, creative way that will stick in your mind. Making notes is different as they are the resources you create yourself. They tend to be more concise.

Why Note Making is important?

The importance lies in the fact that it -

- Promotes active listening / reading
- Provides a framework for revision
- Improves understanding

Note making, like all other skills, can be mastered through practice. How you take and make notes will depend on the subject, context and the way you work

for the best. You will need to reflect on your skills as you progress.

The 5 R's of Note Taking / Note Making

Record: During the lecture, write all meaningful information legibly.

Reduce: After the lecture, write a summary of the ideas and facts using keywords

Recite: Recite all the information in your own words without looking at our notes or the text.

Reflect: Think about your own opinions and ideas. Raise questions and record original ideas

Review: Before reading new material, take 10 minutes to review your older notes. Skim over the main ideas and details,

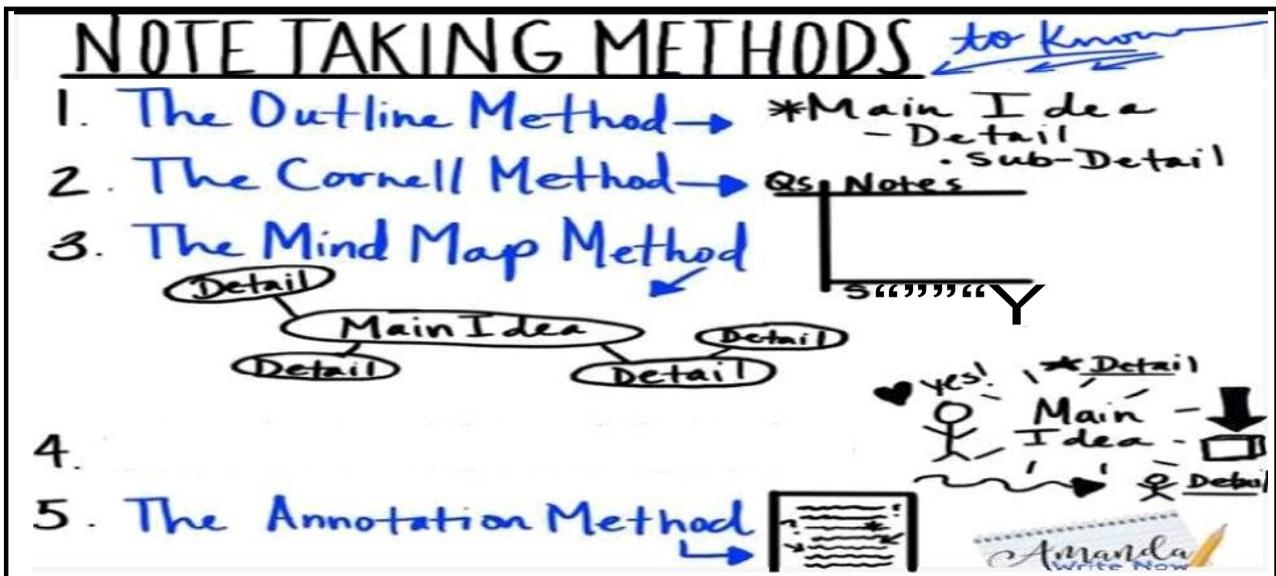
Boston, MA: 'O'ght' Mifflin

What format of Note Making suits you best?

This may depend on your learning preference. Are you best visually or auditorily or kinesthetically? Or do you have a mixture of more than one? Do think about the easiest way for you to produce and review your notes. The structure of the lecture should help you organise the content, so it is important to work on that as well.

Whatever format you decide on (and it might be different for different lectures) the general principles are the same:

- Use your own words.
- Be concise.
- Use abbreviations, phrases and key words, not sentences.
- Date and reference notes clearly.
- Number pages and points.
- Use headings and subheadings.
- List details.
- Use boxes, underlining, colour coding, CAPITALS and highlighting.
- Use arrows to show links between sections.
- Use diagrams and drawings.
- Leave a margin and plenty of space between sections.
- Use a well-spaced layout.



<https://in.pinterest.com/pin/389561436524014933/>

Formats for Notes

1. Outline Method or Linear notes

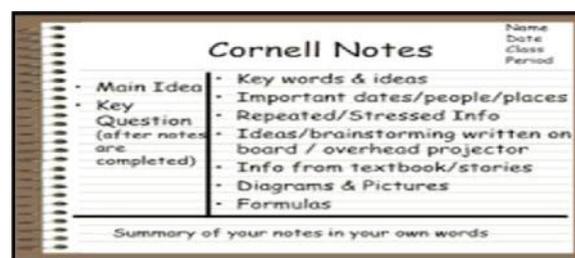
This is the simplest and therefore the most common style of notes, both for reading and listening. The word linear is the adjective of the

Title or topic
I. MAIN TOPIC (to the left side of the paper near the margin)
A. MAJOR SUB-TOPIC (indented and subordinate to the preceding)
t. Min or sub topic (indented under A)
B. MAJOR SUB-TOPIC (indented the same as major sub-topic A)

word line, which indicates that these notes are written down the page, one line after the other.

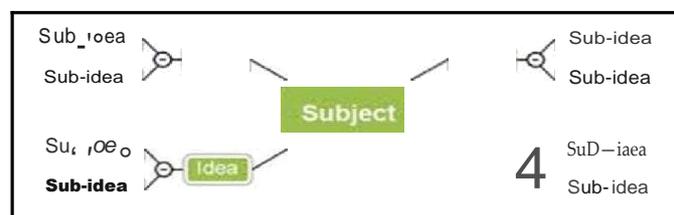
2. Cornell Method

The Cornell notes is a note taking system that was invented back in 1950s by Walter Pauk. The Cornell notes taking method ensures to divide a single page in three sections namely Main idea, Notes and Summary Section.



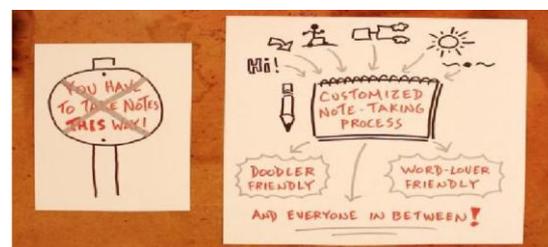
3. Mind Maps

This is a pictorial way of organizing your thoughts and ideas. The visual nature of the notes can make it easier to understand and remember information. You can use colour, diagrams, pictures, and symbols.



4. Sketch notes Method

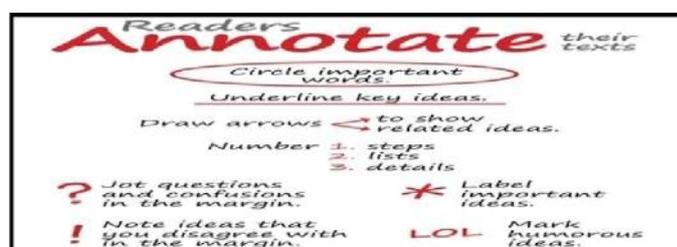
Sketch notes (sketch + notes) are visual notes, so more than just the regular text notes we are used to take. When sketch noting you enhance your regular notes with visual elements such as small drawings, frames, arrows, lettering etc.



<https://www.verbaltovisual.com/what-is-sketchnoting/>

5. Annotation Method

Annotation is an important part of note-taking. You annotate printed materials by marking up the text-writing in the margins, highlighting text, etc. Annotating is useful when you



want to identify key passages so you can find them quickly later.

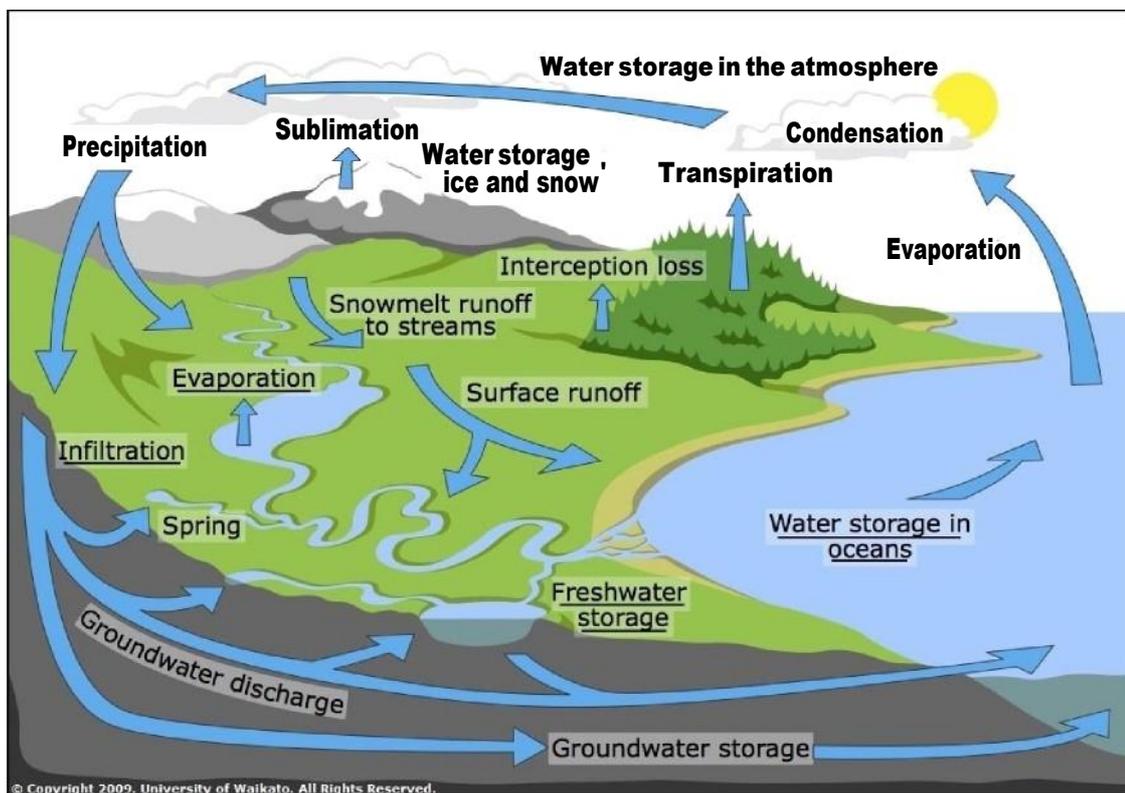
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Practice Exercise:

Passage J: WATER CYCLE

Read the passage carefully and make notes from it using any one of the formats mentioned above:

Water is one of the most essential sources of life. Plants and animals must have water to survive. If there was no water there would be no life on earth. A hydrosphere is the total amount of water on a planet. The hydrosphere includes water that is on the surface of the planet, underground and in the air. A planet's hydrosphere can be liquid, vapour, or ice.



Hydrosphere covers 70% of earth's surface. 97.6% of water found on Earth is in the oceans in the form of salt water. Only 2.4 % of water on Earth is fresh water. Out of this, 87% is in frozen form as glaciers and 13% is available as liquid water which is easily accessible to human. Of this 13 % liquid water 95 % remain as ground water, 3 % distributed as lakes, rivers and streams and the remaining 2 % as soil moisture. It is important to know the cycle of

processes by which water circulates between the earth's oceans, atmosphere and land which in other words can be called as Water Cycle.

Water continually cycles around the planet in 10 distinctive steps:

- **Evaporation** is the primary pathway that water moves from the liquid state back into the water cycle as atmospheric water vapour.
- **Transpiration** is the process of water movement through a plant and its evaporation from aerial parts, such as leaves, stems and flowers.
- **Sublimation** describes how snow and ice change to water vapour without becoming liquid.
- **Condensation** happens when water vapour becomes water droplets via cloud formation.
- **Transportation** defines how water moves through the atmosphere in its solid, liquid or gaseous form.
- **Precipitation** is any form of liquid or solid water particles that fall from the atmosphere and reach the surface of the Earth in the form of drizzle, rain, hail etc.
- **Deposition** is how water vapour changes to a solid state without becoming liquid, like frost.
- **Infiltration** defines how water seeps into the ground and then percolates into the water table
- **Surface flow** describes how rivers, lakes and stream flow to the ocean along with underground aquifers.
- **Plant uptake** explains that plants only use 1 percent of the water pulled in by their roots, while the rest goes back into the atmosphere.

While almost 70% of the Earth is made of water, many parts of the world suffer from clean water shortage. Conserving water is important because it keeps water pure and clean while protecting the environment. Conserving water means using our water supply in a responsible manner. As every individual depends on water for livelihood, we must learn how to keep our limited supply of water pure and away from pollution. Keeping our water supply safe and pure will protect the water for the generations to come.

Source:

https://www1.health.Nov.au/internet/publications/publishing.nsf/Content/ohp-enhealth-manual-atsi-cnt-l_ohp-enhealth-manual-atsi-cnt-l-ch6_ohp-enhealth-manual-atsi-cnt-l-ch6.1#:text=Water%20is%20one%20of%20the,be%20no%20life%20on%20earth.&text=Apart%20from%20drinking%20it%20to

Passage 2: Professional Competence and Professional Ethics

The two important ingredients in our recipe for success in our career life, are nothing but Professional Competence and Professional Ethics. They are not to be confused as they mean two different concepts.

Competence in any area of work is a combination of knowledge and skill and application of the same. Competence is much more than a skill. For instance, a driver may have the necessary skill to drive. But when something goes wrong with the vehicle the driver must be able to identify the problem and fix it himself if possible. Similarly, a person may be good at all the four skills of language, namely, Listening, Speaking, Reading, and Writing. But linguistic competence refers to one's ability to use language effectively in any situation. It should help person transfer knowledge, ideas and information while at the same time using it for interpersonal relationship, by understanding the feelings of others, influencing and motivating others.

Obviously different kinds of professions and even jobs call for the respective skills and competence. Right from the lab assistant to a cobbler, there is a certain amount of skill and competence required to set a microscope or to mend the shoes respectively. In the corporate world, the in -roads to success must be known to the person doing the business. In the field of computers, there is a clear distinction between software professionals and hardware, because both demand a different set of skills and expertise. Skills can be acquired with training whereas competence comes with experience. As Noam Chomsky says, with regard to language intuition plays a very important role in developing competence. It may be true with other fields of work as well.

Professionalism, which is a combination of knowledge, skill, expertise and competence, is essential to increase efficiency and productivity, ultimately leading to success. Professionalism also refers to the attention to every detail and the care with which every minute work or even great challenging work has to be done. It also calls for preparedness. A simple tip to the students who are going to attend an interview: Your professionalism is visible when you report in time at the venue, neatly dressed for the occasion and taking all the necessary certificates and documents, properly arranged. A candidate will be judged by his or her professionalism even before joining the profession. Hence it is necessary we learn to take particular care in everything that we do.

It is not enough if we develop professional competence alone to become successful. Our dealings should be driven by a set of rules or a code of behaviour, called 'ethics'. Professional Ethics refers to the values or principles that govern any profession. Even though the idea was associated with religion basically, it found its application in Divinity, Law and Medicine and later to the Military Services. It took a secular dimension further when it was applied to every field of activity. A fine example of Professional Ethics can be taken from the Hippocratic Oath, taken by medical professionals. By this, every medical practitioner or physician swears to uphold the specific ethical standards of the medical profession. It is attributed to Hippocrates, the ancient Greek doctor and his book Hippocratic Corpus. Similarly lawyers swear that what they speak is nothing but the truth.

Professional Ethics also means one's ability to make judgements or evaluations while taking important decisions. While giving service to the public the professional must disseminate knowledge that should be governed by values. The means adopted should justify the end. If a person's personal values and belief systems are strong and authentic, then his or her professional ethics also will have a strong foundation. If an individual has very strong principles of hard work and honesty, with values of punctuality and integrity, then this will enable the person to adhere strictly to the ethics of the profession.

The professions can be grouped into two broad categories. One is product oriented and the other is service oriented. For instance, business organisations and corporate companies, are product oriented and look for the three Ps - Product, Productivity and Profit. Education, Law, Medicines, to name a few, are service oriented and take into consideration another set of three Ps- People, Prosperity and Peace. So each profession is guided by certain moral standards to follow. To give an example, in science, any discovery or invention should be guided by the principle of uplifting humanity. It should be done for constructive purpose. The question of ethical aspect can be understood when majority of the world raised ethical concerns regarding cloning. In the area of computer science there is an idea called 'ethical hacking'. Alfred Nobel realised how destructive dynamite could be after inventing. He instituted Nobel Prize with all the wealth he had, to encourage scientists to discover or invent to help living beings for their comfortable and peaceful living and also save the planet.

Sometimes there may be situations where value conflicts arise. There may be a clash of individual beliefs and institutional objectives. We should try to resolve such conflicts by our art of influencing or negotiating skills. Here again interpersonal skills come in handy. We also need to understand that sometimes our individual goals may have to be kept aside in order to accomplish group goals. It is equally important to have a win-win approach, to help ourselves and others grow. Meaning to say, anything that we do should lead to development, both as individuals and those surrounding us and the society at large.

What is success after all? Is it just earning money or getting a position and improve our standard of living? Or does it mean finding satisfaction and serving the people? Whatever is our definition of success or goal in life will determine the kind of importance we give to the ethical aspect of our profession. As students we need to be initiated into thinking about this very important aspect of our professional and personal life. In our own small and simple ways we can start practising. The aim of education is not just to create knowledge society but more importantly a value-based society.

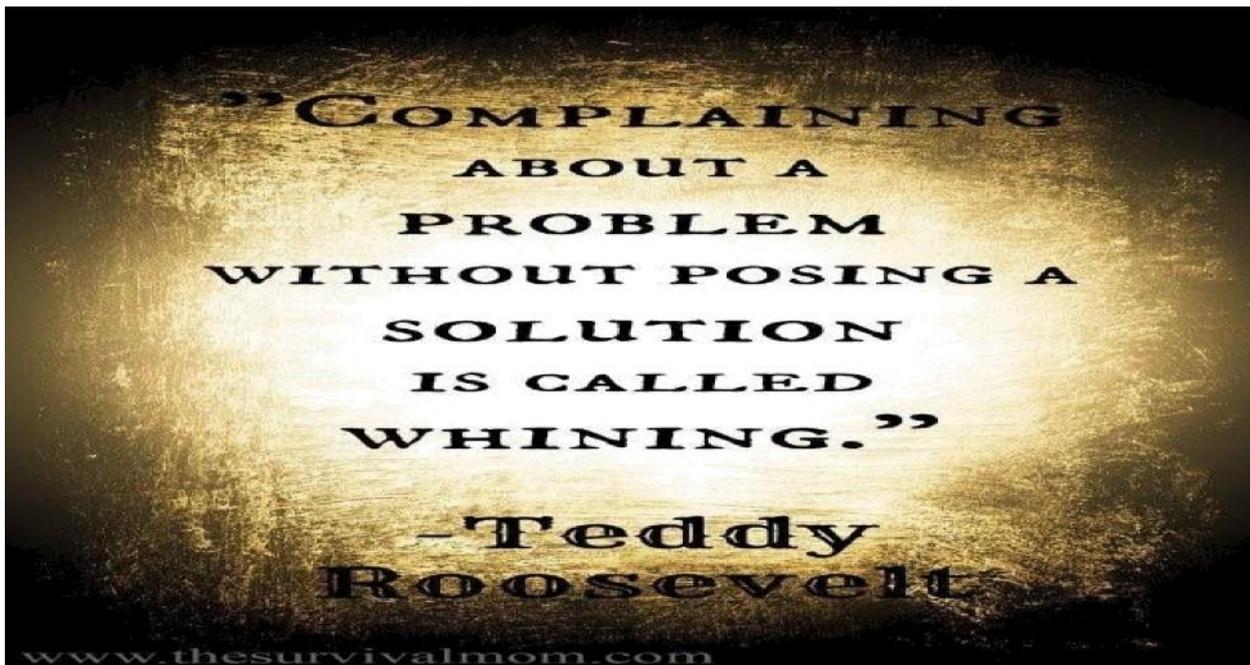
TASK 1:

Form small groups of four or five and discuss the various job opportunities related to your subject of study.

TASK 2:

Think about the different skill sets required for some of the jobs specific to your course of study and discuss in small groups.

4. WRITING

**Self-Check:**

1. Do you agree with this above quote?
2. How do you try to resolve your problem

Passage 1- Obesity

Read the following essay on Obesity and observe its structure.

Consumption of processed and convenience foods and our dependence on the car have led to an increase in obesity and reduction in the fitness level of the adult population. In some countries, especially industrialized ones, the number of obese people can amount to one third of the population. This is significant as obesity and poor fitness lead to a decrease in life expectancy, and it is therefore important for individuals and governments to work together to tackle this issue and improve their citizens' diet and fitness.

Obesity and poor fitness decrease life expectancy. There is a reliance today on the consumption of processed foods, which have a high fat and sugar content is considered as one of the important factors of causing obesity. Overweight people are more likely to have serious illnesses such as diabetes and heart disease, which can result in premature death. It is well known that regular exercise can reduce the risk of heart disease and stroke, which means that those with poor fitness levels are at an increased risk of suffering from those problems.

Changes by individuals to their diet and their physical activity can increase life expectancy. By preparing their own foods, and consuming more fruit and vegetables, people could ensure that their diets are healthier and more balanced, which could lead to a reduction in obesity levels. In order to improve fitness levels, people could choose to walk or cycle to work or to the shops rather than taking the car. They could also choose to walk up stairs instead of taking the lift. These simple changes could lead to a significant improvement in fitness levels.

Governments could also implement initiatives to improve their citizens' eating and exercise habits. This could be done through education, for example by adding classes to the curriculum about healthy diet and lifestyles. Governments could also do more to encourage their citizens to walk or cycle instead of taking the car, for instance by building more cycle lanes or increasing vehicle taxes. While some might argue that increased taxes are a negative way to solve the problem, it is no different from the high taxes imposed on cigarettes to reduce cigarette consumption.

In short, obesity and poor fitness are a significant problem in modern life, leading to lower life expectancy. Individuals and governments can work together to tackle this problem and so improve diet and fitness. Of the solutions suggested, those made by individuals themselves are likely to have more impact, though it is clear that a concerted effort with the government is essential for success. With obesity levels in industrialized and industrializing countries continuing to rise, it is essential that we take action now to deal with this problem.

Inference:

The above essay is an example for Problem - **Solution** essay. The problem discussed in the essay is Obesity. The problem is well analysed in the essay and the solutions are given in the form of recommendations.

When the essay is observed carefully, one can understand the following structure:

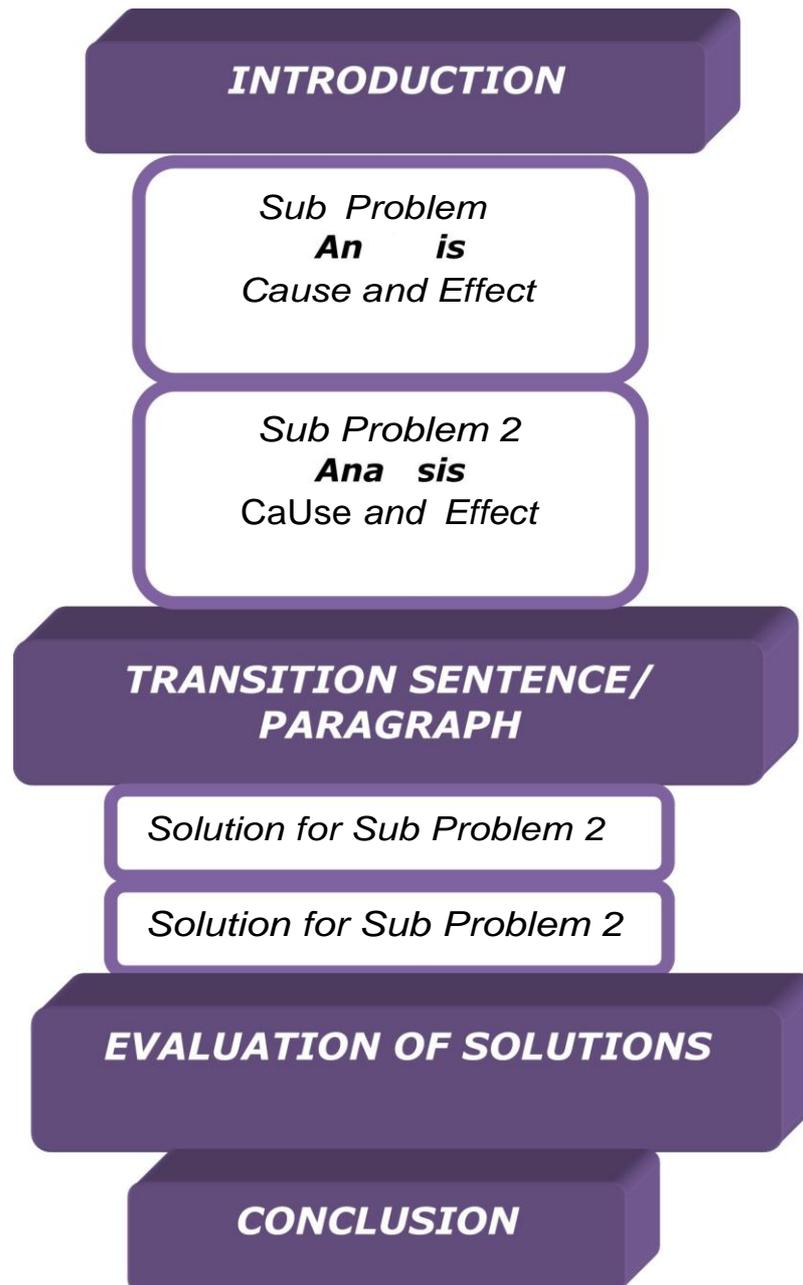
- First paragraph states the problem
- Second paragraph highlights the Cause and effects of the problem
- Third and Fourth paragraphs recommend solutions
- Fifth paragraph serves as the conclusion of the essay.

Considering the above essay as an example, any Problem Solution essay should comprise of:

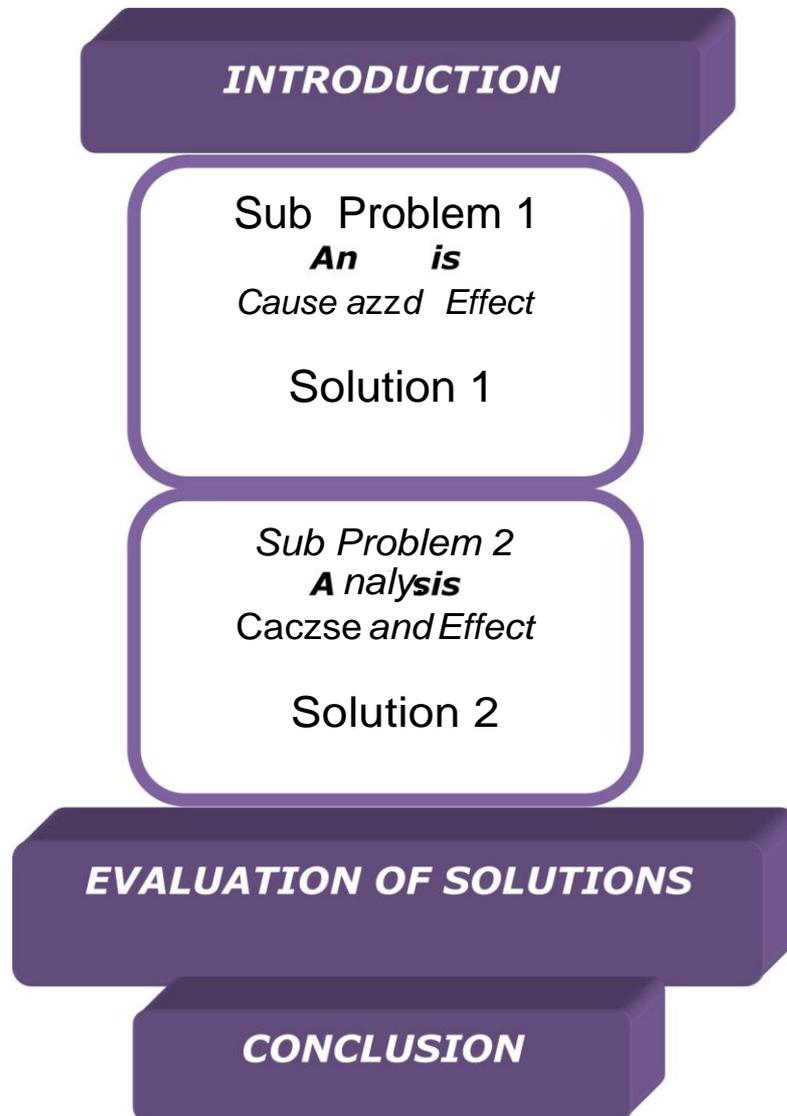
1. Statement of the problem.
2. Analysis of the problem.
- 3. Examination of the cause and effect of the problem.**
4. Finding the possible solutions.
5. Evaluation of the solutions found.
6. Conclusion of the essay.

According to EAP Foundation.com, there are two different ways to structure the Problem — Solution essay namely Block structure and Chain Structure.

Block Structure: All the sub problems related to the main problem given are stated first and the list of solutions to the sub problems are listed afterwards.



Chain Structure: Unlike Block Structure, in the Chain Structure each sub problem is immediately followed by the solution.



Source: Problem Solution Essays

<https://www.eapfoundation.com/writing/essavs/problemsolution/>

Task 1:

Write Problem - Solution Essays for the following:

1. Non-biodegradable waste



Image source: [https:// www.wallpaperflare.com/pile-of-blue-plastic-bottle-lot-orbaoc-plastic-waste-pollution-wallpaper-wvond](https://www.wallpaperflare.com/pile-of-blue-plastic-bottle-lot-orbaoc-plastic-waste-pollution-wallpaper-wvond)

2. Genetically modified animals



Two genetically modified mice (on either side) expressing enhanced green fluorescent protein (eGFP) under UV-illumination flanking.

Image Source:

https://commons.wikimedia.org/wiki/File:GFP_Mice_01.i.pg

Summary writing

Pre-Writing Task:

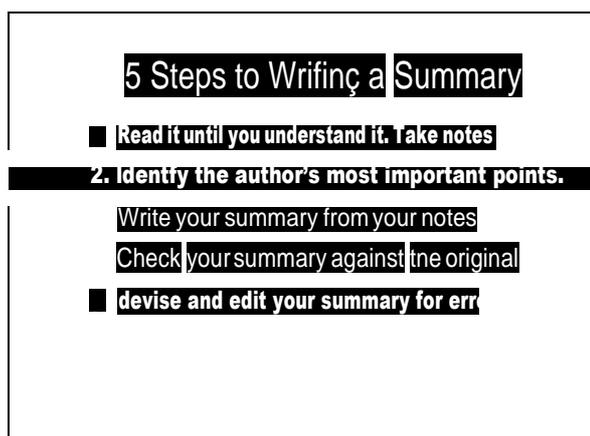
1. What is summary writing?
2. Is it essential to possess the skill of summary writing?

Summary writing:

The skill of summarizing is essential as it aids us to discern the most important details in a text by ignoring the less significant information. The summary comes to a form with the integration of the key ideas.

Characteristics of a good summary

- **Briefness**
- omit unnecessary details like examples, explanations and other unimportant information. (length: 1/4-1/3 of original text)
- **Completeness**
- to include all the main and supporting points delivered in your own words in a condensed manner
- **Coherence**
- rather than an outline listed as key words and phrase, a summary is a paragraph with necessary transitions and function structures to make it flow.
- **Objectivity**
- to contain only the ideas or information of the original text. Do not include your own ideas or emotions on the topic.



Source:

https://images.slideplayer.com/25/7741098/slides/slide_4.jpg

<https://i.ytimg.com/vi/WZFI6dvgOzU/maxresdefault.jpg>

Passage 2 • Read the following passage on *I-fuman* /immune System

What is immunity?

The ability of an organism to resist a particular infection or toxin by the action of specific antibodies or sensitized white blood cells in the host is referred as immunity.

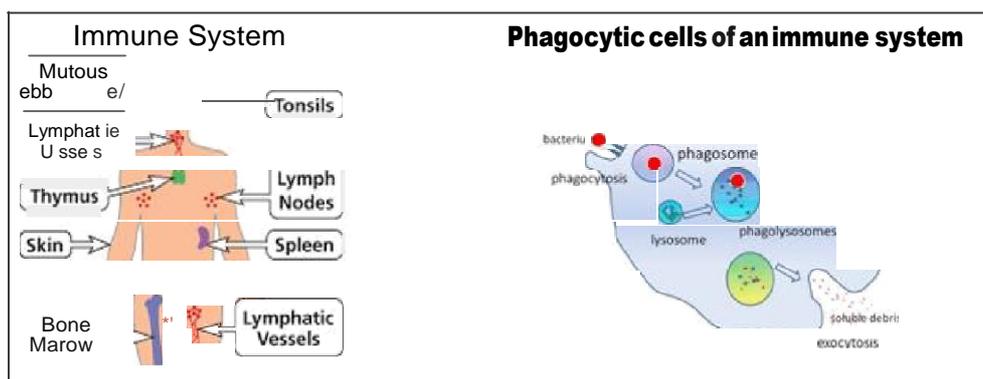
Types

Passive immunity: It is a transfer of active immunity in the form of ready-made antibodies from one individual to another. It also can occur naturally when maternal antibodies are transferred to the foetus through the placenta. Passive immunization is used when there is a high risk of infection and insufficient time for the body to develop immune response. It provides immediate protection but at risk of being infected by the same pathogen later.

Active immunity: Naturally acquired active immunity occurs when a person is exposed to a live pathogen and develops a primary immune response. This type of immunity is "natural".

Immune systems

The immune system is a complex network of cells and proteins that defends the body against infection. The immune system keeps a record of every germ (microbe) it has ever defeated so it can recognise and destroy the microbe quickly if it enters the body again. There are two major immune systems: the innate immune system and the adaptive immune system. Both subsystems use humoral immunity (antibodies mediated) and cell-mediated immunity to perform their functions.



The immune system produces an immune response to the pathogen by generating antibodies, killer cells, or both.

- In the first type of immune response (humoral response), the body's B-cells produce antibodies to neutralize antigens and eliminates,
- In the second type of immune response (termed the cell-mediated response), specific killer cells called cytotoxic T-cells attack the pathogen in the infected cells.

How to enhance immunity?

Inadequate sleep is linked to susceptibility to sickness, Whole plant foods like fruits, vegetables, nuts, seeds and legumes are rich in nutrients and antioxidants that may give you an upper hand against harmful pathogens. Healthy fats, like those found in olive oil and salmon, may boost your body's immune response to pathogens.

Getting to Know: Technical Terms or 3argon

1. Pathogen-a bacterium, virus, or other microorganism that can cause disease.
2. Microbe- a microorganism, especially a bacterium causing disease or fermentation.
3. Foetus- an unborn or unhatched offspring of a mammal, in particular an unborn human more than eight weeks after conception.
4. Placenta-a flattened circular organ in the uterus of pregnant eutherian mammals, nourishing and maintaining the foetus through the umbilical cord.
5. Antibody- a blood protein produced in response to and counteracting a specific antigen. Antibodies combine chemically with substances which the body recognizes as alien, such as bacteria, viruses, and foreign substances in the blood.

Task:

Prepare a summary of the passage on human immune system in about 250 words.

READ, IMAGINE, INNOVATE



The following books and channels are recommended for you to widen and expand your learning experience:

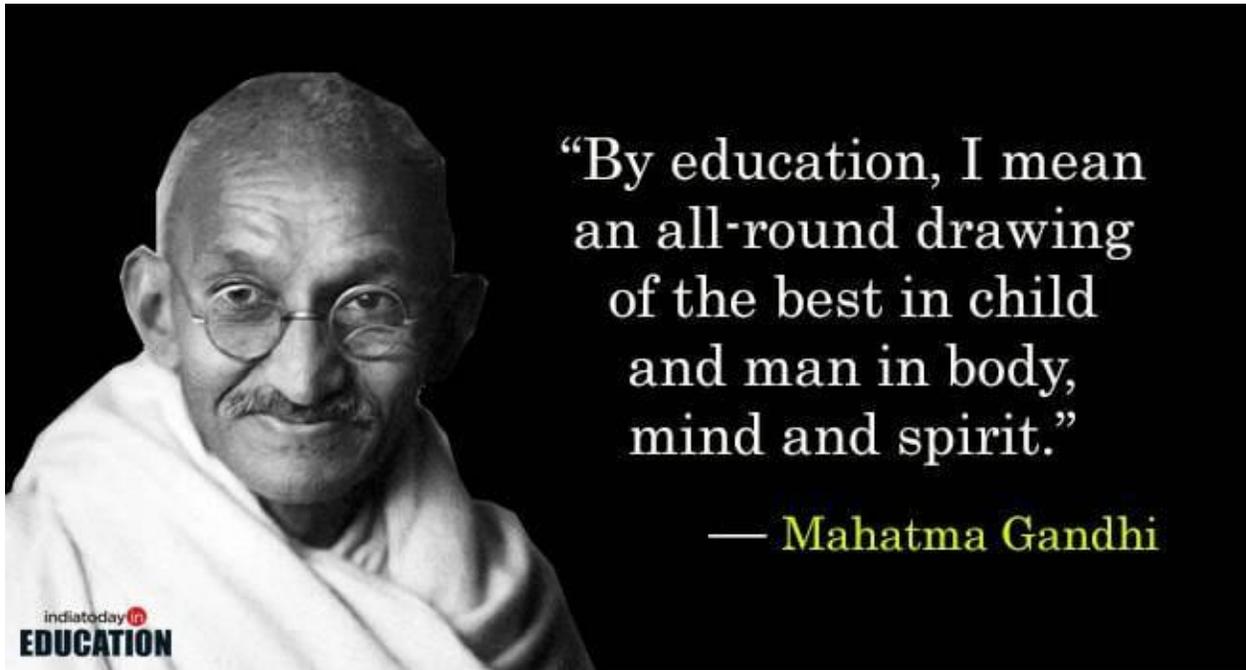
Books:



1. Joy Adamson - *Born Free, Living Free*
(movie also available)
2. Ruskin Bond — *My Favourite Nature Stories*
3. Janaki Lenin — *Every Creature Has a Story*
4. Vance Packard — *The Human Side of Animals*
5. Salim Ali — *The Book of Indian Birds*

Channels

1. Discovery
2. National Geographic



“By education, I mean
an all-round drawing
of the best in child
and man in body,
mind and spirit.”

— Mahatma Gandhi

Professional English - Semester-II [part-III -add on Course]

Weightage: 4 Credits

Duration: 90 hrs

Objectives:

The Professional Communication Skills Course is intended to help Learners in Arts and Science colleges

- Develop their competence in the use of English with particular reference to the workplace situation.
- Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.
- Develop their competence and competitiveness and thereby improve their employability skills.
- Help students with a research bent of mind develop their skills in writing reports and research proposals.

Unit 1- Communicative Competence

(18 hrs)

Listening – Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions)

Reading: Two subject-based reading texts followed by comprehension activities/exercises

Writing: Summary writing based on the reading passages.

Grammar and vocabulary exercises/tasks to be designed based on the discourse patterns of the listening and reading texts in the book. This is applicable for all the units.

Unit 2 - Persuasive Communication

(18 hrs)

Listening: listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: debates – Just-A Minute Activities

Reading: reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: dialogue writing- writing an argumentative /persuasive essay.

Unit 3- Digital Competence

(18 hrs)

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related)

Reading: Selected sample of Web Page (subject area)

Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

The essay will address all aspects of digital competence in relation to MS Office and how they can be utilized in relation to work in the subject area

Unit 4 - Creativity and Imagination

(18 hrs)

Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites – E.g. <https://www.youtube.com/watch?v=tpvicScuDyo>)

Speaking: Making oral presentations through short films – subject based

Reading: Essay on Creativity and Imagination (subject based)

Writing – Basic Script Writing for short films (subject based)

- Creating blogs, flyers and brochures (subject based)
- Poster making – writing slogans/captions (subject based)

Unit 5- Workplace Communication & Basics of Academic Writing (18 hrs)

Speaking: Short academic presentation using PowerPoint

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis)

Capitalization (use of upper case)

Outcomes of the Course.

At the end of the course, learners will be able to,

- Attend interviews with boldness and confidence.
 - Adapt easily into the workplace context, having become communicatively competent.
 - Apply to the Research & Development organisations/ sections in companies and offices with winning proposals.

Instruction to Course Writers:

1. Acquisition of subject-related vocabulary should not be overlooked. Textboxes with relevant vocabulary may be strategically placed as a Pre Task or in Summing Up
2. Grammar may be included if the text lends itself to the teaching of a Grammatical item. However, testing and evaluation does not include Grammar.

Professional English for Life Sciences

Semester-II

[Part-III – Add-on Course]

Syllabus

Weightage : 4 credits

Duration: 90 hours

Objectives:

The Professional Communication Skills Course is intended to help Learners in Arts and Science colleges,

- Develop their competence in the use of English with particular reference to the workplace situation.
- Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.
- Develop their competence and competitiveness and thereby improve their employability skills.
- Help students with a research bent of mind develop their skills in writing reports and research proposals.

Unit 1- Communicative Competence

(18 hours)

Listening – Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions)

Reading: Two subject-based reading texts followed by comprehension activities/exercises

Writing: Summary writing based on the reading passages.

Unit 2 - Persuasive Communication

(18 hours)

Listening: listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: debates – Just-A Minute Activities

Reading: reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: dialogue writing- writing an argumentative /persuasive essay.

Unit 3- Digital Competence (18 hours)

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related)

Reading: Selected sample of Web Page (subject area)

Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

The essay will address all aspects of digital competence in relation to MS Office and how they can be utilized in relation to work in the subject area

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Speaking: Making oral presentations through short films – subject based

Reading : Essay on Creativity and Imagination (subject based)

Writing – Basic Script Writing for short films (subject based)

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Speaking: Short academic presentation using PowerPoint

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis)

Capitalization (use of upper case)

Outcome of the Course:

At the end of the course, learners will be able to,

- Attend interviews with boldness and confidence.
- Adapt easily into the workplace context, having become communicatively competent.
- Apply to the Research & Development organisations/ sections in companies and offices with winning proposals.

Contents

Unit - 1	8-19
Unit - 2	20-44
Unit - 3	45-60
Unit - 4	61-80
Unit - 5	81-128

PREFACE

The textbook on Professional English visualized under the leadership of the Hon. Chief Minister of Tamilnadu, Thiru. Edappadi K.Palaniswami by the Honorable Minister for Higher Education Thiru. K.P. Anbalagan, and the Principal Secretary to Government, Department of Higher Education, Selvi. Apoorva, I.A.S., is a pioneering venture and strategic intervention in higher education of Tamil Nadu. It has been prepared with the ample support of Thiru. Vivekanandan, I.A.S. Member Secretary, TANSCH (Tamil Nadu State Council for Higher Education)

Tamil Nadu has the distinction of having the highest GER (Gross Enrolment Ratio) of 49%, in higher education in the country: this figure manifests the efforts of the government to empower the youth of the state by enhancing access to higher education.

After duly examining the need of the students in learning their subjects and with a vision to equip them with 21st century skills, four textbooks, *English for Physical Science*, *English for Life Sciences*, *English for Arts and Social Sciences* and *English for Commerce and Management* have been prepared for the second semester.

As language is an essential tool with regard to the learning process, a textbook which focuses on the contextual usage of language to leverage language learning is an ideal approach and fulfills the dual objective language proficiency and professional competence.

The book is meant for promoting learner autonomy and defines the role of teachers as facilitators and learners as highly motivated stakeholders.

Disclaimer

Some of the passages given for Listening, Speaking, Reading and Writing lend themselves to the teaching of Grammar items. However, testing and evaluation does not include Grammar.

This material is not for publication: it is only for training purposes.

Unit 1

Communicative Competence

Listening : Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions

Reading: Two subject-based reading texts followed by comprehension activities/exercises

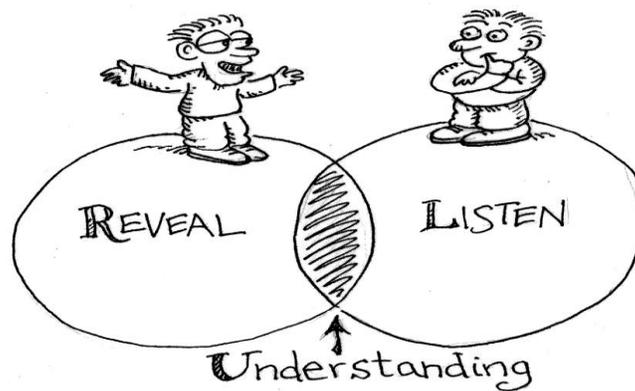
Writing: Summary writing based on the reading passages.

Unit 1 Communicative Competence

Listening:

“Communication is a process of passing information and understanding from one another.”

This definition of communication by Davis explains the purpose of communication. When an information is passed on from one person to the other, one needs to listen to understand its meaning. Listening is thus inevitable in communication process.



Source: <https://pixy.org/4608973/>

While communicating one engages in listening for various reasons – to appreciate, to be empathetic, to comprehend, and for critical analysis. All these happen only when we listen because it is an active process of decoding the message in accordance with the speaker’s language use and intonation. It is not necessary that all the types occur in all situations. The language use and the intonation, by itself, sways the listeners to respond accordingly.



Source: https://www.photosforclass.com/download/px_3182808

Listening Activity:

Pre-task

Vocabulary List:

Coral	a hard red, pink or white substance that forms in the sea from the bones of very small sea animals.
Devour	eat or do something quickly and completely
Metamorphosis	a complete change of form
Nook and cranny	every place; everywhere
Problematic	full of problems
Lethal	very dangerous and able to kill
Scrap	something that is discarded
Manage	to handle
Disrupt	to stop or disturb something

Task 1

Listen to the content given in the below link and familiarize with the different types of listening to strengthen and improve your ability of listening.

<https://ed.ted.com/lessons/the-big-beaked-rock-munching-fish-that-protect-coral-reefs-mike-gil>



Source: [https://commons.wikimedia.org/wiki/File:Parrot_fish_on_coral_reefs_\(27324293082\).jpg](https://commons.wikimedia.org/wiki/File:Parrot_fish_on_coral_reefs_(27324293082).jpg)

Task 2

Answer the comprehension questions based on the link given above.

1. What do Parrotfish feed on?

2. How does the coral larvae help the fishes in the marine system?

3. How is overfishing a threat to coral reefs?

4. Why are reef eco-systems becoming fragile?

5. How does reef guard coastlines?

Speaking

Speaking skill can otherwise be called as a conversation skill. Speaking is the primary competency that has to be developed in communication process. To acquire speaking competence various aspects of the skill such as pronunciation, structure, vocabulary, content, accuracy and fluency are to be focused on equally.

In order to achieve the structure, vocabulary, accuracy and fluency the content of the subject matter must be well-known. To aid in this practice a set of open-ended questions are given below.

Answer the following questions in the conversation between Biology students.(This is based on listening skill exercise)

Vinay: Hey! What is Scarridae?

You : It is a type of fish whose common name is Parrotfish.

Vinay: I haven't heard of it. Can you describe its physical features?

You : _____

Vinay: What does it survive on?

You : _____

Vinay: How does it even eat them?

You : _____

Vinay: Umm...I am not aware of what larvae and polyps are...

You : _____

Vinay: How do you say that it helps the marine eco-system?

You : _____

Vinay: I am amazed at the facts of this species! I, now understand the ecological importance of its existence.

Reading

Reading Comprehension exercises are aimed at improving comprehension. One could also develop strategies to comprehend various types of texts.

Reading Comprehension develops the cognitive ability to understand the functional information and the inferential information of a given text.

The ability to make inference is to use two or more pieces of information from a text to arrive at a conclusion.

Inferential information are understood by means of deduction, speculation and examination of the given text. The inferential questions on a reading comprehension task drives the human mind to analyze, synthesize and evaluate the given information. This, in turn, trains the learner's mind to understand the nuances of real-life communication process and develop their communicational competence.

Read the given passages and answer the questions that follow.

Task 1

Ayurveda emphasizes that individual well-being should not come into conflict with social well-being. A happy life is that which achieves individual well-being, whereas a wholesome life is that which is conducive to social well-being. These concepts are currently in application and we have countries projecting their personal and national well-being indices, which match exactly the Ayurvedic notion of a happy and wholesome life. Integrative approach to healthcare Ayurveda is perhaps the earliest form of Integrative Medicine practised by humanity.



Source : <https://www.flickr.com/photos/189590028@N07/50191955812/>

The definition of Ayurveda is in tune with modern notions of Integrative Medicine. Integrative Medicine attempts to heal the body, mind and self at the same time or treats the human being as a complete whole. Integrative Medicine combines mainstream medical therapies and

complementary and alternative medical therapies for which there is some high-quality scientific evidence of safety and effectiveness. Ayurveda states that human life rests on the tripod of the body, mind and self. Ayurvedic texts also advise that there are multiple approaches to healing that are prevalent in the world and that we must examine and integrate the most effective methods to make a complete system of healing.

Balance of inner environment and personalized medicine Ayurveda defines health as a dynamic balance of the internal environment that positively impacts the sense organs, mind and the self. Just like the sun, the moon and the wind maintain the balance of the external environment, the body maintains itself by balancing anabolic (building up) and catabolic (breaking down) activities by self-regulation.

Each individual is unique and has a specific mental and physical constitution, which define the vulnerability to disease and the scope for achieving higher levels of health. Ayurveda has also been at the forefront of advocating an approach to personalized medicine from historical times. Advances in human genetics and medical genetics have heralded the emergence of a personalized approach to medicine today that tailors medical intervention to suit individual needs.

1. How does Ayurveda help in individual well-being?

2. In what way does Ayurveda conform to the concept of integrative medicine?

3. What is inferred from fourth paragraph?

4. Why does Ayurvedic medicine have variations in treating each individual?

5. How would you relate medical genetics with Ayurveda?



Task 2

A few weeks ago, a newspaper article quoted a well-known scientist saying, 'IT has destroyed Indian science'. One can speculate about the various ways in which the growth of the IT sector and other similar knowledge industries such as biotechnology has led to a decline in basic scientific research in India. The most obvious reason is money; pay scales in IT and BT are much higher than one can aspire for in academia. The argument goes why should a bright, B Tech or M Sc student enroll in a Ph.D programme when she can make a lot more money writing code? Not only does a fresh IT employee make a lot more than a fresh M.Tech student, her pay will rise much faster in IT than in academia. A professor's pay at a

government-run university, even after the Sixth Pay Commission, tops out at far less than a senior executive's salary in a major industry.

Second, the social status of IT and BT jobs equal or even exceed the social status of corresponding academic positions, since they are seen as knowledge industries, which plays to the best and worst instincts of the societal order. As quintessential white-collar professions, neither do they compel a successful entrepreneur to resort to violence and corruption, nor do they demand any physical labour. Unlike real estate or road construction, it is felt that IT workers can become rich while staying honest and sweat-free, assuming that the labour pool for academia and IT is roughly the same, the difference in our collective preferences biases the labour market towards IT and away from academia.

Further, when the imbalance between IT and academia continues for decades, a destructive loop, from academia's point of view, is created. When our best and brightest take IT jobs over academic ones for a decade or more, faculty positions in our universities and research centres are no longer filled by the best candidates. As faculty quality goes down, so does the capacity to train top-class graduate students who, after all, are 'teachers in training. In response to decreasing faculty quality, even those students who would otherwise choose an academic profession, decide to join industry or go abroad for their studies. These foreign trained graduates prefer to come back to corporate India, if at all they do come back and the downward cycle replicates itself in each generation.

In other words, academia is trapped within a perfect storm created by a combination of social and economic factors. In this

socio-economic calculus, the members of our societal classes should prefer an IT job to an academic one. Or, to put it another way, the knowledge economy, i.e. the creation of knowledge for profit, trumps the knowledge society, i.e. the creation of knowledge for its own sake or for the sake of the greater good. As is said, "Knowledge is power, but money is even more power". Perhaps the scientist was alluding to this victory of Capitalism over the pursuit of pure knowledge when he accused IT of having a negative influence on Indian science. Surely, knowledge has become a commodity like any other and as a result, knowledge workers are like any other labourers, who will sell their wares to the highest bidder.

1. What did the scientist actually mean when he said, "IT has destroyed Indian Science"?

2. What could be the appropriate title for the given content?

3. Why does the author say that knowledge has become a commodity?

4. What does knowledge economy refer to?

5. What perception towards IT jobs is given in the passage?

Writing

Writing skill is a part of academic learning. It helps to communicate verbally in written form. It is the knowledge and ability to express one's ideas through written words. Acquisition of writing skill helps to communicate with clarity. Besides, it is also an easier way to convey a message to a mass audience.

In academic writing, writing a summary is considered important. This is because, summary is something a student has to write from his/her understanding of the topic. In this effort, the use of the language by the student in expressing his/her own idea would be exhibited.

Here are a few guidelines to write summary on any given topic.

- ✓ Write in present tense.
- ✓ Do not copy sentences from the original work.
- ✓ Paraphrase the information in your words.
- ✓ Do not add your own ideas, opinions, or interpretations while writing a summary of a factual topic.
- ✓ Add connective words for clarity and coherence.

The skeleton of the summary:

- ✚ Introduction- introduce the topic
- ✚ Paragraphs- each summary can have minimum three paragraphs excluding introduction and conclusion

Each paragraph must revolve around one main idea. The other sentences in that paragraph must be the supporting points of that main idea.

- ✚ Conclusion- summarise the entire points; do not add any new point here.

Task 1

Using the above given guidelines write a summary on Ayurvedic treatment and its benefits. (Task 1 of Reading Comprehension can be taken as a material to summarise its ideas)

Unit 2

Persuasive Communication

Listening: Listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: Debates – Just-A Minute Activities

Reading: Reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: Dialogue writing- writing an argumentative /persuasive essay.

Unit 2 Persuasive Communication

A strong message can influence **thinking**, **behaviour** and **belief**



Source: <http://www.aventislearning.com/images/Keys%20to%20Persuasive%20Communication.png>

LISTENING

Pre-listening:

Think:

1. Have you ever tried to persuade others through communication?
2. Do you possess the art of persuasion?

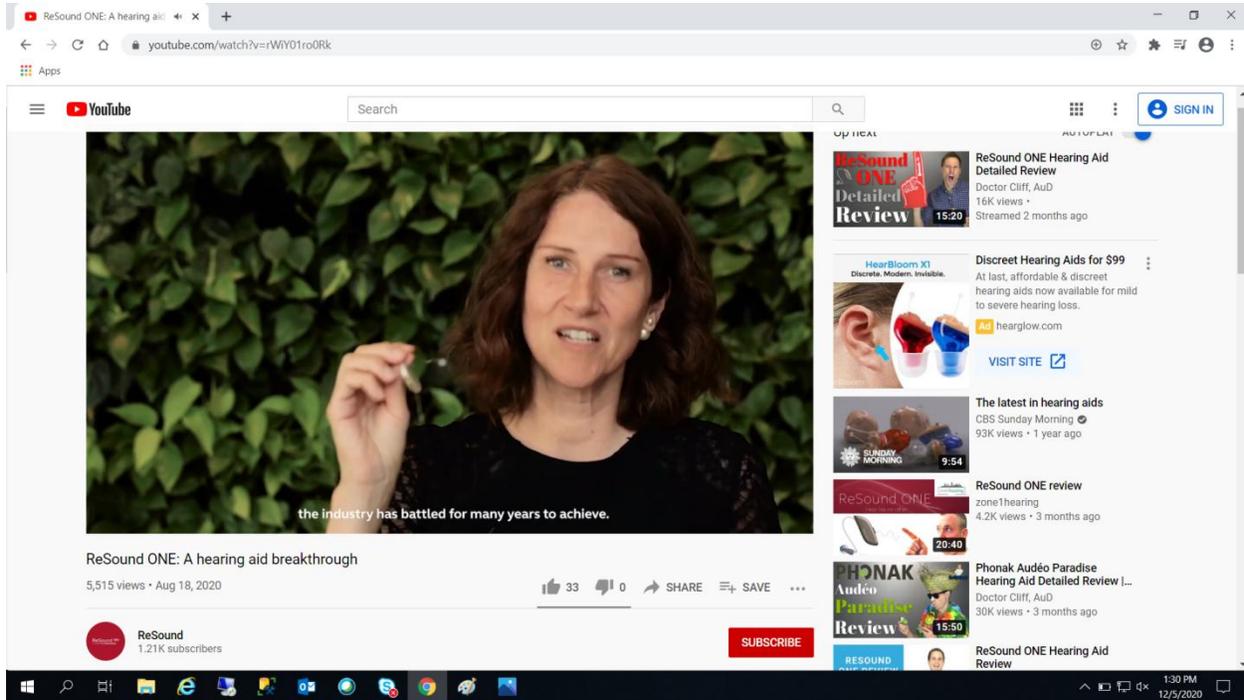
Definition of persuasive communication:

- According to U.S. National Library of Medicine, Persuasive Communication is "a mode of communication concerned with inducing or urging the adoption of certain beliefs, theories, or lines of action by others."
(Source: <https://www.definitions.net/definition/persuasive+communication#:~:text=Library%20of%20Medicine-,Persuasive%20Communication,lines%20of%20action%20by%20others.>)
- According to APA Dictionary of Psychology, "Persuasive communication conveys "information that is intended to change or bolster a person's attitude or course of action and is presented in written, audio, visual, or audiovisual form."
(Source: <https://dictionary.apa.org/persuasive-communication>)

In a nutshell, persuasive communication is a form of communication that deals with influencing or persuading others. It helps the speaker to appeal to the listeners' or viewers' brain and encourage him/ her to move from resistance to consensus. Learning the nuances of persuasive communication becomes important as it help us to be successful at achieving goals.

Listening:

Listen to the following video which is about the launch of ReSound ONE, a revolutionary new hearing aid.

A screenshot of a YouTube video player. The main video shows a woman with brown hair speaking, with the subtitle "the industry has battled for many years to achieve." The video title is "ReSound ONE: A hearing aid breakthrough" and it has 5,515 views as of August 18, 2020. The video player interface includes a search bar, a "SIGN IN" button, and a sidebar with related videos. The sidebar includes a "ReSound ONE Hearing Aid Detailed Review" video, an advertisement for "HearBloom X1" hearing aids, and other related content. The Windows taskbar is visible at the bottom of the screen.

<https://www.youtube.com/watch?v=rWiY01ro0Rk>

Transcription:

Voiceover: Just like a fingerprint, every person's hearing is unique. Yet the most commonly worn hearing aids use a standardized approach modelled on an average ear which can often compromise sound quality globally 79 million people wear hearing aids but 93% say that they have trouble hearing in noisy environments and 55% get confused about where sounds come from. All this changes today, as GN hearing launch ReSound ONE, a revolutionary new hearing aid that places an additional microphone inside the ear canal also called an M&RIE, Microphone and Receiver in ear design. This for the first time allows those relying on hearing aids to experience the world with their own ears. People can now enjoy the benefits of superior sound quality and hear conversations better in noisy environments.

Gitte Aabo (GN Hearing CEO & President): I am very proud that once again, we are first in the industry with groundbreaking innovation that makes a genuine difference in how people experience conversations and sounds around them. This way of placing a microphone inside the ear canal, is something the industry has battled for many years to achieve. ReSound ONE will allow people with hearing loss to feel that they are literally getting their own hearing back, hearing the way nature intended.

Ray Weave (Musician, Voice Over Artist & Writer): I am seriously surprised at how much I like them because I'm naturally skeptical about things and I know that as the years go on it's going to be even more important to me because you know as we all know you get older your hearing doesn't get better all of a sudden. It doesn't improve when I'm 75 or 80 and I'm as time goes on I'm going to be even more happy that I have these things and I think that having them. You will feel differently about yourself the way I do and I think that you just go give it a try.

Voiceover: To find out more about ReSound ONE, visit resound.com forward slash press or check out our social channels.

ReSound One, hear like no other.

Glossary:

- Unique – being the only one of its kind
- Hearing aid – A small amplifying device which fits on the ear and helps in hearing.
- Compromise – an agreement of a dispute that is reached by each side making concessions.
- Revolutionary – causing complete change
- Genuine - authentic
- Groundbreaking – pioneering
- Innovation – featuring new methods

- Ear canal – A pathway running from the outer ear to the middle ear
- Microphone – an instrument for converting sound waves into electrical energy variations which may then be amplified, transmitted, or recorded
- Skeptical – having an attitude of doubt

Discussion:

The above listening passage is a model on how a product is launched. For any product launch, it is important to use persuasive words or expressions that would influence the consumers to buy the product.

According to entrepreneur.com, the following are the ten important persuasive words that would instantly grab the attention of the consumers.

1. Free: Though the word “free” is overused, it tops the list of persuasive words as the products could be sold just by giving something free.

2. Exclusive: When the product is given a tag as “exclusive”, it makes the people, want it more.

3. Easy: Consumers are easily drawn to the products which claim to make their lives “Easy”.

4. Limited: It is a general psychology of the people to buy products when the products have only “limited offer” or “limited version”

5. Get: It is an action word that psychologically puts the reader in charge and prepares them for action. “Get” is also typically followed by a benefit.

Example: Get a flat stomach in six weeks.

6. Guaranteed: Authenticity is a legitimate concern which any customer would have. The word “Guaranteed” is the right word which gives the reassurance about the product which triggers the consumer to buy the product.

7. You: When the sales copy is written always use 'first-person language' to persuade. It makes the consumers attentive and makes them feel special. Moreover, using "you" makes the writing conversational, and it brings the tone down to a friendly level where the psychological connection is made with the buyer.

8. Because: Human brains love explanations. Tie the product which you want people to buy with a reason, and people will be more compelled to take action.

Example: Why do you need that feature? *Because* it will help you get . . .

9. Best: The following examples will highlight the difference which the persuasive word "best" would bring to the sales.

Example 1: "The way to change a Flat Tire"

Example 2: "The Best Way to Change a Flat Tire."

Which of these examples sound better? We know its example 2. The word "best" always has the tendency to grab the buyers' attention.

10. Compare: Before buying any product, it is the tendency of any buyer to make comparisons between different brands available in the market. When the seller shows the consumers the difference between his/ her product and the competitors', it makes him/ her, the reliable seller.

Source: <https://www.entrepreneur.com/article/279224>

Post-listening:

I. Discuss in pairs and pick the persuasive words/ phrases/ expressions that you think would convince the consumers to buy the product, from the listening passage given above ,

II. Considering the listening passage as a model, write a detailed description about a product related to your subject using the above mentioned persuasive words.

SPEAKING

1. DEBATE

Debate is a logical argument carried out between two teams aimed at getting a conclusion on a topic. The two teams involved will hold opposite views of the same topic. The team which has the most cogent argument will be considered as the winner.

The following are useful expressions for debating:

Welcoming the audience:

- Ladies and Gentlemen, Welcome to this debate.

Stating the issue:

- The motion for debate today is ...
- Let's first define some important concepts...

Phrases to present the most important point:

- This argument/idea is of paramount importance.
- The most important argument for ... is ...
- The most important idea is...
- The primary argument for... is...

Conceding an argument:

- It's true/obvious/evident that ... However, ...
- While you might say that ..., it's important to remember that ...
- I agree with you that ... On the other hand, ...
- I agree/admit/concede that ... , but we must remember that...

Sequencing a list of arguments:

- First of all, I'd like to state ...
- Firstly, ... Secondly, ...Thirdly, ...
- The second argument in favour of ...
- To begin with, ...
- The next argument I'd like to state is...

Adding an argument to strengthen your point:

- In addition to that,...
- You also have to consider...
- Furthermore,...
- Moreover,...
- I might also add that...
- Not only that but also...

Concluding:

- Let me recap/recapitulate my point ...
- As a final word, let me summarize my point of view ...
- To reiterate my point of view, ...
- My final thought is ...
- In a nutshell, what I am trying to say is ...
- To sum up, ...
- Finally, ...

The following are the five important benefits of debating:

- It improves the critical thinking skills
- Students acquire the public speaking skills
- It develops the teamwork skills.
- It helps the student on how to persuade the listener
- It helps students in structuring their thoughts in a coherent manner.

Source: https://www.myenglishpages.com/site_php_files/communication-lesson-useful-expressions-for-debating.php

Task 1:

Divide the class into two teams and conduct the debate for the following topics:

1. Is it ethical regulate/allow genetically engineered food?
2. Should we support the cloning for tissues and organs?

2. Just A Minute (JAM)

The activity Just A Minute (JAM) is a spontaneous speech where the speaker articulates the ideas on the topic in a minute. The topic could be of the speaker's choice or a given topic. This activity helps the student condense the information precisely in his/ her mind and speak only the most relevant details within a minute. This helps the students improve their communication skills. Hence, JAM session is included in the job recruitment process to test the communication capability of the candidates. So it becomes important for the students to master the impromptu speaking skill which can be learnt through practice and training.

To conduct JAM session in your classroom:

1. The teacher should divide the class into two groups.
2. He/ she should ask each team to prepare the list of topics (related to your subject) on which they want their opponents to speak.
3. The teacher should ensure that each and every student gets a chance to speak for a minute.
4. The teacher can ensure that the contestant adheres to the rules of JAM.

Rules that are to be followed during JAM session:

1. Once the topic is chosen/ given, try to analyse and assimilate your ideas.
2. Think about the facts that are related to the topic.
3. Start your speech without any hesitation.
4. Stress on the facts by giving examples.
5. Use proverbs and anecdotes to persuade the interest of your listeners.
6. Be brief and speak to the point.
7. Frame simple sentences.
8. Remember to follow the sequential order.
9. Do not deviate from the topic given.
10. Do not drag your point.
11. Do not give too many pauses.

12. Do not repeat your ideas and words.
13. Be time cautious.

Benefits of JAM

1. It improves the students' Vocabulary as they are not allowed to repeat the words.
2. It improves their thought process.
3. The students' level of Confidence increases as they asked to speak in front of their class.
4. The students will be able to train and improve their Time Management skill.
5. The students will learn to assimilate and condense their ideas.

TASK 2:

Conduct JAM session for the following topics

1. Forest preservation
2. Healthy food habit
3. Water Conservation
4. Genetic Science
5. Water borne diseases
6. COVID 19
7. Effects of music on the brain
8. Intelligence of Dolphins
9. Why Bats hang upside down?
10. Best types of house plants

Suggested videos:

BBC- Nicholas Parson's Just A Minute (JAM):

- <https://youtu.be/2Zu-2eNYmMM>
- <https://www.youtube.com/watch?v=Dp5vqxEot1c>
- <https://youtu.be/pSGV2HZcPQ0>

READING

Pre-reading:

Read the following print advertisements and answer the following questions:



(Source: <https://in.pinterest.com/pin/419819996514536798/>)



(Source: <https://images.app.goo.gl/kJ1P7ZWhUtRQbr8Y6>)

- What do you understand from these images?
- What do the slogans "A warm welcome to death" and "Whose hand are you holding" mean?

Reading:

Advertisement can be defined as the most powerful and persuasive tool that a company uses as one of its marketing tool. It is a form of an effective communication that attempts to persuade the potential customers to use the brand or its services. In other words, a good advertisement helps the firm increase the number of consumers and aids to have control over them. Lot of creativity goes into the process of making an advertisement. There are many important elements like logo, colour, jingle etc that sculpts the advertisement to serve its purpose. Slogan is one such element which makes the advertisement more effective.

A slogan or the tagline is a catchy phrase that helps the consumers remember the product. The Oxford Dictionary of English describes slogan as "a short and striking or memorable phrase used in advertising." When a slogan is combined with music, it is called jingle. The choice of words plays a crucial role in constructing a slogan as it should highlight the message it wants to convey. It shall also express the quality and the uniqueness of the product.

- The main motto of the slogan is to sell the product or the service to as many consumers as possible through the message it provides.
- The innovativeness or the uniqueness of the product should be expressed using the minimum number of words in an alluring way.
- It should shape up the consumers' opinion about the product and influence them to buy it.
- It should be concise and appealing to the consumers.
- It should be easily remembered.
- It should build a positive brand image.
- It should go well with the logo of the brand as they are always displayed together.



(Source: <https://images.app.goo.gl/GPzvuvkt7C8NcMbz7>)

Post-reading:

I. Google and write the slogans for the following popular food products and food brands:

- Oreo
- Kit Kat
- KFC
- Boost
- GRB ghee
- Maggie noodles
- Nestle
- Nescafe

II. Look at the following advertisements carefully and write your inference along with the appropriate slogans.

1.



Source: <https://www.thoughtmedia.com/wp-content/uploads/2019/11/creative-print-ads-9.jpg>

2.



Source: <https://i.pinimg.com/originals/cd/3d/d2/cd3dd26cc002f008de3d3ac7286d8276.jpg>

WRITING

1. Persuasive Essay

While writing a persuasive essay, it is the writer's duty to convince the reader to accept the standpoint which the writer takes about the particular issue. Writing persuasive essay demands a wide research about the topic and about the biases of the target readers to demonstrate not only why the writer's opinion is correct but also why the opponent's opinion is wrong.

Steps to write a persuasive essay:

1. Do the intensive research to understand the topic thoroughly and to gather the convincing evidence.
2. Understand the readers' perspective to design the persuasive technique.
3. Organise the ideas collected to get the right perspective of the issue and pick the side you wish to advocate.
4. With this understanding, give an outline to your essay in a proper sequential order.
5. Reinforce your statement with proper evidences.
6. Support your point of view with fact, examples, analogies etc.
7. Refute the opposing views strongly with the evidences you have.

According to time4writing.com, a Persuasive Essay should have the following Outline:

Introductory Paragraph: The writer should grab the attention of the reader in the introductory paragraph. It should encompass an overview of the argument. It should also contain the thesis statement through which the writer explicitly expresses his/ her standpoint.

Body Paragraphs: Each paragraph should be centered on evidence in the form of statistics, quotes from experts and real-life examples which the writer has gathered during his/ her phase of research. It should also comprise of the supporting statements.

Opposing View Paragraph: This paragraph plays a crucial role in the essay as it describes and disproves the opposing views of the issue.

Concluding Paragraph: It is important for the writer to reaffirm his/ her thesis statement while he/ she summarizes his/ her ideas in this paragraph. This will make certain that the readers will have no doubt in writer's perception.

(Source:https://www.bestessaytips.com/persuasive_essay.php#:~:text=A%20persuasive%20essay%2C%20also%20known,convincing%20facts%20and%20logical%20reasons.)

Sample essay:

Why You Should Not Eat Fast Food



Considering the ever-increasing pace of life in big cities, sometimes it can be easy to lose oneself in overwhelming routine. Being in a hurry all the time, a regular citizen may have no time for satisfying even basic needs such as sleep and nutrition. This is probably why seeing sleeping people in public transport is so common, and why fast food restaurants are crowded all the time. Sleep deprivation in big cities is a well-known problem, and people are gradually becoming more aware of the importance of sleep. In the case of fast food, however, things are not that simple. Even though the majority of people know about the dangers of eating food from McDonald's,

Burger King, Subway, and similar places, they still go there. The factors causing such behaviour should be analysed separately. Instead, this paper focuses on the reasons why you should quit eating fast food as soon as possible.

The most obvious reason everyone is aware of is the increased risk of developing obesity. Sometimes, being overweight is caused by health problems or psychological issues. However, much more often, becoming overweight is evoked by dysfunctional eating habits and the regular consumption of fast food. According to research, people eating fast food regularly develop much higher risks of gaining extra weight. They are also more likely to develop type 2 diabetes. Unfortunately, not only adults are exposed to these risks—teenagers and children are also under threat. Throughout the last 30 years, the rates of adolescent obesity have tripled. For children, this index has doubled over the same period of time. This might be related to sophisticated advertising, but facts remain facts: fast food leads to obesity, and all age groups are at risk (*Lifhack*).

Unlike organic food, which is by default created from pure, natural ingredients, fast food often has a bunch of dubious ingredients in it. To start with, all kinds of flavour enhancers are added into it so that it tastes and smells better. Conservatives and food preservatives may be used as well—in particular, tertiary butyl hydroquinone, which is made from similar ingredients as petroleum. As if this was not enough, fast food may contain the remainders of drugs and antibiotics. How do they get in there? The good news is that fast food does contain real meat. The bad news is that animals are kept in such awful conditions that they often suffer from a number of diseases. To deal with this problem, fast food manufacturers may add antibiotics to animals' nutrition—later, they can get into your body when you eat your next chicken burger (*SheKnows*).

Along with the risks of developing obesity and pumping your body with doubtful chemicals, eating fast food often means exposing almost every organ of your body to dangers. For example, it becomes much easier to get kidney diseases: because fast food is often salty and greasy, it increases blood pressure, makes you want to drink all kinds of soda drinks (which are unhealthy in their own way), and affects kidneys adversely. Besides, due to high amounts of cholesterol and triglyceride contained in fast food, your cardiovascular system suffers as well. This is not to mention the fact that processed fats in fries and other junk food, when supplied to the brain instead of nutrition, affect cognitive abilities in a negative way. In particular, according to research conducted on rats, a week of daily fast food consumption caused memory impairment in test subjects. And, as if this was not enough, junk food increases your chances to get cancer (*Beauty and Tips*).

As it can be seen, cheap and tasty food is not what your body needs. To start with, when eating fast food regularly, you put yourself (or your children, if you tolerate their fast food habits) at risk of developing obesity, and possibly type 2 diabetes. Some crucial organs of your body such as kidneys, heart, and brain, suffer from junk food immensely. And, if adverse health effects are not enough for you, think about preservatives, antibiotics, and other chemicals you stuff your body with when eating fast food.

(Source: <https://academichelp.net/samples/academics/essays/persuasive/should-not-eat-fast-food.html>)

Task 1:

Read the following persuasive essay and identify the persuasive words, thesis statement, facts and supporting statements:

What a lack of sleep can do to your body and mind



All of us have received advice to “take a good rest” at least once in our lives. Probably, this is also one of the most neglected pieces of advice a person may give to another. With the ever-increasing pace of life, especially in big cities, sufficient rest—and sleep, in particular—is gradually becoming more of a luxury than a basic need that should be addressed and satisfied. Everyone knows how sleep is important: health experts, psychologists, self-help books, and other authoritative sources keep talking about the importance of having good sleep—and still exhaustion and fatigue remain one of the biggest problems in a number of developed countries. Perhaps, this is just not enough to make people pay attention to the problem. Supposedly, it would be more convincing to learn about the negative effects of sleep deprivation, poor quality sleep, or just constantly ignoring one’s need for restoration and rest. This essay discusses some of the crippling (and sometimes surprising) effects a simple lack of sleep can do to a person’s mind and body.

First of all, if you ever wondered how someone with schizophrenia or other severe mental disease feels, a sleepless night could get you closer to this condition. As researchers from the University of Bonn and King’s College London discovered, upon missing a night of sleep, a psychologically-healthy person may experience symptoms typical for some forms of

schizophrenia. During the course of the experiment, which led the scientists to such a conclusion, a group of people was offered to first have a night of normal sleep, and then to stay awake by conversations, games, and physical activities. After this, test subjects were to undergo prepulse inhibition measurements. Prepulse is a psychological mechanism helping the brain to filter incoming sensory information: with its help, our minds distinguish between important and unimportant stimuli coming from the environment. After just one sleepless night, this function turned out to be inhibited significantly. Test subjects reported altered bodily sensations, distorted perception, and weird ideas: for instance, some of them believed they could read thoughts. They also became more sensitive to light and loud noises (*Universitat Bonn*). After having a good rest, perception returns back to normal, but it takes time to return all psychological and physical functions back to its usual state. In the case of prolonged sleep deprivation, some consequences may be irreversible.

Do you enjoy feeling depressed? Or do you like mood swings, when periods of euphoria quickly change to severe blues? If the answer is yes, then sleep deprivation is for you. Numerous research studies conducted in different sleep laboratories showed that people who did not have enough sleep, or have been deprived of it for certain periods of time, tend to be more irritable and less able to control their negative emotions. They are also more likely to react negatively to something they do not like, even if the trigger is not significant. This is not to mention the increased likeliness of developing depression. Besides, the lack of sleep inhibits friendliness and empathy, and impairs one's ability to stay in a positive mood (*Psychology Today*). In addition, if you have such mental conditions as obsessive-compulsive disorder or chronic depression, their symptoms may become more acute as well. In any case, to avoid prolonged periods of negative mood, you might want to sleep well regularly.

As if it was not enough, sleepless nights can affect your body in a negative way as well. There have been numerous research studies proving that people having problems with falling or staying asleep also had other health issues as well. In particular, sleepless nights can lead to increased risks of heart attacks and failures, strokes, diabetes, and increased blood pressure. Poor sleep can also kill your sex drive, regardless of your gender. In particular, both men and women who suffer from sleep deprivation reported lowered interest in sex and decreased libido in general. In particular, poor sleep caused by the apnea syndrome—a widespread health condition among men—was also connected to abnormally low levels of testosterone secretion during nighttime (*WebMD*).

Among other peculiar and unpleasant consequences of depriving yourself of sleep is the suppression of your immune system, weight gain, memory issues, and problems with concentration. This is not to mention the risk of getting into an accident because of decreased attentiveness and alertness (*Healthline*).

Overall, there is a number of good reasons why you would not want to stay up the next time you feel like working or studying at night. In particular, you may experience altered perception, distortion of cognitive and memory functions, and the inability to concentrate and think straight. Also, your mood will be down, and it will become harder for you to control your negative emotions, such as anger or fear. As if this was not enough, your body suffers as well. In particular, people who regularly deprive themselves of sleep, develop higher risks of heart diseases and diabetes, and report lowered sex drive and libido. So, in general, there is probably nothing that would compensate you for a night spent without sleep.

(Source: <https://academichelp.net/samples/academics/essays/persuasive/lack-of-sleep.html>)

Task 2:

Write Persuasive essays for the following topics:

1. Is human behaviour determined by genetics?
2. Are biological weapons ethical?
3. Should aggressive dogs be euthanized or socialized?

2. Dialogue Writing:

Understand how a seller can persuade the buyer to purchase the products from the following conversation between the shopkeeper of Kelly's Organic Vegetable shop and Sathya, a buyer:

Shopkeeper: Ma'am, welcome to Kelly's Organic shop! How can I help you?

Sathya: Thank You! (*looks at the price of the vegetables*) The price of the vegetables seems costlier when compared to other shops.

Shopkeeper: Yes ma'am! This is an Organic shop.

Sathya: Organic shop? What does 'Organic' mean?

Shopkeeper: 'Organic' refers to the way in which agricultural products are grown and processed.

Sathya: Oh I see! How are organic vegetables different from conventionally grown vegetables?

Shopkeeper: Firstly, Synthetic and chemical fertilizers are used to grow the vegetables in conventional way whereas natural fertilizers like manure are used to grow the vegetables in organic way. Secondly, in conventionally grown vegetables weeds are controlled with chemical herbicides, the residues of which tend to stay on the vegetables even after washing in multiple times but in organic farming, weeds are controlled naturally through the process of crop

rotation, hand weeding, mulching and tiling. Sometimes natural herbicides are also used to control the weeds in organic farming. Thirdly, the pests are controlled with synthetic pesticides in conventional farming whereas in organic farming, pests are controlled using natural methods and naturally derives pesticides.

Sathya: My Goodness! You have compared it so well. Could you please throw some light on the ill effects of synthetic fertilizers and pesticides that are used to grow the vegetables in conventional manner?

Shopkeeper: Sure ma'am! First of all, the synthetic fertilizers deplete the natural nutrition of vegetables. Nitrogen and Phosphate based synthetic fertilizers seep in to the groundwater causing an increase in its toxicity. This results in water pollution. These fertilizers increase the nitrate level of soil and the consumption of vegetables produced from such soil, convert to toxic nitrates in the intestines. These nitrates react with the haemoglobin in the blood and cause suffocation and even death in the extreme cases.

Sathya: My God! These facts are alarming! It is wise to spend money in organic shop rather spending it in the hospital. I appreciate you for explaining the goodness of organic farming. I will share these valuable information with my friends and will convince them to buy vegetables from your organic shop.

Shopkeeper: Thank You, Ma'am!

Sathya: Thank You, Sir!

Task 3:

Rajesh creates awareness about the ill effects that are caused to one's health due to the use of plastic and persuades Suresh to use Eco friendly cloth bags. Write a dialogue between a dialogue between Rajesh and Suresh.

Unit 3

Digital Competence

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related)

Reading: Selected sample of Web Page (subject area)

Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

Unit 3 Digital Competence

Objective:

This Unit enables the students to acquire Digital Competence.

Outcome:

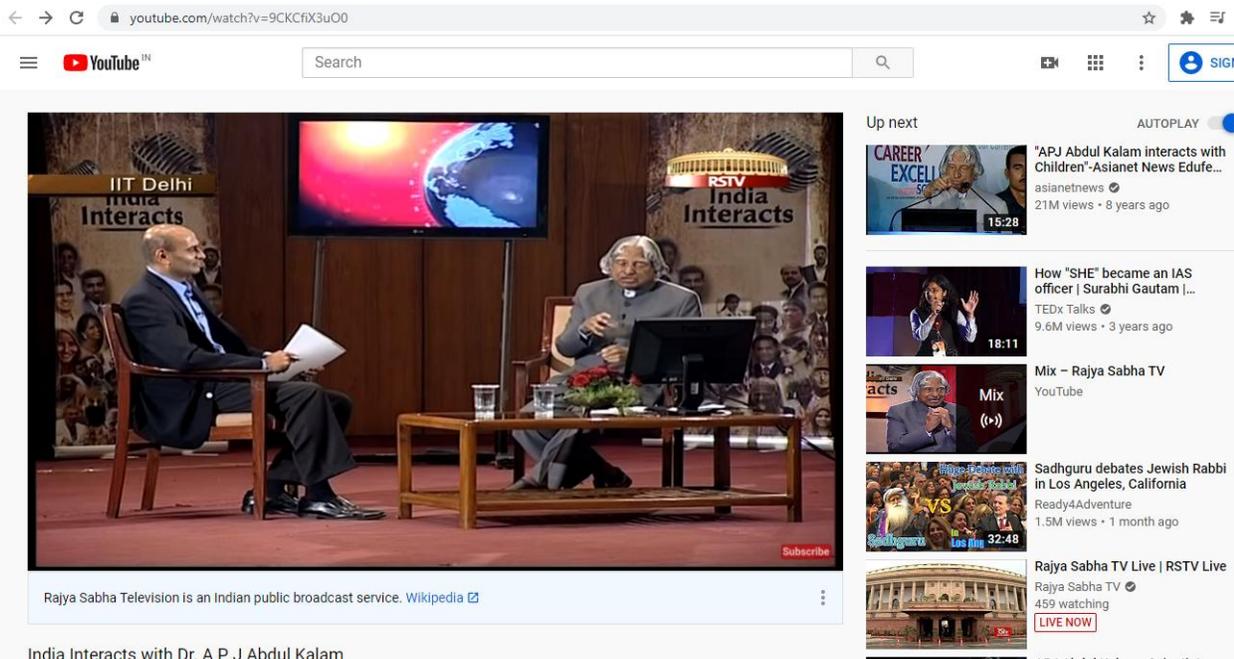
Students will be able to comprehend scientific information from web sources, do video conferencing with experts, create Vlogs and post video clips, create web pages and post multimedia materials in web pages.

Listening to interviews

Listening to interview helps the listener to stay focused and alert in an interview, and will improve conversational skills and competence over the subject. Active listening skills will not only help to succeed in professional life, but they will help the person develop his/her character.

Task 1: Listening to interview - I

Direction: Click on the given YouTube web link and listen to the interview with Dr. A P J Abdul Kalam and answer the following questions.



The screenshot shows a YouTube video player interface. The main video is titled "India Interacts with Dr. A P J Abdul Kalam". The video content shows Dr. A P J Abdul Kalam sitting in a chair, being interviewed by a host. The background features a large screen displaying a globe and the text "IIT Delhi India Interacts" and "RSTV India Interacts". Below the video player, there is a caption: "Rajya Sabha Television is an Indian public broadcast service. Wikipedia". To the right of the video player, there is a "Up next" section with several video thumbnails and titles, including "APJ Abdul Kalam interacts with Children", "How 'SHE' became an IAS officer", "Mix - Rajya Sabha TV", "Sadhguru debates Jewish Rabbi in Los Angeles, California", and "Rajya Sabha TV Live | RSTV Live".

<https://www.youtube.com/watch?v=9CKCfiX3u00>

(Source : India Interacts with Dr. A P J Abdul Kalam, YouToube)

Questions:

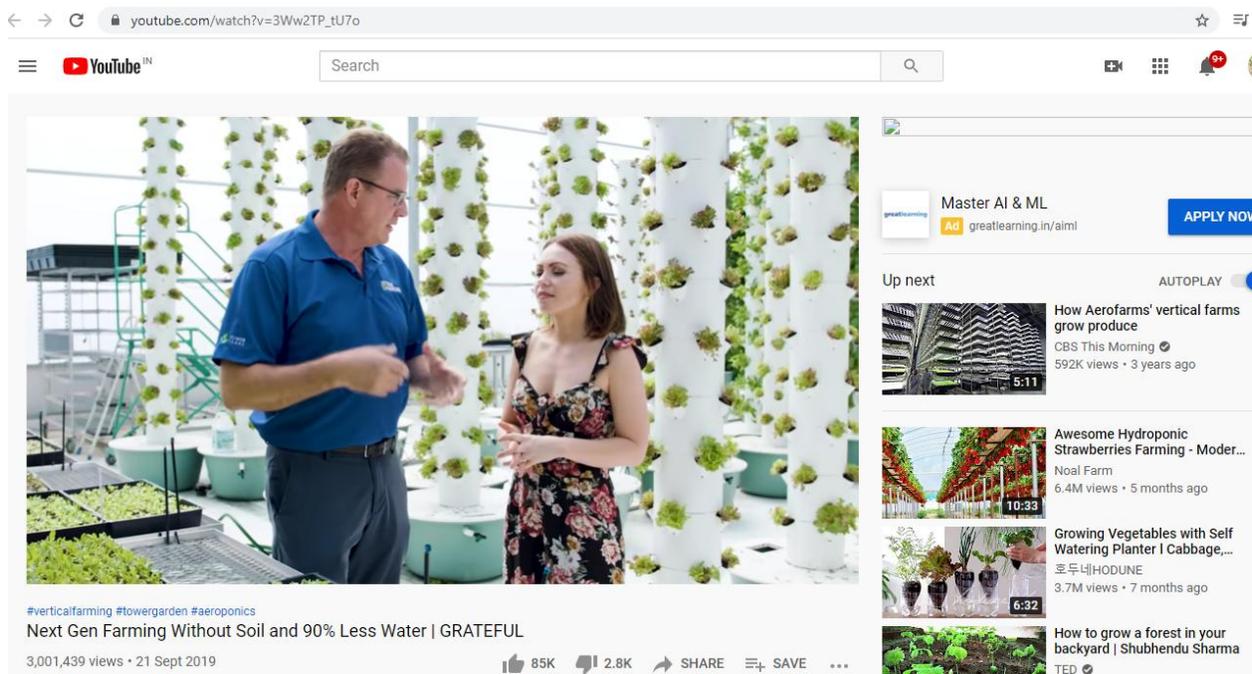
1. Distinguish discovery from invention with relevant examples.
2. Define innovation.
3. Elucidate 'right type of education'.
4. List out the qualities of great teachers.
5. Share your perception on DNA technology

Task 2: Listening to interview – II

Direction: Click on the given YouTube web link and listen to the interview and answer the following questions.

https://www.youtube.com/watch?v=3Ww2TP_tU7o

Aeroponics



#verticalfarming #towergarden #aeroponics
Next Gen Farming Without Soil and 90% Less Water | GRATEFUL
3,001,439 views • 21 Sept 2019

Up next

- How Aerofarms' vertical farms grow produce
CBS This Morning
592K views • 3 years ago
- Awesome Hydroponic Strawberries Farming - Moder...
Noal Farm
6.4M views • 5 months ago
- Growing Vegetables with Self Watering Planter | Cabbage...
포두네|HODUNE
3.7M views • 7 months ago
- How to grow a forest in your backyard | Shubhendu Sharma
TED

(Source: Next Gen Farming Without Soil and 90% Less Water, YouTube)

Questions:

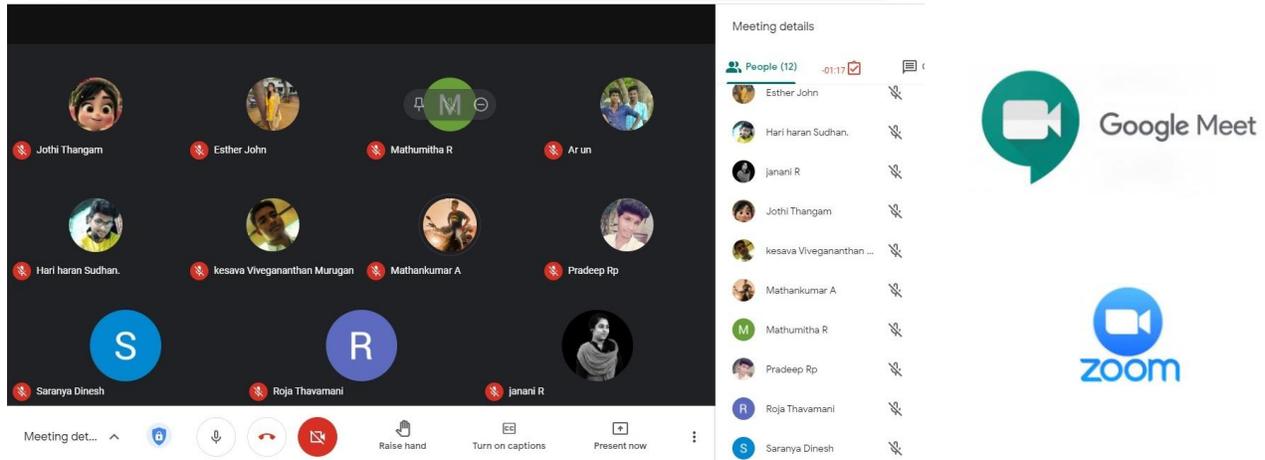
1. Can you compare Aeroponics with conventional farming?
2. How can coconut husk be used to grow plants with less water?
3. Can you defend vertical farming?
4. How does vertical farming bring more outcome?
5. How is nutrient substances supplied to plants in Aeroponics?

Speaking: Interviews with subject specialists

Interview with subject specialists can be made easy through video conferencing.

Video conferencing

Video conferencing is live, visual connection between two or more remote parties over the internet. Desktop video conferencing is a core component of unified communications applications and web conferencing services, while cloud-based virtual meeting room services enable organizations to deploy video conferencing with minimal infrastructure investment.



Video conferencing can be made through the online platforms of Google meet, Zoom, Cisco WebEx, Microsoft Teams, GoToMeeting, Facebook live, YouTube live, Skype etc.

Video conferencing skills

Video conferencing skills include the following;

1. Get to know your technology

One of the best steps is to spend some quality time with your technology. Review features like chat, mute, and background replacement to

make sure you can quickly turn these options on and off as needed during an important meeting.

2. Maintain a Clean Background

Looking neat is important for a video conference. Hence clear out items that colleague shouldn't see.

3. Anticipate Distractions

Video conference users should not only create a distraction-free background, but also make sure their surroundings are relatively quiet. An unexpected phone call and a text message notification can disrupt the flow and create a distraction. Consider silencing your phone.

4. Pay Attention to Body Language

Encourage the habit of looking directly at the camera when speaking, which creates the appearance of eye contact. Avoid excessive gesturing during a video conference, as these movements can appear over-exaggerated when they show up on the screen. Sitting too close to the camera or leaning in during the meeting can also be distracting, Maintaining a comfortable, consistent distance from the camera throughout the meeting matters a lot.

(Source: <https://www.flexjobs.com/employer-blog/4-ways-enhance-teams-video-conferencing-skills/>)

Tutorial - How to Use Google Meet

<https://www.youtube.com/watch?v=wGXI0KpkR50>

Task 1: Download Google Meet App from Playstore and install it in your mobile. After installing the app, start a meeting, copy the meet link/meeting code and send it to an expert / teacher and interview the expert over Climate change.

Task 2: Download Zoom App from Playstore and install it. After installing, start the app, copy the code and password and send it to an expert / teacher and interview the expert over Afforestation.

Creating Vlogs

Vlog stands for video blog where all of the contents are in a video format. A vlogger is a profession where one creates a video on a specific topic then post them to a video sharing platform like YouTube, Facebook, Instagram, blog and other video websites.

There are two types of vlogging: 'talking-head' and 'follow me around.' On 'talking-head', the camera is set on a tripod and it remains static as the vlogger talks about a subject or walks the audience through a process. For example drawing tutorials, cooking videos etc. On the other hand, 'follow me around' vlog creators record clips in different locations. Once you create



your video, you can upload it online or embed the video within a post on your blog or website so your followers can see your latest update.

(Source: <https://www.stokedfortravel.com/gopro-for-vlogging/>)

How to become a vlogger?

1. Determine niche and research

You must consider your interest and the potential of it to attract audiences. This will guarantee you that all your audience will enjoy every

video you shared. After determining your niche, you should research your possible competitor. You should know what works for them and what's not. This will be your guide to always make things right and avoid making the mistakes they'd experience.

2. Create a channel on any video sharing platforms and understand how it works

You've to create your own video channel. There are several video sharing platforms today, choose what you think best fit your interest and skills. Also, take time to familiarize yourself with how it works to have a smooth and organized process.

3. Create video

Once you have a channel, the next thing to do is creating the video. Make sure the videos are Informative, well-researched and original. People research on the internet to find answers, so, make sure your video's content is helpful and true. Use the recommended video format and settings for your videos. Make it mobile-friendly as well to widen your visibility to your audience.

4. Optimize your videos and get discovered

Optimizing videos is a way for the video sharing platform to discover your content and give the attention you deserve. So make sure to include all the important factors in your video such as title, file name, tags, and descriptions.

5. Publish regularly

To keep your audience hook on your channel, you must ensure that you'll stay active and publish more engaging videos.

6. Interact with your audience in the comment section

Vlogging is all about building a relationship with your audience and comment section is the best part of your channel where you can effectively interact with them.

7. Share your video on social media

Social media are effective platform for video sharing. Its free and people are always active in social media comparing to other websites. Make sure to make use of it to broaden your reach and visibility. Vlog requires a lot of hard work, creativity and patience in both researching and building the video.

Video can be edited before uploading it online. Some useful apps helps to edit the video film or add music, titles, credits, logos etc., for iPhone - iMovie, for Android Phone - PowerDirector, VivaVideo, KineMaster etc, for Computer / Laptop - Windows Movie Maker.

(Source: <https://www.shiftcomm.com/insights/7-killer-tips-to-become-a-professional-vlogger/>)

Tutorial - How to Setup a Car Vlog

<https://www.youtube.com/watch?v=xS5-y88C0A0>

Task 1 : Describing Plants

Direction: Using your mobile, shoot a video of plants and describe the benefits of plants. Upload your video in your YouTube channel / blog and share the link in your class whatsapp group / Edmodo/ Google classroom

Task 2: Describing Domestic Animals

Direction: Shoot a video of domestic animals and give voice description. Add title to the video using VivaVideo / KineMaster app. Upload your video in your YouTube channel / blog and share the link in your class whatsapp group / Edmodo/ Google classroom.

Reading

Web Pages

A Web page is a document available on World Wide Web. Web Pages are stored on web server and can be viewed using a web browser. A web page can contain huge information including text, graphics, audio, video and hyper links. These hyper links are the link to other web pages. It is often used to provide information to viewers, including pictures or videos to help illustrate important topics. A web page may also be used as a method to sell products or services to viewers. Collection of linked web pages on a web server is known as website. There is unique Uniform Resource Locator (URL) is associated with each web page.

Static Web page

Static web pages are also known as flat or stationary web page. They are loaded on the client's browser as exactly they are stored on the web server. Such web pages contain only static information. User can only read the information but can't do any modification or interact with the information.

Static web pages are created using only HTML. Static web pages are only used when the information is no more required to be modified.

Dynamic Web page

Dynamic web page shows different information at different point of time. It is possible to change a portion of a web page without loading the entire web page. It has been made possible using Ajax technology.

(Source: https://www.tutorialspoint.com/internet_technologies/web_pages.htm)

Task 1 : Reading Web page - 1

Direction: Click on the web link to read the web pages and answer the following questions.

Title: Human Genome Project

<https://www.genome.gov/human-genome-project>

Questions:

1. What is Genome?
2. What are the three major ways through which human genome was deciphered?
3. What does homologous gene mean?
4. Describe single nucleotide polymorphisms
5. Define Eukaryotic

Task 2 : Reading Web page - 2

Direction: Click on the web link to read the web pages and answer the following questions.

Title: Symbiosis

<https://biologydictionary.net/symbiosis/>

Questions:

1. Describe symbiosis
2. Distinguish endosymbiosis from symbiosis
3. Synthesize the relationship of human beings with ecology
4. Explain the exchange between plants and their pollinators.
5. How does Parasitism occur?

Writing: Creating Web Pages

Google Site:

Google Sites is a website building platform that makes creating a website easy. It has site builder features that make it easy and intuitive to design your site the way you want. You can also add "gadgets" like calendars, maps, spreadsheets, presentations and more to make your site more functional.

Creating Goggle Site:

Before you can start a Google Site, you must have a Google email account . Log into Google Sites to create a new site.

Steps to create a Site:

1. Browse

<https://sites.google.com/>

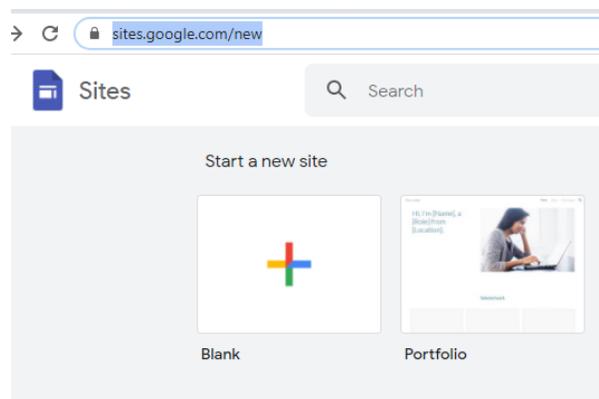
2. Select **Blank template** to design your own site from scratch. For your first site build using a blank template is the easiest way to build your site.

3. **Name your site** – Your name needs to identify its purpose. Once you name it, it cannot be changed.

4. Beneath the site URL, there are also 2 additional sections, **Choose a theme** and **More Options**.

5. Select a design for your site in the **Choose a theme** section.

6. **Add a description and category** for your site. (This is optional)



7. Select the sharing access in the **More Options** section.

(Source: <https://sites.google.com/site/tiesitestutorial/starting-your-google-site>)

Tutorial : Creating Google Site

<https://www.youtube.com/watch?v= Jc79kCWS8E>

Task 1: Create a Google site (<https://sites.google.com/new>) and post content on 'Biodiversity' and share your website link in your class whatsapp group / Edmodo/ Google classroom.

Task 2: Create a Blog in Bloggar.com and post a video, picture and text description on the 'adverse effects of pollution' and share the blog link in your class whatsapp group / Edmodo/ Google classroom

Reading Comprehension:

Digital Competence

Digital competence involves the confident and critical use of electronic media for work, leisure, and communication. These competencies are related to logical and critical thinking, high-level information management skills, and well-developed communication skills.

(Source: <https://www.igi-global.com/dictionary/teaching-digital-competence-and-scholarly-communication/7585>)

Microsoft Office

Microsoft Office is a computer program which includes Word, Power Point, Excel Access, Outlook and Publisher and. It's used to create, view, edit, save and print documents.

In today's world, learning process is technology-driven. Hence every student is expected to have a working knowledge of Microsoft Office programs like Word, Excel, and PowerPoint that will set them up for success in their field.

Microsoft Word:

Microsoft Word is a word processing program that allows for the creation of both simple and refined documents. You can create documents such as resumes, letters, and fax cover sheets. Pie-chart, Bar-chart, Line graph, Fish graph, Tables also can be created in Microsoft word.

Tutorial - Microsoft Word <https://www.youtube.com/watch?v=fUkh3yWm3d4>

PowerPoint:

PowerPoint uses a graphical approach to presentations in the form of slide shows. It is used to create slides adding pictures, videos and different WordArts. PowerPoint suggests word processing, outlining, drawing, graphing and presentation management tools. Pictures, Charts, Videos, Animation can be created using power point.

Tutorial - Creating Animation in PowerPoint

<https://www.youtube.com/watch?v=X1io7tFR6jI>

Excel:

Excel is used to create graphs and charts. Excel also provides functions and formulas, making it possible for your spreadsheet to automatically calculate and update results based on the data you input.

Tutorial - Guide to Excel

<https://www.youtube.com/watch?v=rwbho0CgEAE>

Microsoft Access:

Microsoft Access helps to analyze large amounts of information, and manage related data more competently than Microsoft Excel or other spreadsheet applications.

Tutorial - Microsoft Access

<https://www.youtube.com/watch?v=57jBdK3YVJo>

Task 1: Preparing a Word file

Direction: Type an essay on 'Biodegradable plastics'. Add picture, chart and table and share the Word file in your class whatsapp group / Edmodo/ Google classroom.

Task 2 : Preparing a powerpoint presentation

Direction: Prepare a powerpoint presentations on 'Transgenic Organism'. Add relevant picture, pie chart/ bar chart/ line graph, gif and video file and share the PPT file in your class whatsapp group / Edmodo/ Google classroom.

Unit 4

Creativity and Imagination

Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites – E.g. <https://www.youtube.com/watch?v=tpvicScuDy0>)

Speaking: Making oral presentations through short films – subject based

Reading: Essay on Creativity and Imagination (subject based)

Writing – Basic Script Writing for short films (subject based)

- Creating blogs, flyers and brochures (subject based)
- Poster making – writing slogans/captions (subject based)

UNIT 4. Creativity and Imagination

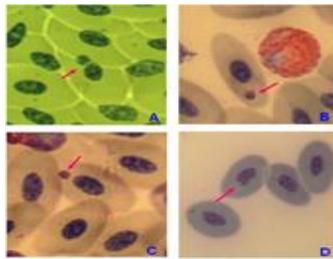
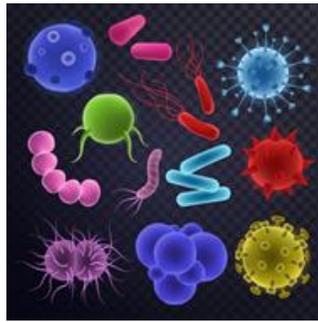
Academic listening

Task : In pairs, discuss your responses to the following questions.

1. How do microbes benefit the environment?
2. Do you think we can live without microbes?
3. Imagine what would happen if all microbes were destroyed from the environment?

I. Pre-listening Task:

Associate your ideas with the word 'micro' along with the pictures given below and list it in the blanks given:



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

While Listening:

What is academic listening?

Academic listening is a special kind of listening skill, which helps the learners to encounter, understand, learn, discuss, and remember new ideas.



Academic listening consists content with different forms of multimedia like audio tracks, video clips, web pages and activities like tasks, games, experiments, surveys in order to make listening more engaging and more motivating for the students in an integrated manner with elaborated style of thinking.

Activity: Listen to this academic video prepared by EMRC:

<https://www.youtube.com/watch?v=XIOHEumNf4U>

Post Listening Task 1: Recall the information presented in the video.

Task 2: State whether the statements are true or false from the above listened video clip.

1. Microbes are not present on the surface of our body, inside of a body, in the food we eat, in the water we drink and the air we breathe.
2. Microbes used food and fermentation industries.
3. Immunology is the study of nervous system
4. Growing of animal cells on artificial medium in a controlled environment is done to understand the functioning of cells.
5. Microbiology does not touch our lives in all dimensions.

Speaking: Making oral presentations through short films



In this globalized world, every profession is involved in some aspects of communication which usually involve gathering, analysing, and distributing scientific and/or technical information efficiently and accurately for specific audiences. Making oral presentations through short films links all four aspects of communicative skills (LSRW). Short films act like a bridge between language study and language use. It demonstrates one's potential to communicate through real-world experience between the audience and the presenter. It helps to build creativity, critical thinking and teach life-long skills both personally and professionally.

What is a short film?

A short film is any motion picture that runs from fifteen seconds to forty five minutes in length. It expresses a single concept with unique ending.

Basic instructional design for oral presentation through short films:

- **Plan** - Plan the topic with important events with focus to your presentation. An oral presentation should never be a monologue, but an active dialogue in verbal communication. First greet the audience and introduce yourself. Explain the purpose of your talk. Start by introducing the topic. Outline the main points. State your purpose and announce the outline of your presentation in very simple and precise language.

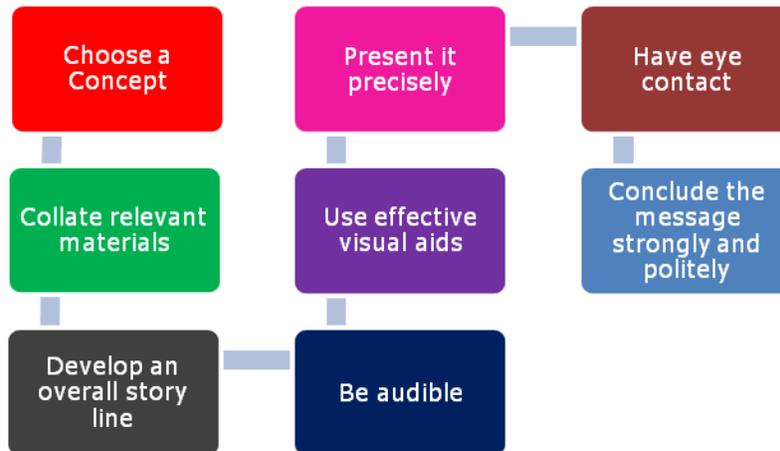
- **Structure** – The information in the body needs to be well-structured. State main ideas clearly. Use visual aids to engage the interest of your audience. It could be in chronological order, theme or order of importance.

- **Prepare** – The first thing to be done when preparing a spoken presentation is to identify the audience as precisely as possible. Prepare the oral presentations with key points within time limit. The presentation can have one of these aims: to inform, to persuade, to teach.

- **Present** - Shape the presentation by organizing and selecting the arguments or pieces of information within the time allotted. Introduce appropriate visual aids to impose its effect on the audience. During the presentation a presenter need to face the audience - maintain eye contact with the audience as much as possible. Use natural hand gestures, look presentable and speak in a clear and audible voice.

- **End** - Prepare a closing summary with main points and give a strong concluding remark that reinforces why your information is of value. It reaffirms the connection between the audience and the material presented. Invite questions from the audience at the conclusion of your presentation. Respond to questions politely and briefly.

PROCESS RECAP



Activity:

Watch **BABY – An Experimental Short Film** about the beginning of life

<https://www.youtube.com/watch?v=eYSu2ochIE4>

Task 1:

- **Discuss in pairs about how did the film make you feel?**
- **What aspect of the film did you most engage with?**
- **What will you remember?**
- **What does it make you think about?**
- **Would you watch it again? Why/why not?**
- **How would a second viewing be different?**
- **What would you focus on?**
- **How would different people view this film differently (dependent on gender, age, ethnic background, worldview, etc)?**

Task 2

Prepare a power point presentation with inclusion of pictures and videos of about 5-8 minutes of your own interest based on your subject.

Source: <https://www.youtube.com/watch?v=selYsj94RQg> (A video on how to record a PowerPoint Presentation with Voice-Over Narration and Saving it as a Movie File)

Creativity and Imagination

Introduction:

Creativity surrounds us and expresses itself in the form of innovative ideas in our everyday life. It is a skill that can be practiced daily to solve life's problems as well as discover its opportunities. In fact, it is the ability to apply reason and logic to new or unfamiliar ideas, opinion or situations.

Creativity Defined:

There is a common misconception that creativity belongs to a few gifted individuals, or it pertains to the field of arts. As a result, many who do not consider themselves as the artistic type neglect the development of their creative skills. Let's look at what defines creativity. To be creative means turning new and imaginative ideas into reality. The Dictionary defines creativity as 'the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods and originality' It is also defined as 'progress, or imagination'. As a matter of fact, creativity is characterized by the ability to see the world in new ways, to make connections between seemingly unrelated phenomena and to generate solutions.

As we have seen earlier, creativity should not be tied to a specific discipline or a craft, it is indispensable everywhere. It is pertinent in arts, entertainment, business, mathematics, engineering, medicine, social sciences, and physical sciences and is the cornerstone of civilization.

Reflections on Creativity:

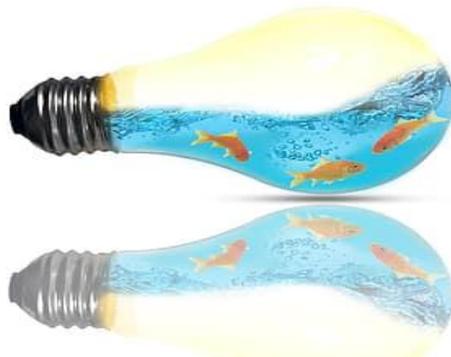
It is important to define creativity because it can mean different things to different people. If you refer to the thesaurus, you will find the following synonyms for the word 'creativity':

Cleverness	imagination	imaginativeness	ingenuity
inspiration			
genius	inventiveness	originality	resourcefulness
vision			talent

The word 'creative' is associated with being

inventive	imaginative	innovative	original	artistic	expressive
inspired	visionary		productive	prolific	
talented					
gifted	resourceful	quick-witted		ingenious	
clever	smart	unconventional	unorthodox	a genius	

Difference between Creativity and Imagination:



Have you ever wondered how creativity manifests itself? Do you know how the inventions come into existence? What is the basis for creative

thinking? **Creativity** relies on imagination, the conscious representation of what is not immediately present to the senses. Remember your imagination is not only an artistic influence but can inspire you as a person or others to add development to your lifestyle, business or work ethic. While **imagination** is the process of seeing the world in new ways and finding the hidden patterns. Creativity helps in converting your new and imaginative ideas into reality. People who believe in imagination cross the boundary of “usual” and “normal” are able to think outside the box. More importantly, if you have ideas, but don’t act on them, you are only imaginative but not creative.

Students of science classes usually get the idea that involve careful observation and analysis of data to test hypotheses. One thing that remains shrouded in mystery, is how scientists decide on the particular question and give an exact answer? You might be surprised to know that they involve in creativity and come out with logical reasoning.

The natural world is highly complex, and really big. Interesting scientific problems (like curing cancer) are usually too difficult to solve directly. The art of being a scientist involves continually re-imagining these big problems, mentally breaking them down into smaller, solvable parts, and then speculating about which of these smaller parts might be key to cracking open the whole subject. In other words, a scientist must imagine, in advance, possible outcomes from different observations, and design a research study that might help to decide between different hypotheses.

How is creativity possible in science?

Logical thinking is always a part of the creative process in any field, from art to science to business. Creativity is not only the ability to come up with new ideas, but also narrowing down those new ideas to focus on one that can be elaborated. Creative people in any field come up with new ways

of looking at the world. They constantly ask, "What if...?" But it doesn't stop there. After a creative person asks "What if...?" they then go on to logically think through the consequences.

Science is creative in much the same way as art, music, or literature are creative. In Science discipline, individuals have to use their imagination to come up with explanations. The explanations should be well informed. They must not be mere guesses. As Peter Medawar explained, "Scientists are building explanatory structures, *telling stories* which are scrupulously (carefully) tested to see if they are stories about real life" (Medawar, 1984, p. 133, emphasis in original). By "telling stories," Medawar does not mean that scientists' are just making things up out of nothing. He means that scientists' piece together bits of information in a way that makes sense, the way writer's piece together characters and events. But a scientist's job doesn't end there. The story they've told is rigorously tested to see if it makes sense in the context of real life.

Conclusion:

Success in science requires a creative mind. Some of the most important questions in science are either too large or too complex to answer directly. So scientists break them down into smaller, solvable questions. Scientists use creativity to determine which questions are likely to yield results or and which will not. They imagine possible answers to their questions, and devise ways to test those answers. To be creative, science students should be curious to know what will happen next through their creativity and imagination through experiments, show interest in their observation and finally try to bring their creative brilliance in reality.

Suggested Reading

1. Bono, Edward de. 1990. *Lateral Thinking: A Textbook of Creativity*. London: Penguin Books.
2. Hussain, S. 1988. *Creativity, Concept and Findings*. Patna: Motilal Banarasidass.
3. Clear, James. *Creativity: How to Unlock Your Hidden Creative Genius*. [.https://jamesclear.com/creativity](https://jamesclear.com/creativity)
4. Medawar, P. B. (1984). *Pluto's republic: Incorporating the art of the soluble and induction and intuition in scientific thought*. Oxford: Oxford University Press.

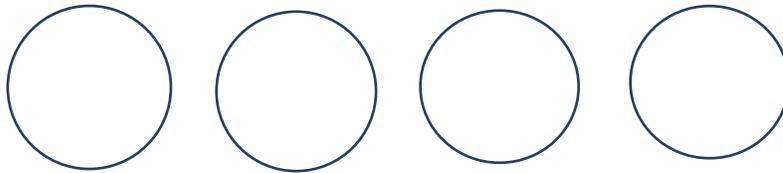
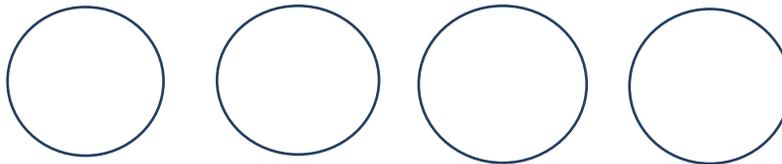
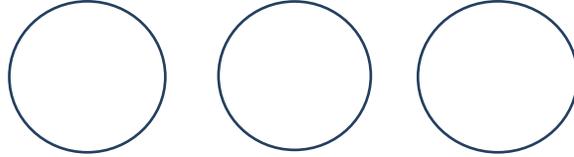
Task 1: Answer ALL the questions:

1. Explain the difference between creativity and imagination.
2. How do scientists find solutions with logical reasoning?
3. Why creativity and imagination is important for science students?
4. What is Medawar's explanation on "telling stories"?
5. Creative people in any field come up with new ways of looking at the world. Explain.

Task 2: Complete the incomplete circles using your creativity and imagination. First circle has been done for you:



by Liam Ashurst



Task 3: Read on how Rene Theophile Hyacinthe Laënnec invented the stethoscope.

Script Writing



(Source: <https://www.masterclass.com/articles/how-to-write-a-film-treatment-in-6-steps>)

A short film is just a short movie with a clear, compelling story. It is an excellent fun side-project for the beginners. A short film can be live-action, animated, or computer generated. Like feature films, short films tell closed-ended stories with a distinct beginning, middle, and end. The best short films have a clear focus and are economical with their storytelling, utilizing only one or two locations and few characters.

Scientific Script Writing for short films:

1. Brainstorm. Jumpstart your creativity remembering any images or events from your childhood. Fix the genre or the style that you want to write. Once, the idea is fixed write down whatever comes to your mind.

2. Research – It is the vital aspect for Science based genre. The film maker has to research the fact in order to give accurate data for the audience.

3. Outline - Begin to outline the idea for the film. Like feature films, short films too have a beginning, middle, and end. This brings the overall structure of the film.

4. Write your first draft - Now that you know the shape of your story, start writing the first draft of your short film script with screenplay structure.

5. Rewrite the script - When you start writing the second draft, you might find to restart the process and create a new outline. Once the story is solid, start refining the dialogue for the scenes.

6. A picture is worth a thousand words - As you write, think creative images and captions. Science offers beautiful and unusual images that can help readers visualise what you are writing about. Spend time on catchy and informative captions — they are indispensable entry points into your story.

Task 1: Watch the video Science and Storytelling | Lucy Hawking | TEDxSalford <https://www.youtube.com/watch?v=E7K-qlQVpgE>

Blogs:

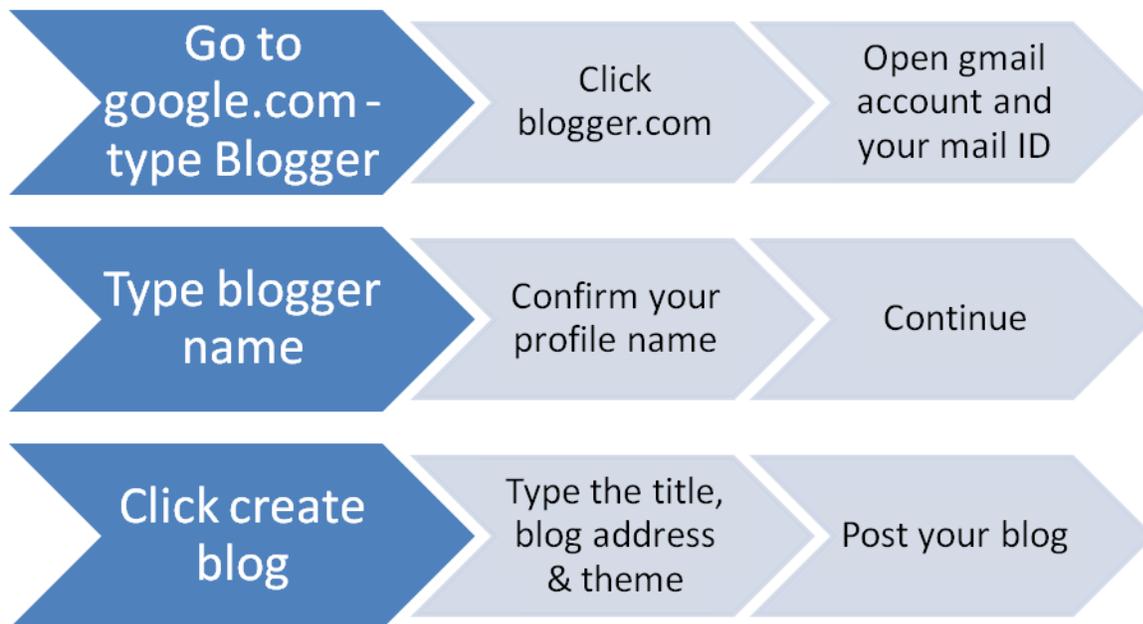
A blog, an online journal in which you share your thoughts about a particular subject with readers.

How to start writing science blogs?

- Exactly what is it that you have found out?
- What methods have you used?
- Why is this research important, and why should my target audience be interested?
- What environmental benefits might this research bring?

- Will this research lead to more sustainable technology?
- Will it lead to less expensive and/or safer technology?
- What is your or your group's contribution to this field internationally?
- What is needed for this technology to be applied/commercialised?
- Is this project relevant to others in the industry? Will it enable us to attract new clients and win new projects?

How to create a blog?



Source: <https://www.youtube.com/watch?v=X2-v-NnZrVE>

Activity: Create, write and post your desired topics in your blog.

Task 2: Write about the importance of blog creation and its uses.

What is a Flyer?

A **Flyer** is usually a single, unfolded printed sheet that is **used to** draw attention to an event, service, product or idea. A **flyer** usually contains a very simple message that can be conveyed quickly.



<https://www.postermywall.com/index.php/posters/search?s=science%20fair%20flyer>

How to make flyers?

1. Include the basics

Make sure your flyer states the who, what, where, and when of what you're trying to communicate.

2. Go for eye-catching imagery

Flyer design is important, and images speak for themselves and can go a long way to communicating tone and feel. You can use your own imagery or choose from thousands of royalty-free photos we provide for you

3. Keep it brief

When it comes to text, less is more. Be brief. Be concise. Be powerful with your words. Choose your words carefully and make each one count.

4. Take theme into account

Think about what feeling you want to evoke with your flyer. Be mindful of the thematic elements of what you're trying to promote. The images, colours, text you use in your flyer should be theme-appropriate.

5. Let readers know what to do next

Include links, contact information, or a strong call-to-action to let readers know how to learn more.

Source: <https://www.youtube.com/watch?v=dGqpurykz3w>

Task 3: Make a flyer for science exhibition to be conducted in your department.

Brochure:

A Brochure is a single foldable sheet used by marketers to highlight a product, company or service. They are one of the most common and effective tools used by businesses and organizations for relaying information or announcements to a wide audience. Brochures are distributed in many different ways: as newspaper inserts, handed out personally, by mail or placed in brochure racks in high traffic locations especially in tourist places.



Source: <https://in.pinterest.com/pin/448811919100082233/>

How to make a brochure?

Write concisely. Your brochure should focus on one product or service. A trifold brochure only has space for about 350-450 words, so keep words, sentences and paragraphs short. Include only the most relevant information, leaving some white space and images.

Science Brochures:

While making science brochure design, follow three elements:

1. Target audience / people. Be clear for whom you are creating a brochure. Think about marketing concept, what makes an ordinary people while reading your scientific articles. To test, whether you understand your client's needs, ask yourself a simple question: "For what a person really ready to pay money?".
2. USP (unique selling proposition). You must clearly understand your positioning, how to differ from competitors. It should be something that distinguishes you from rivals for the better.
3. Target action. The target action is what the user must do after reading. If you don't offer people any action, the customer could close your science brochure design ideas and leave it.

This is what your brochure for science should convey.

Source: <https://www.youtube.com/watch?v=Gjev8RkqO1k>

Task 4: Design a brochure for your science lab.

POSTER

Poster is another visual to reach the people with specific message. Posters are usually displayed at a height that makes it visible to viewers. So, content and structure are important in a poster.



Source: <https://www.amazon.in/Tamatina-Health-Posters-Coronavirus-Precautions/dp/B085ZZQRJJ>

Instructions to create a poster.

- Decide on the size of the poster
- Make sure it is readable from a distance.
- Create Some Contrast.
- Consider the location of display.
- Let the image be large and catchy.
- Make good use of space in the poster.

(Source: https://www.youtube.com/watch?v=AwMFhyH7_5g)

Task 5: Design a poster with effective slogans on the importance of cleanliness

Unit 5

Workplace Communication & Basics of Academic Writing

Speaking: Short academic presentation using PowerPoint

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis)

Capitalization (use of upper case)

UNIT 5

BUSINESS ENGLISH

Language is a powerful tool that has propelled changes, carved history and sustained culture and tradition. Languages have, since the time of our linguistic revolution, grown and influenced each other. The faculty of language that captures floating thoughts into a timeline, adding memories, feelings, emotions and envisioning a future, is one of the advances of evolution that has made us survive and progress thus far as a species.

We are living in an era of digital revolution wherein language seems to no longer belong to the domain of mouth and related speech organs. It has moved on to the domain of the digital Siri and Alexa. It can be heard when we use google maps directing us. It can be heard, translated, and automated by chatbots.

Thus, when language has transcended to wider domains, humans who were the first to revolutionize it into the digital forms that we have today also need to equip themselves with the required skills to make language an effective medium of communication. The common misconception is that “just because I speak, I am understood”. Once we free our minds from this fallacy, therein begins our first attempt to communicate effectively.

Words when timed appropriately, arranged coherently, expressed accurately can make or break a relationship. Communication failure is a new normal in this era of digital communication where emojis and emoticons have taken over determiners in language; determiners that were aimed at accuracy in communicating. Although pictographic representations of what could be described through words, may be an easier way to express the difference between, say for example, a chuckle, a titter, a giggle, a chortle, or a cackle, yet, the constant use of emojis would stunt the usage of accurate

vocabulary, leading to a dilution of meaning. In other words, thanks to social media, we speak more and yet communicate so less.

When words are replaced by feelings that are captured by emojis, the communication becomes more reactive than responsive. In this era of Facebook and Whatsapp we have successfully learnt to react to posts through these five modes of expression- like, anger, love, laughter, hug, sadness, and awe. Of these, like is an all-encompassing positive feeling, anger, love, laughter and sadness are emotions, and hug is an action. Altogether we are reinforced constantly to react only within this framework of limited expressions forgetting that human emotions are complex and can lead to an endless labyrinth of responses. When you are self-aware of these endless possibilities of responses, then you free yourself from the influence of fake news and posts that spread the message of hate.

In a typical business context where the communication is domain specific there is a need to practice the art of effective communication. Businesses today have a wider reach and one major part of business that contributes to its growth is effective communication. With wide networking and collaborative efforts, it is essential to navigate through misinterpretations and assumptions, and create an ambience of meaningful engagements. Self-awareness will make you mindful of the words that you need to choose before you communicate. Along with practicing mindfulness, it is also imperative that you learn techniques and nuances in very specific contexts such as:

- Power Point presentations
- Circular
- Minutes of a Meeting
- Paraphrasing

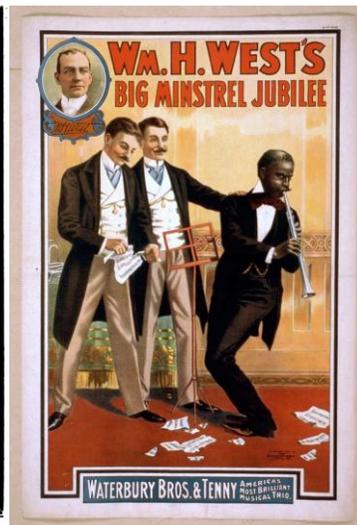
POWERPOINT PRESENTATION

Pre-task:

Consider image 1 and image 2. Which image do you think has a better appeal?

1

2



Compare the advertisements and explain which advertisement has more visual appeal.

Image sources:

<https://digitalcollections.nypl.org/items/918ed050-cf4e-0133-59bd-00505686a51c>

<https://picryl.com/media/wm-h-wests-big-minstrel-jubilee-2>

It is evident that image 2 displays a greater appeal because it has a visual representation. Advertisements are visual representations of products. They are designed in a way that it can instantly attract a potential buyer. A successful advertisement makes use of image, colours, captions, layout, font, background, foreground etc. in a judicious way that can communicate the essential features of the product in an effective manner.

Power point presentations also play a similar role. Just like how a visual appeal is created in a well-designed advertisement, so also a visual appeal is created by making use of Power point when presenting content.

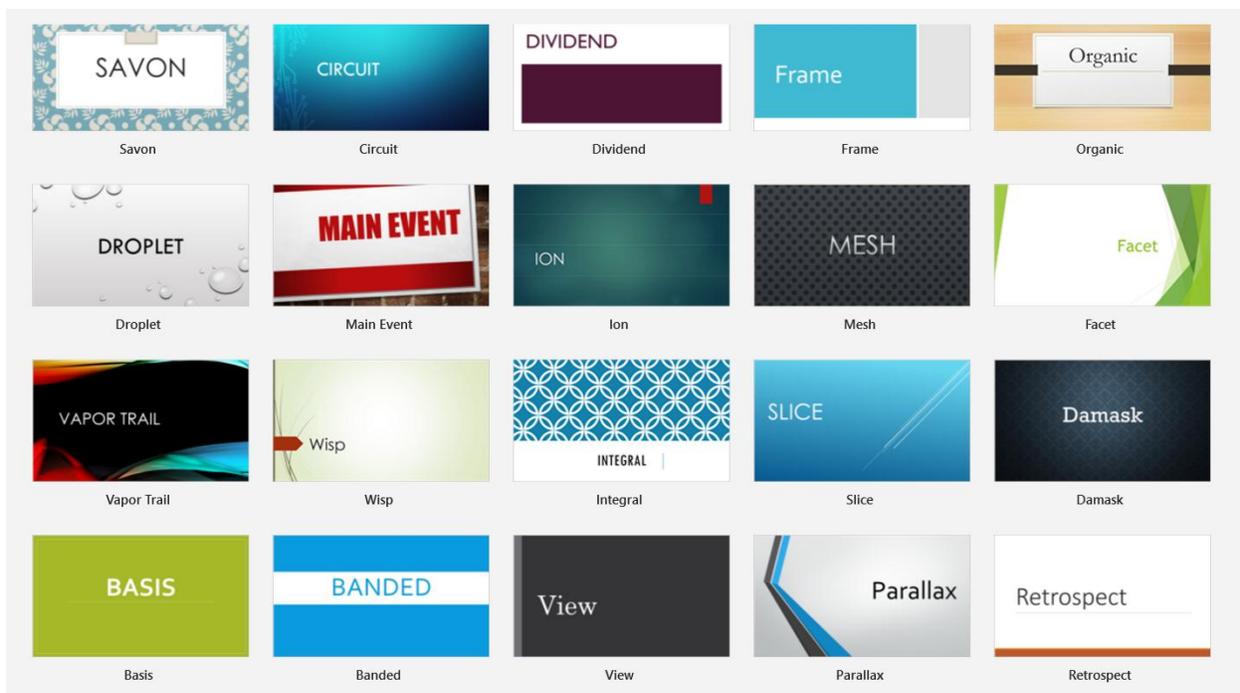
Features of Power Point

Power point can be accessed from Microsoft Office App. 

When you create a new Power Point presentation, there are thousands of themed templates available from which you can choose the one most relevant to the theme of your presentation. In addition to themes, Power Point also provides numerous diagrams and charts as well which will add more visual appeal to your presentation and will also help you to organize your content in a succent and professional way.

Sample themes, diagrams and charts are presented below.

Themes



Diagrams

← Back

- Multi-color tree diagram
- Plant growth graphic
- Horizontal DNA graphic
- Road builder graphics
- Triple helix DNA graphic
- Underground drill graphic
- Linked chain graphics
- Spiral graphic
- Double helix DNA graphic
- Animated tree growth gra...
- Conveyor belt block graphic
- Animated flower slide
- Multi-color gauge graphics
- Colored block graphics
- Animated scale graphic

Charts

← Back

- Project milestones timeline
- Minimal organization chart
- My family tree
- Infographic resume
- Tech infographic resume
- International infographic...
- Family tree
- Colorful conference prese...
- AccentBox presentation
- Sketch presentation
- Teach a course presentation
- Color-coded organization...
- Horizontal organization c...
- Team organization chart
- Simple organization chart
- Human resources, from 2...
- PowerPoint Graphics Sam...
- Data-driven PowerPoint, f...
- Balanced scorecard, from...
- Dashboard, from 24Slides

Texts, Fonts and Paragraphs

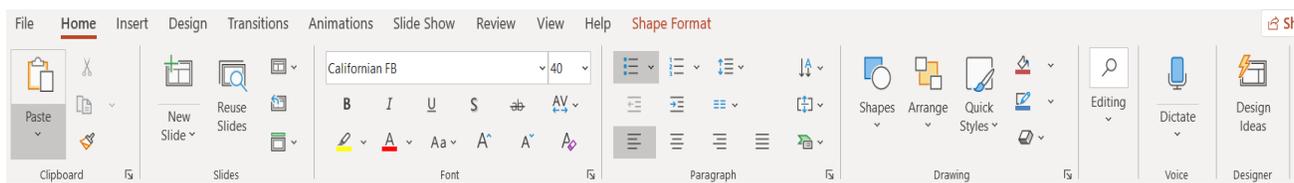
Text Editing: Just like how you can edit (cut/copy/paste) texts in MS Word, so also it is possible to edit texts in the slides

Slides: New slides of various format according to the layout in which you desire the slide to appear can be inserted.

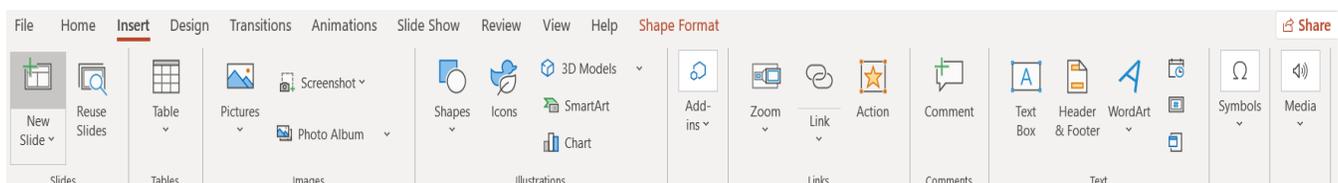
Font: You can apply formatting such as bold, italics, underline, strikethrough, word spacing, font type, size and colour, highlighting text, and capitalization.

Paragraph: Bullets, numbering increasing and decreasing line spacing, indenting texts (left, right, centre, justify), and changing the direction of the texts can be done.

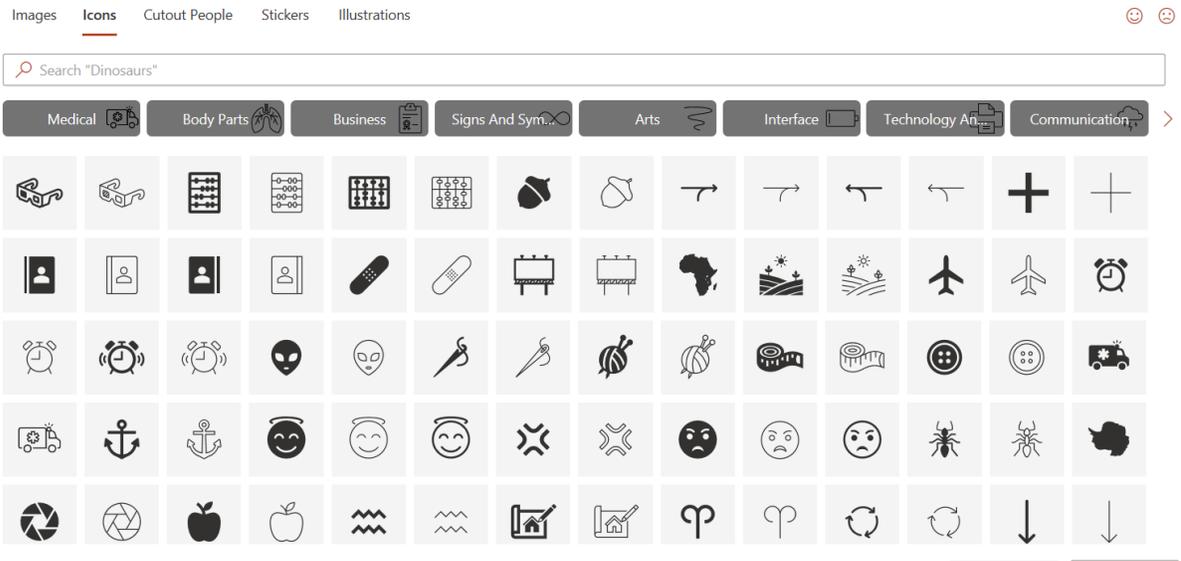
Design ideas: This is a unique feature in the latest version of PPT were the texts you enter in the slides are automatically designed



The **INSERT** option enables you to add more visuals to your slides. You can insert tables, pictures, shapes, icons, 3D models, smart art, charts, add-ons, hyperlinks, comments, text box, Header and footer, word art and symbols.

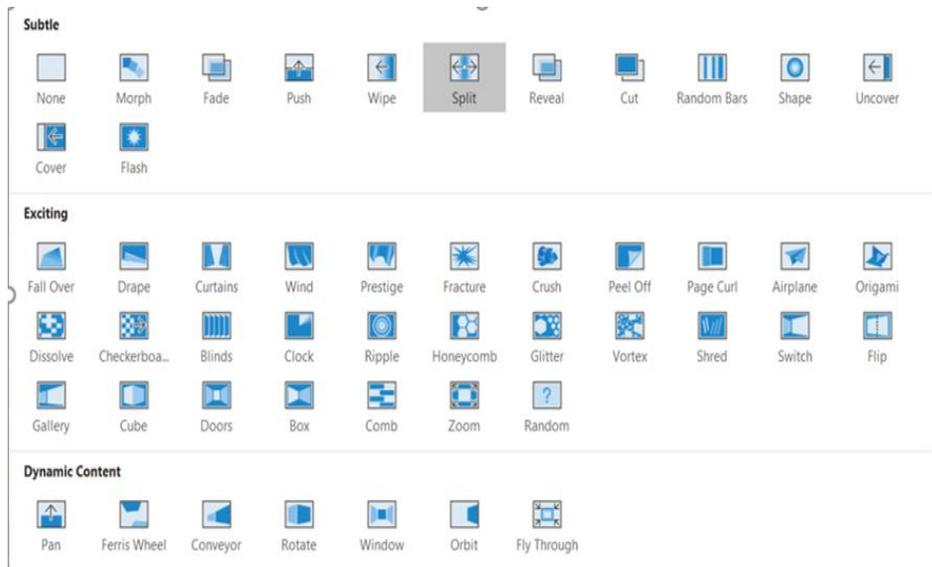


The interesting part is that there are a wide range of items that you can choose from. For instance, the latest version also provides numerous selections of icons which can be used when you are describing specific points in the slides.



Transitions

When navigating from one slide to another, adding transitions will add to the overall effect. But ensure that the transitions are not too jarring to the eyes. There are several smooth transitioning features that you can select from.



Animations

Entrance and exit of points can be animated. If you need to emphasize a point you can add emphasis that can make it stand out.



Slide-Show

The slide show option will enable you to present it in full screen, rehearse timings and use sub-titles. You can also create E-content by using the record option.



Techniques for a captivating presentation

- Images, charts, diagrams, maps etc. communicate more effectively.
- Explain processes using charts
- Use only relevant images which are related to your content
- Limit the words and as the name goes, it is power POINT. Bullet points are sufficient. You need not write elaborate sentences
- Every slide should have a main idea and corresponding ideas in point form
- Too much usage of any feature will look cumbersome, be it colors, font type, animation, or transition
- Ensure that the background and the text are in contrast so that the text appears clear and legible
- Limit the total number of slides and the content in each slide
- There is no one way to prepare and present. Use your creativity and imagination.

Sample Presentation

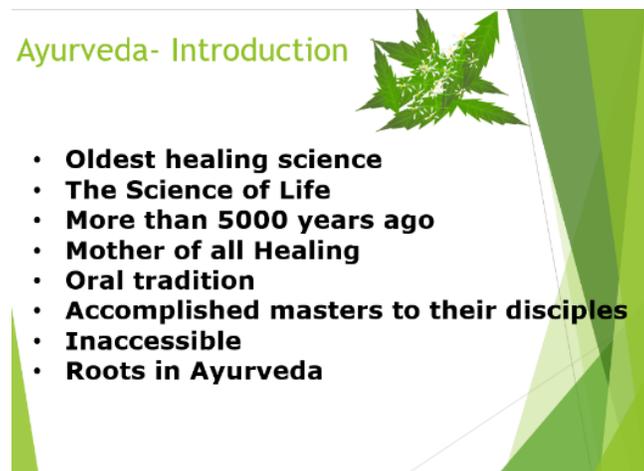
The following is an excerpt from "Ayurveda: A Brief Introduction and Guide" by Vasant Lad. This is the introductory paragraph. The important points that will make up a slide are highlighted.

Ayurveda is considered by many scholars to be the **oldest healing science**. In Sanskrit, Ayurveda means **"The Science of Life."** Ayurvedic knowledge originated in India **more than 5,000 years ago** and is often called the **"Mother of All Healing."** It stems from the ancient Vedic culture and was taught for many thousands of years in an **oral tradition** from accomplished **masters to their disciples**. Some of this knowledge was set to print a few thousand years ago, but much of it is **inaccessible**. The principles of many of the natural healing systems now familiar in the West have their **roots in Ayurveda**, including Homeopathy and Polarity Therapy.

Lad, Vasant. AYURVEDA: A BRIEF INTRODUCTION AND GUIDE. 2006. 2020 12 17.
<<https://www.ayurveda.com/resources/articles/ayurveda-a-brief-introduction-and-guide>>.

In the above content, 8 points are highlighted. You can either have 4 points in two slides (4 points in each slide) or all the 8 points can feature in one slide.

Notice how phrases such as “oldest healing science”, “The Science of Life”, “more than 5000 years ago”, “Mother of all Healing”, “oral tradition”, “accomplished masters to their disciples”, “inaccessible” and “roots in Ayurveda” are highlighted. If these points were to be created as a power point slide it will look something like this.



You must also consider the overall structure of your presentation. Like any piece of writing which has an introduction, a body, and a conclusion, so also a power point must be structured in a way that the ideas are presented seamlessly.

For example, take a look at the following Power Point slides for a presentation on Ayurveda.

The Strategy: Your Constitution and Its Inner Balance

Ayurveda places great emphasis on prevention and encourages the maintenance of health through close attention to balance in one's life, right thinking, diet, lifestyle and the use of herbs. Knowledge of Ayurveda enables one to understand how to create this balance of body, mind and consciousness according to one's own individual constitution and how to make lifestyle changes to bring about and maintain this balance.

Just as everyone has a unique fingerprint, each person has a particular pattern of energy—an individual combination of physical, mental and emotional characteristics—which comprises their own constitution. This constitution is determined at conception by a number of factors and remains the same throughout one's life.

Many factors, both internal and external, act upon us to disturb this balance and are reflected as a change in one's constitution from the balanced state. Examples of these emotional and physical stresses include one's emotional state, diet and food choices, seasons and weather, physical trauma, work and family relationships. Once these factors are understood, one can take appropriate actions to hullify or minimize their effects or eliminate the causes of imbalance and re-establish one's original constitution. Balance is the natural order; imbalance is disorder. Health is order; disease is disorder. Within the body there is a constant interaction between order and disorder. When one understands the nature and structure of disorder, one can re-establish order.

Notice in the content provided above, the phrases underlined in violet are the main headings of the slides. The content highlighted in green are the supporting points. The above content may be designed in four slides as follows:

3

Factors that Disturb Balance

- ▶ Emotional state
- ▶ Diet
- ▶ Food choices
- ▶ Seasons and weather
- ▶ Physical trauma

4

Appropriate Actions

- ▶ Nullify or minimize their effects
- ▶ Eliminate the causes of imbalance
- ▶ Understand the nature and structure of disorder
- ▶ Re-establish order

Balance is the natural order; imbalance is disorder.
Health is order; disease is disorder.

1

Emphasis on Prevention

- ▶ Balance
- ▶ Right thinking
- ▶ Diet
- ▶ Lifestyle
- ▶ Use of herbs
- ▶ Balance of body, mind and consciousness
- ▶ Make lifestyle changes

2

Pattern of Energy

- ▶ Physical, mental and emotional characteristics
- ▶ Determined at conception
- ▶ Remains the same throughout one's life.

You may observe the following in the above slides:

- Simple design
- Colour theme according to the central topic of Ayurveda
- Similar pattern repeated in all slides
- Words and/or phrases are used as points
- Heading is in a different colour and is emphasized
- Slide 4 has a sentence that is highlighted. Important quotes may be highlighted in this way

Now that you have an idea of how to prepare a power point presentation, complete the following tasks as instructed.

Task 1

Read the following passage. This passage is an excerpt from the same content provided so far about Ayurveda. You may follow these steps:

Step 1: Read the passage

Step 2: Identify the main idea in each paragraph

Step 3: Identify the supporting ideas under each main idea

Step 4: Look for visuals that can be incorporated

Step 5: Structure the main ideas and supporting ideas in various slides

Step 6: Add transition and animation

Step 7: Rehearse the timing to see if you can complete it within 5 minutes

Step 8: Present your slides in class

Balancing the Three Principal Energies of the Body

Ayurveda identifies three basic types of energy or functional principles that are present in everyone and everything. Since there are no single words in English that convey these concepts, we use the original Sanskrit words vata, pitta and kapha. These principles can be related to the basic biology of the body.

Energy is required to create movement so that fluids and nutrients get to the cells, enabling the body to function. Energy is also required to metabolize the nutrients in the cells, and is called for to lubricate and maintain the structure of the cell. Vata is the energy of movement; pitta is the energy of digestion or metabolism and kapha, the energy of lubrication and structure. All people have the qualities of vata, pitta and kapha, but one is usually primary, one secondary and the third is usually least prominent. The cause of disease in Ayurveda is viewed as a lack of proper cellular function due to an excess or deficiency of vata, pitta or kapha. Disease can also be caused by the presence of toxins.

In Ayurveda, body, mind and consciousness work together in maintaining balance. They are simply viewed as different facets of one's being. To learn how to balance the body, mind and consciousness requires an understanding of how vata, pitta and kapha work together. According to Ayurvedic philosophy the entire cosmos is an interplay of the energies of the five great elements—Space, Air, Fire, Water and Earth. Vata, pitta and kapha are combinations and permutations of these five elements that manifest as patterns present in all creation. In the physical body, vata is the subtle energy of movement, pitta the energy of digestion and metabolism, and kapha the energy that forms the body's structure.

Vata is the subtle energy associated with movement — composed of Space and Air. It governs breathing, blinking, muscle and tissue movement, pulsation of the heart, and all movements in the cytoplasm and cell membranes. In balance, vata promotes creativity and flexibility. Out of balance, vata produces fear and anxiety.

Pitta expresses as the body's metabolic system — made up of Fire and Water. It governs digestion, absorption, assimilation, nutrition, metabolism and body temperature. In balance, pitta promotes understanding and intelligence. Out of balance, pitta arouses anger, hatred and jealousy.

Kapha is the energy that forms the body's structure — bones, muscles, tendons — and provides the "glue" that holds the cells together, formed from Earth and Water. Kapha supplies the water for all bodily parts and systems. It lubricates joints, moisturizes the skin, and maintains immunity. In balance, kapha is expressed as love, calmness, and forgiveness. Out of balance, it leads to attachment, greed, and envy.

Life presents us with many challenges and opportunities. Although there is much over which we have little control, we do have the power to decide about some things, such as diet and lifestyle. To maintain balance and health, it is important to pay attention to these decisions. Diet and lifestyle appropriate to one's individual constitution strengthen the body, mind and consciousness. Give a passage. Let them prepare slides based on the info in the passage.

Task 2:

Prepare a video either with PowerPoint or using ScreenO'matic software for 5 minutes. You can use the same content as above and the slides you had prepared for the previous task.

PRODUCT DESCRIPTION

Pre task:

Get into groups of two. Ask the following questions to each other.

Are you familiar with online shopping?
From how many sites have you purchased items?
How do you choose a product when you shop online?
What are the advantages and disadvantages of online shopping?

Have a discussion based on the above questions in groups of two and summarize your points. One of you may share it to the class.

Why is Product Description important?

Product description is like a heart-to-heart connect that the advertisers try to establish with potential customers. In this era of consumerism, people are looking for the most trending, most useful yet cost effective product. Many resources are spent in market analysis, product design and manufacturing. Despite all the efforts spend in creating it, if the product is not sold, then all previous efforts are in vain. That is why companies invest a substantiate amount in advertising.

What is the format of a product description?

Consider the following description of the product Oziva Plant Protein. This is found in the product website <https://www.oziva.in/collections/protein-shakes/products/oziva-superfood-plant-protein-finest-vegan-clean-protein-powder-with-plant-protein-ayurvedic-herbs-multivitamins-for-everyday-fitness>



OZiva Superfood Plant Protein with Ayurvedic Herbs & Multivitamins for boosting Immunity & Energy, Soy Free

★★★★★ 74 reviews

One Time Purchase
₹699

Size: 250 gm (16 servings) | Flavour: Coco Vanilla

Subscribe & Save

100% Authentic

Easy Returns

For better safety, we recommend that you opt for online payments to minimize contact at delivery.

An image of the product placed alongside the name of the product and its most unique features “OZiva Superfood Plant Protein with Ayurvedic Herbs & Multivitamins for Boosting Immunity & Energy, Soy Free.”

You can see that the product has a 5-star rating. Its cost, size with details of the number of servings, flavour and the fact that it is authentic and can be returned is also highlighted.

The description doesn't stop there. After having highlighted the most important selling features of the product there is a brief description of the features in a greater detail. The heading “Why Is It A Must Have” surely will draw readers towards it.

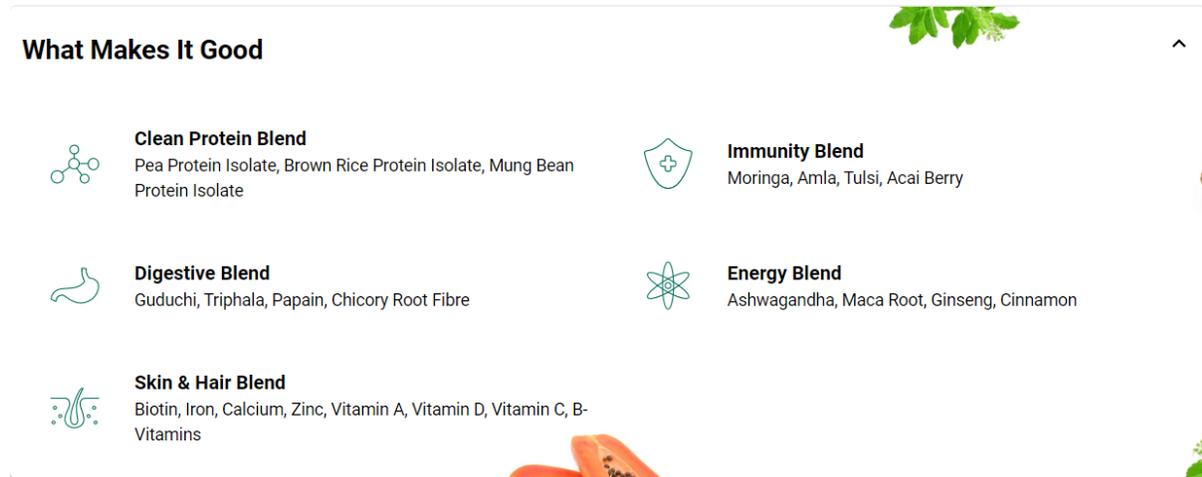
Why Is It A Must Have

OZiva Superfood Plant Protein combines essential amino from Pea Protein Isolate, Brown Rice Protein Isolate, and Mung Bean Protein Isolate to provide holistic health, better energy, and immunity.

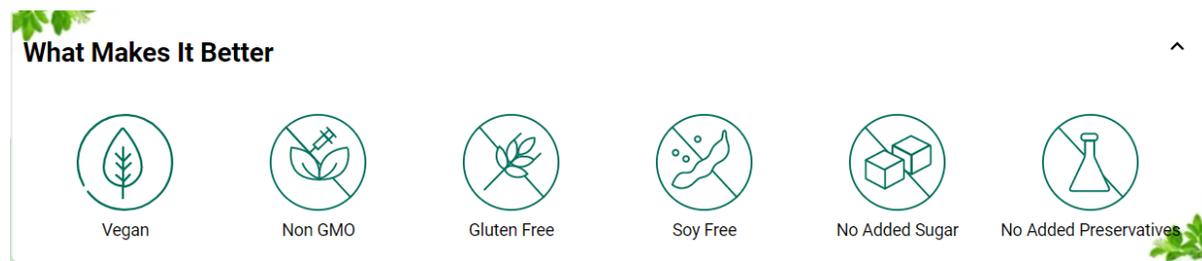
- ✓ 20g of Complete Protein, 15 essential Vitamins, and Minerals per serving of Superfood Plant Protein.
- ✓ 100% Vegan-friendly Protein blended with standardized herbal extracts for daily nutrition and fitness.
- ✓ Provides better energy and immunity with specially designed Ayurvedic Herbs blend consisting of Ashwagandha, Maca Root, Amla, Tulsi, etc.
- ✓ Enhances digestion and absorption with Digestive enzymes and herbs.
- ✓ Promotes younger skin and healthier hair with essential Multivitamins like Biotin, Iron, Zinc, Vitamin A, Vitamin D, Vitamin C, B-Vitamins.
- ✓ Soy-free, no trans fat, non-GMO, no artificial sweetener, 0g added sugar.
- ✓ Free diet consultation with nutritionists.

*Results may vary as per the individual's diet and workout

After this, there is another format in which the product features are further reinforced. But this time it is not descriptive sentences. Using icons to represent points is a new design format.



Thus, by saying that it is a must have, the product has created an artificial crisis in the mind of the potential customer. By continuing to explain what makes it good has compensated for the fear of lacking something had created. In other words, creating a need by promoting a lack or a void and then coming up with the solution that the product has to offer is the typical emotional roller-coaster that any product description would take you through. Therefore, it is not more about what you say about your product than how you say it.



In adding components of what makes it better, they have summed up the vitals that fitness lovers look for- vegan, non-GMO, Gluten free, Soy free, No added sugar and No added preservatives. It looks like a dream product for those who are on their path of fitness routines.

One may wonder how to use the product. Is it complicated? In the huge rush to work will one have the time to use this product daily? To address this the usage of the product is explained in one simple step. The product can be mixed or blended. Either ways it is simple to be consumed.

How to Enjoy

Direction to use



1. Mix 1/2-1 scoop in 200 ml of water



2. Shake well or use a blender to mix. Enjoy it!

To make the potential customers feel special the best part is explained last: exclusive benefits. This point will close the deal. The potential customer has already clicked the buy button and in on the way to complete a purchase.

Exclusive Benefits

Once you have purchased the product, you get access to all OZiva Prime Benefits. All you need to do is authenticate your purchase by using the Auth-Code that you receive inside the product.



What You Get



Diet Plan



OZiva Merch

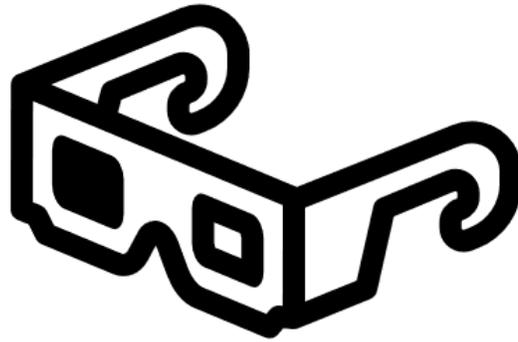


Expert Guidance

To sum up, a typical product description would have the following features:

- An attractive image of the product
- Name of the product with its most unique features
- Display of basic product specifications
- Detailed description of the product features
- Highlighted points of the product features
- Common yet important features of the product
- Exclusive benefits/ product discounts/ coupon codes etc.

Task 3:



Based on this image answer the following Wh questions using your own imagination about the product.

1. Who will use this product?
2. What are the specifications of this product?
3. Where can this product be used?
4. When can this product be used?
5. Why is this product useful or better than other products in the market?

Note down the answers and based on the answers can you tell a story? The story should be brief. Share your story with the class.

Task 4:

Read the following product description. Can you identify the special features of this product? Can you add more features to it? Design a poster in an A4 sheet describing the features in the way OZiva product was described. Creating an image is optional.

Genestra Brands – HMF Forte
Average Cost: \$38.00 [60 Pills, twice daily]
NON-GMO, DAIRY FREE, GLUTEN FREE, SOY FREE

This product received Innovative Medicine’s highest score probiotic and continues to be the supplement recommended in house for many of our patients. It boasts strong adherence to intestinal cells, improving the likelihood of successful colonization. Many have reported almost immediate reduction of gastrointestinal discomfort and no uncomfortable stomach effects immediately swallowing.

With 10 Billion CFUs per serving and containing 4 comprehensive probiotic strains, HMF Forte tosses out fancy fillers for simply effective. This probiotic is trusted among many integrative doctors, including the New York Center of Innovative Medicine’s own practitioners. Its quality ingredients make HMF Forte vegan-friendly and maintain an affordable supplement to your gut health.

Strains included: Lactobacillus acidophilus (CUL-60), Lactobacillus acidophilus (CUL-21) Bifidobacterium bifidum (CUL-20), Bifidobacterium animalis subsp. lactis (CUL-34)

Hah from Colorado noted it helped his Crohn’s symptoms, stating, “HMF Forte keeps me running strong.”

HMF Forte Probiotics - Innovative Medicine

CIRCULAR

Pre-task:

Consider the following channels of communication. Write the various possibilities that each channel of communication has. You may select from the following list and write it in the space provided

Send messages, video chat, voice call, send images, send files, multi-media, social media, browsing, entertainment

Which is the fastest way to communicate? Group the communication channels into fast and slow.



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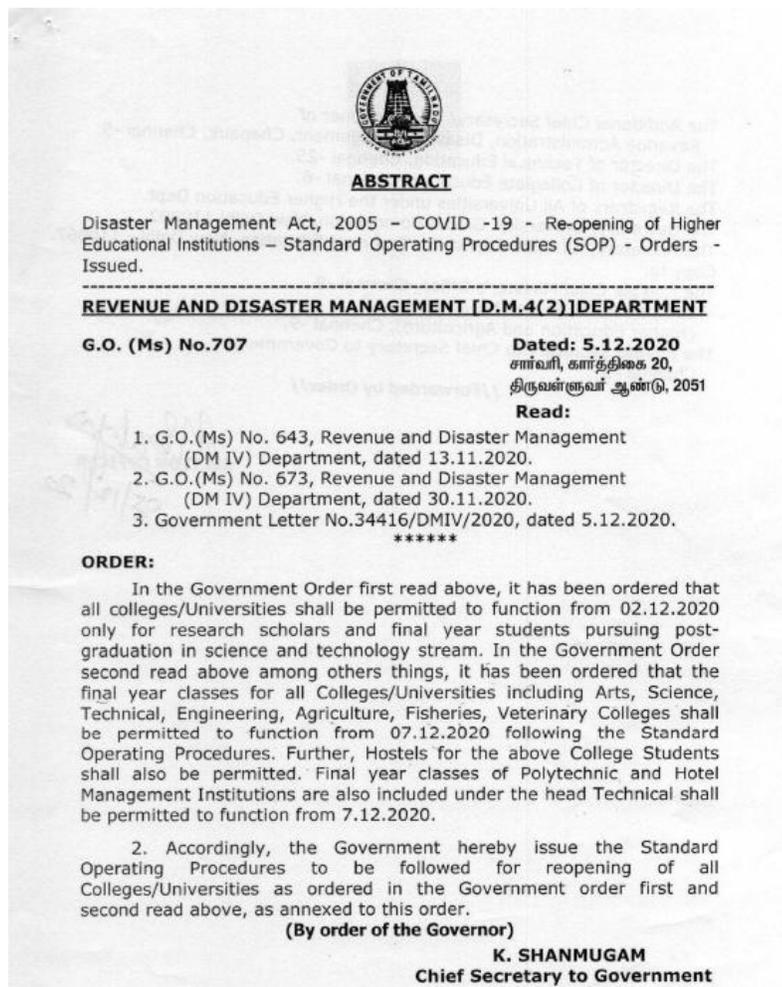


As you have listed, any communication that is digital, is faster and includes multiple features. You can explore the whole world with a smart phone. But in a professional context, it is important to be very clear, concise, precise, accurate, exact, and objective when important information is conveyed. There is no allowance for miscommunication in a professional space. Miscommunication can be costly and may also determine profit or loss for an organization. It can lead to multiple interpretations and employees

performing in different ways leading to various unprecedented outcomes. Damage control at this level may lead to utilizing resources which could have been used to enhance productivity.

Although it might look outdated or slow, CIRCULARS are an effective way to exact communication that will ensure the details in the information provided are not lost in transmission. Take for example the messages you constantly communicate via whatsapp or messenger. Have you not encountered multiple instances where you were misunderstood despite having typed elaborate texts? Therefore, in professional contexts, circulars are used in order to ensure that misunderstandings and misinterpretations or distortion of facts are avoided.

Look at this sample circular. The following circular was obtained from this link: https://www.tn.gov.in/go_view/dept/26



Note the use of passive voice to make the information objective and sound professional. Notice the reference made to two GOs and one Letter while mentioning the streams and educational institutions with reference to two previous communications.

The phrases that are commonly used in a circular as seen in the above example are as follows:

- “first read above”- reference to previous information
- “it has been ordered”- use of present perfect continuous
- “From 02.12.2020”- the exact date is mentioned
- “Accordingly, the Government hereby issues”- formal language
- “As ordered in the Government order first and second read above”- reference to two previous orders is reiterated. Repeating information will avoid ambiguity

This is a crucial circular regarding the reopening of educational institutions during the COVID19 situation in 2020. Colleges, universities, and streams are reopening in a phased manner. This circular conveys the information that Standard Operating Procedures must be followed while reopening the institutions. At a time when thousands of students and faculty are concerned about the course of their education, such a circular is timely and will quench doubts, fears, and apprehension regarding the reopening. Circulars are thus very important without which the employees and major stakeholders will not have the right information to pursue towards the right directions for their actions and decisions.

Task 5

Read the following circular and list the important information conveyed.

SCHOOL FEE CIRCULAR

Dear Parent,

In order to facilitate payment of School fee, DPS Society is introducing online school fee collection through net banking, RTGS/NEFT, Debit / Credit cards. The DPS Society has also successfully launched a Mobile application for collecting school fees. Fee is also being collected offline at fee counter (Saket) for the parents who wish to pay through account payee cheque.

1. Online Payment: Payment can be made through Credit/Debit Card/Net Banking with No extra charges by logging in to our website www.dpsi.ac.in . Click on "Pay Fee Online" > put admission number in the admission no box > Click "Get Details" > Check mark on Month / Quarter > click on pay now. Register your email ID with "PayUMoney" (the payment gateway). Create a password to track your transaction and find out all payment history with PayUMoney and click "Continue". Now PayUMoney redirect you to your banker for payment then follow the instruction.

To get receipt of your previous payments: Logon to our website www.dpsi.ac.in . Click on "Pay Fee Online" > put admission number in the admission no box > Click "Get Details" > Click on "Fee Received" button and print your receipt.

2. Mobile app: To download the mobile app, go to Google Play Store (for Android) or I-Tune Store (for IOS) or Microsoft Store (for Windows). Search for "DPS Connect" and download/install.

Payment through Mobile app: Open application > Select School "DPS International" > Select "OK". First time you need to register your mobile number against the admission number of your ward. After registering your mobile number, put the registered mobile number and click "Search". Select the name of the student for whom you want to make payment and click "Get Details" > Check mark on Month / Quarter > click on "Check Out" > Click "Pay Now". Register your email ID with "PayUMoney" (the payment gateway). Create a password to track your transaction and find out all payment history with PayUMoney and click "Continue". Now PayUMoney redirect you to your banker for payment then follow the instruction.

3. RTGS & NEFT:- Payment to be made in 12 digit A/C No.VADPSSIO<admission no.> (Please note that the 8th character is numeric "Zero"), IFS CODE: RATN0000141,NAME OF THE BANK:- RBL BANK (The Ratnakar Bank)

4. Electronic Cheque Dropbox: - Parents who wish to pay through account payee cheque can deposit in the Electronic Cheque Dropbox placed at fee counter, Saket only except Saturday, Sunday and Gazette Holidays. Please note that cheques will not be accepted at R K Puram. Cheque/Demand Draft / Pay order to be made in favour of "DPS International< Admission No.>". Write Admission No., Name, Class, Contact No. on the reverse of the Cheque. Outstation Cheques and Cash will not be accepted.

Note: For problems related to the fee process contact Mr Sashibhusan Nayak – Accountant. The contact details are:
Fees Department: email ID is dpsi.fees@gmail.com, Phone no.29564889 / 29561187, Extn.- 229
School email ID is dpsi111@gmail.com

Principal

Source:
https://www.dpsi.ac.in/dpsinternational/UserSpace/UserName/rkpadmin/DynamicFolder/RKP%20NEW%20HOMEPAGE/circular/SCHOOL%20FEE%20CIRCULAR_15.html

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Task 6

Imagine you are the principal of your college. Based in the following information, draft a circular that must be sent to the faculty and students.

1. Heavy rain
2. Power failure
3. Online exam postponed
4. Subject: Professional English Course
5. Original date of exam: 15.12.2021
6. Rescheduled date of exam: 19.12.2021

Write the draft in the space provided

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MINUTES OF MEETING

Pre task:

You must be familiar with the acronyms used in text messaging and internet and such as "OMG" (Oh My God), "LOL" (Laughing Out Loud) "ROTFL" (Rolling on the Floor Laughing) etc. Can you guess the expansion of the following acronyms?

ASAP	EOD
IDK	FAQ
IDC	TBA
BRB	TBC
BFF	OT
BTW	NA

Source: <https://www.smart-words.org/abbreviations/text.html> You can refer to this webpage to get more interesting acronyms which you can use in your day to day text messaging and Internet communication.

Acronyms are used in contexts where a shorter version is required so that the focus can be on the other facts and information communicated. When we receive a message from another person, our mind processes the most vital inputs and accordingly prepares the body to react. Dangerous situations that require flight, fright and fight responses are impulses directed by the minimum information that is processed. It is like the brain telling you "There is a fire, RUN" instead of "There is a fire, see how brightly it burns, wonder how hot it must be, what are the things that it could possibly destroy". For our own survival evolution has wired our brains to assess situations and respond instantly.

Minutes of a meeting is a written document that records such vital information that happens in a controlled environment. It is a professional document that is empowered with validity, credibility, and sustainability such that any discrepancies in an organization about decisions taken may be sorted out in referring to the minutes. It is an acceptable document by the court of law when it comes to legal disputes.

Since the minutes of meeting is almost a legal document that is filed and circulated among the members who participated in the meeting, care is taken to format it in the right manner and to record the meeting as accurately as possible. Every organization may have its own policies, templates, or requirements about the minutes. Sometimes the final draft needs to be approved by members to be documented. All of these make the Minutes of Meeting an important and essential document.

Preparing for the meeting

Before the meeting commences, learn about the agenda of the meeting. Having a copy of the agenda as a template will be easier to organize the minutes after the meeting. Also have a list of participants and the list of those who are present in-absentia.

During the meeting

Even before the meeting starts, make a note of those participants who have arrived. Keeping the template with you will be easier for noting down minutes.

Note down key points of discussion and action taken. Unless it is very relevant you must not record every word stated by others. During disputes note down those who had disapproved of an action along with their reason. If need be use acronyms and avoid writing full sentences.

After the meeting

It is important to draft the minutes as soon as the meeting is over. The points of deliberations will be freshly remembered and can be recorded accurately. In some contexts, you might need to get the minutes approved before it is circulated among the members. The approving authority can be the chair of the meeting or the CEO or a few members from the board.

Format and proceedings of a meeting

The diagram illustrates the format and proceedings of a meeting for Love Douglas Baseball. It includes the following elements:

- Name of Organization:** Love Douglas Baseball
- Meeting Title:** ANNUAL GENERAL MEETING
- Time, Day, Date:** 10:00 a.m. SATURDAY, AUGUST 31, 2013
- Address/Venue:** 5436 Chestnut Crescent, Ladner, BC, V4K 1J4
- AGENDA:**
 - A. Call to order
 - B. Welcome
 - C. Acceptance of the Agenda
 - D. Approval of the Minutes
 - E. President's Report
 - F. Treasurer's Report
 - Approval of Financial Statement 2012/2013
 - Confirmation of preparer of Financial Statement for 2012/2013
 - G. Introduction of the 2013/2014 Executive Board
 - H. Other business
 - I. Adjournment

Callouts and notes:

- Opening remarks by the Chair & Welcome:** Points to items A and B.
- Approval of previous agenda and minutes:** Points to item D. Note: "This will be followed by business arising from the minutes"
- Any other business or issues discussed:** Points to item H.
- Main activities:** Points to items E, F, and G.
- You must note down the time when the meeting was adjourned. Also the date and time for the next meeting will be decided.** Points to item I.

Image Source: <https://in.pinterest.com/pin/827255025293911484/>

Another sample of Minutes of Meeting

Ethics Committee Meeting Minutes - *Approved*

Date: April 25, 2011

The meeting began at 7 pm in the Town Hall Conference Room.

Members attending: Richard Rubenstein, Joan Landzberg, Laurie Noonan, Robert Garofalo, Ira Forman

Non-voting member/Ethics Board Counsel attending via conference call: Jeannette Koster

1. Regular Business:

- a. The minutes of the March 03, 2011 minutes were distributed.
- b. Attendance was noted.

2. President's Comments:

- a. Richard discussed the Public Hearing scheduled to be held during the upcoming Town Board Meeting. Topics for each Committee member to present at the meeting were suggested.
- b. The Committee agreed that Richard will address the issue of gatekeeper, Bob will address the Disclosure Form, Laurie will review the Mission Statement and commentary prepared by Joan and Ira will address recordkeeping and privacy concerns expressed by various board

3. New Business:

- a. Jeannette indicated that changes to the Amendments to the Code of Ethics have been made to address Committee Chairs and members who are required to complete the Disclosure Form. Points of discussion:
 - i. Committees that don't set policy or have decision-making authority should be removed from the revised list of committees that are required to complete the Disclosure Form.
 - ii. The Affordable Housing and Community Housing Board members should be added to the list.
 - iii. Other committees that should be considered for addition to the list include:
 1. Group Home Committee
 2. Senior Citizens Advisory Committee
 3. Planning Approval Review Committee

4. Next Steps:

- a. The agenda for the next Ethics Committee meeting was discussed. Joan agreed to develop proposed internal operating procedures for the Committee. Bob indicated that he would work on suggested guidelines for handling ethics-related complaints.
- b. The Committee members agreed to schedule the next meeting after the upcoming Town Board Meeting and Work sessions. The next meeting is tentatively scheduled for June 6th at 8pm.

The meeting adjourned at 8:00 pm.

Source of the template:

https://www.yorktownny.org/sites/default/files/fileattachments/town_clerk/meeting/1105/ethics_board_minutes_-_042511_-_approved.pdf

The following template for Minutes of Meeting is available in Microsoft word. However, it is good to learn about the templates and/or format expected or available in your respective organization.

Meeting Title | MINUTES

Meeting date | time Date | Time | Meeting location Location

<i>Meeting called by</i>	Name	Attendees
<i>Type of meeting</i>	Purpose	Attendees
<i>Facilitator</i>	Name	
<i>Note taker</i>	Name	
<i>Timekeeper</i>	Name	

AGENDA TOPICS

Time allotted | Time | Agenda topic Topic | Presenter Name

Discussion Conversation

Conclusion Closing

<i>Action items</i>	<i>Person responsible</i>	<i>Deadline</i>
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Time allotted | Time | Agenda topic Topic | Presenter Name

Discussion Conversation

Conclusion Closing

<i>Action items</i>	<i>Person responsible</i>	<i>Deadline</i>
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Time allotted | Time | Agenda topic Topic | Presenter Name

Discussion Conversation

Conclusion Closing

<i>Action items</i>	<i>Person responsible</i>	<i>Deadline</i>
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Task 7:

Imagine you are taking down minutes of Students Union meeting. The topic is how to organize the College Cultural Festival during the ongoing pandemic. The points of discussion could be date, time, venue, online and offline competitions, Standard Operating Procedures (SOPs), budget, sponsorship, PA system, Food and hospitality, decorations, Guests etc. Using the above template prepare Minutes of Meeting and submit it. You may modify this template according to the needs of the meeting.

Task 8:

Watch a YouTube video of a sample Board Meeting. Take down the minutes according to the format of the proceedings.

The link is given below:

<https://www.youtube.com/watch?v=WBXJEJCsULw>

SUMMARY AND PARAPHRASE

Pre task:

The following image captures a crucial part of Ramayana, the Great Indian Epic.



Write one sentence about this image:

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Write about the events related to this image in five sentences:

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The pre-task that you just did shows how one image can be expressed in one sentence and in many sentences. Knowing how to compress ideas into one sentence or a paragraph and to explain ideas in your own words is an essential writing skill which will be very useful in several forms of writing such as: project reports and proposals, formal letters, product description, introductions, and in writing academic research papers.

Read the following article on "Scientific Contributions or Glories of Ancient Tamils. *This article was written by Kandiah Thillaivinayagalingam (Disclaimer: The views expressed are the views of the author Kandiah Thillaivinayagalingam).*

1

In the time of William Shakespeare, there were commonly reckoned to be five wits or five senses. At that time, the words "sense" and "wit" were synonyms, so the senses were known as the five outward wits. This traditional concept of five senses is common today, and Extrasensory perception is often called the sixth sense.

2

The traditional five senses are enumerated as the "five material faculties" (pañcannaṃ indriyānaṃ avakanti) in Buddhist literature. They appear in

allegorical representation as early as in the Katha Upanishad (roughly 6th century BC), as five horses drawing the "chariot" of the body, guided by the mind as "chariot driver".

3 Depictions of the five traditional senses as allegory became a popular subject for seventeenth-century artists, especially among Dutch and Flemish Baroque painters. A typical example is Gérard de Lairesse's *Allegory of the Five Senses* (1668), in which each of the figures in the main group allude to a sense: Sight is the reclining boy with a convex mirror, hearing is the cupid-like boy with a triangle, smell is represented by the girl with flowers, taste is represented by the woman with the fruit, and touch is represented by the woman holding the bird.

4 Ancient Tamil Literature, *Tholkappiyam* is said to be the first written text in the world to describe six senses which related to external body parts. While the exact date of the *Tholkappiyam* is not known, based on linguistic and other evidence, it has been dated variously between the 5th century BCE and the 3rd century CE. While our sensory organs are capable of perceiving information only within the very narrow bandwidth of the particular sense, the mind is where the various perceptions come together to form a consensus of the truth. The individual senses of a person are incapable of knowing the absolute truth. It is impossible to simply touch a surface and know what it is made of. We can perceive, by touch, its surface irregularities, whether it is soft or hard, and a relative indication of its temperature. We can tap on it, and in hearing the sound, determine that perhaps it is metal or glass if it is thin enough to send a true indication, but a sheet of glass that is 2-inches thick cannot be perceived as glass without sight. We need multiple sensory perceptions to be fed to the mind to assist in determining the truth. We hear a sound that may be lightning, a gunshot, or something hitting another thing. In most cases it is extremely

difficult to ascertain the truth from a single instance of sensory perception. we must use our other senses and are mind to better discern the truth. The "oldest Tamil work on grammar, poetics" was the Tolkappiyam. The Tolkappiyam considers all native elements, especially all animate beings, as part of a continuous series graded by degrees of sentience. One of its verses says :

"beings with one sense are those that have the sense of TOUCH.

Beings with two senses are those that have the sense of TASTE along with the above.

Beings with three senses have sense of SMELL in addition.

Beings with four senses have sense of SIGHT, along with the above.

Beings with five senses have sense of HEARING, in addition.

The beings with six senses, have a MIND, along with the above."

Tholkappiyam, does not stop with this classification alone, it's also gives examples of beings in each of these classifications. For example: senses Grass (Pul) and Trees (Maram) have single sense, that is the sense of touch. Similar beings also form part of this branch (kilai). Snails (Nandhu) and Oysters or Molluscs (Mural) have two senses, the sense of touch and taste. Similar beings also form part of this branch (kilai) Termites (Sidhal) and Ants (Erumbu) have three senses, the sense of touch, taste and smell. Similar beings also form part of this branch (kilai). Crabs or Crustaceans (Nandu) and Dragonfly or Beetles (Thumbi) have four senses, the sense of touch, taste, smell and vision. Similar beings also form part of this branch (kilai). Horses, Elephants, Pigs (Maa) and Other similar animals and birds (Maakkal) have five senses, the sense of touch, taste, smell, vision and hearing. Similar beings also form part of this branch (kilai). Only humans have six senses, the sense of touch, taste, smell, vision, hearing and mind. Similar beings also form part of this branch (kilai).

6

Sixth sense, or subtle perception ability, is our ability to understand the subtle cause and effect relationship behind many events, which is beyond the understanding of the intellect. Extrasensory perception (ESP), clairvoyance, premonition, intuition are synonymous with sixth sense or subtle perception ability. Tholkappiyam is said to be the First in the world to describe the sixth sense which related to external body parts. Tholkappiyam verses explanation above is truly an amazing classification and proves that our Tamil ancestors not only an expert in literature and grammar, but obtained higher spiritual knowledge that is progressively of more universal need and of lasting importance in terms of a time span of centuries.

7

There are some errors in his above classifications, Considering the time or period he made these classifications. We can understand these mistakes. For example, beetles have no nose, they use their antennae to smell things. Similarly, Snails are strange-looking creatures with shells and large stalks sticking out of the tops of their heads. Because most snails are small, it can be difficult to see their primary features. However, snails do have eyes and vision, though the exact location of the eyes and their use depends on the specific type of snail. Snails don't rely on sight as much as humans, but it's still one of their senses.

Source: <http://www.ttamil.com/2017/07/scientific-contributionsor-glories-of.html>

A summary contains a gist of a larger content. Any type or genre of text can be summarized. An action that is witnessed live in the cricket stadium is summarized by the commentator in various instances. A person caught speeding summarizes his predicament to the police who will not perhaps listen to elaborate details. A doctor would require you to summarize the details of your ailment as many other patients are waiting with similar if not more ailments. When you are asked the question "tell us something about yourself" although you might have had several years of experience and skills

unmatched, yet you have to summarize and express your best in a minute or two.

The purpose of a summary is to present the best or the essence of the substance in as brief a manner as possible. Care should be taken that the most important information is included in a summary. The challenge is not only to include the essential information but also to ensure that the bits and pieces that are combined make sense.

A summary is also like a big picture or a bird's eye view of the entire content. It will make sense to go through a summary of a document rather than to peruse word for word if there is a time constraint.

Technique to write a good summary:

- Read the entire content and understand it completely
- Identify the core or the theme of the content
- Draw a concept map of the theme and how it is connected to various other themes
- The key words in the concept map should be a part of your summary
- Understand the author's perspective and conclusion.
- Connect the dots and write it all in your own words.

Example of a summary

1 In the time of William Shakespeare, there were commonly reckoned to be five wits or five senses. At that time, the words "sense" and "wit" were synonyms, so the senses were known as the five outward wits. This traditional concept of five senses is common today, and Extrasensory perception is often called the sixth sense.

2

The traditional five senses are enumerated as the "five material faculties" (pañcannaṃ indriyānaṃ avakanti) in Buddhist literature. They appear in allegorical representation as early as in the Katha Upanishad (roughly 6th century BC), as five horses drawing the "chariot" of the body, guided by the mind as "chariot driver".

The traditional concept of five senses common during the time of William Shakespeare which is called five material faculties in Buddhist Literature appear in the Katha Upanishad.

Task 9

Read the above passage and answer the following questions.

1. What is the central idea of the passage?
2. What are the supporting ideas?
3. What is the conclusion?

After having identified the answers to the above questions, write it in a paragraph. What you have is a summary.

A paraphrase is aimed at providing all the information in a content in your own words. It is like explaining a movie in detail to your friend who wants to know everything that happens in a movie before watching it. You may not repeat all the dialogues that appeared in the movie in the exact same way. You will narrate the movie in your own words. A paraphrase serves similar purpose. It is a humble way of saying that the content that you are refereeing to is not written by you. It is to acknowledge that the author of the content is someone else.

Paraphrasing will therefore include all the details in your own words. In case there may be sentences or phrases that need to be included as it is, they can be used within quotations.

Example of a paraphrase

4 Ancient Tamil Literature, Tholkappiyam is said to be the first written text in the world to describe six senses which related to external body parts. While the exact date of the Tholkappiyam is not known, based on linguistic and other evidence, it has been dated variously between the 5th century BCE and the 3rd century CE. While our sensory organs are capable of perceiving information only within the very narrow bandwidth of the particular sense, the mind is where the various perceptions come together to form a consensus of the truth. The individual senses of a person are incapable of knowing the absolute truth. It is impossible to simply touch a surface and know what it is made of. We can perceive, by touch, its surface irregularities, whether it is soft or hard, and a relative indication of its temperature. We can tap on it, and in hearing the sound, determine that perhaps it is metal or glass if it is thin enough to send a true indication, but a sheet of glass that is 2-inches thick cannot be perceived as glass without sight. We need multiple sensory perceptions to be fed to the mind to assist in determining the truth. We hear a sound that may be lightening, a gunshot, or something hitting another thing. In most cases it is extremely difficult to ascertain the truth from a single instance of sensory perception. We must use our other senses and our mind to better discern the truth. The "oldest Tamil work on grammar, poetics" was the Tholkappiyam. The Tholkappiyam considers all native elements, especially all animate beings, as part of a continuous series graded by degrees of sentience. One of its verses says : "beings with one sense are those that have the sense of TOUCH.

Beings with two senses are those that have the sense of TASTE along with the above.

Beings with three senses have sense of SMELL in addition.

Beings with four senses have sense of SIGHT, along with the above.

Beings with five senses have sense of HEARING, in addition.

The beings with six senses, have a MIND, along with the above."

Tholkappiyam of Ancient Tamil Literature describes the six-sense related to external body parts. Although the exact date of its composition is not known it is placed somewhere between 5 BCE and 3 CE. More than our senses it is within our mind that we realize perceptions of truth. Interaction of multiple sensory perceptions are needed to get a complete understanding of the world around us. If objects were perceived with individual senses that do not interact, we would get a distorted view of reality. It is difficult to understand reality from a single sensory perception. Tholkappiyam describes all sentient beings as beings with varied senses such as beings with one, two, three, four, five and six sense having the sense having the sense of touch, taste, smell, sight, hearing, and mind in this order. In each level of sense organism one sense is added beginning with one sense organism through six sense organisms.

Task 10

Paraphrase paragraph 5 and 6 of the above article in your own words.

Punctuation and Capitalization



(Source: <https://www.teachstarter.com/au/blog/26-punctuation-resources-activities/>)

Punctuation

The system of signs or symbols, such as full stop, comma and exclamatory mark, used in written language is called Punctuation. Punctuation marks show a reader how a sentence is constructed and how it should be read. Every sentence should include at least a capital letter at the start, and a full stop / exclamation mark or question mark at the end.

Why Punctuation matters?

Life would be confusing without proper punctuation.

Look at these sentences

1. some people find inspiration in cooking their families and dogs

Vs.

Some people find inspiration in cooking, their families and dogs.

2. let's eat grandpa

Vs

"Let's eat, Grandpa!"

The sentences convey **totally** different things as per the proper usage of punctuations.

For the sake of family members and Grandpa's life, use proper punctuation. Punctuation saves lives and keeps people alive!

3. Now, this is a big one. Depending upon where you place your comma, your sentence could convey an entirely different meaning. Like in this sentence:

a woman without her man is nothing

“A woman, without her man, is nothing.” (A woman’s success depends on her man)

Now, let’s change up where we’re placing the punctuation:

“A woman: without her, man is nothing.” (A man’s success is possible only with the help of a woman)

Here is an infographic on various punctuations used in English



CAPITALIZATION

Capitalization is one of the most basic and important elements of writing. Capitalization draws the reader's attention to names, titles, and more. Capitalization also marks the start of new sentences and new paragraphs, provides signals to the reader, and helps to create a structure and a hierarchy in written language.

Basic Capitalization Rules

- 1. Capitalize proper nouns.** Proper nouns always begin with a capital letter. Capitals are used
 - To indicate the names of people, such as Vijay, David or Anwar.
 - To denote the names of months and days, such as January, August, Sunday, Thursday
 - To denote days of national/international importance, such as Independence Day, Women's Day
 - Finally, proper nouns also include the names of buildings, landmarks, and companies, such as the Leaning Tower of Pisa, the Statue of Liberty, or Verizon
- 2. Use capitalization with proper adjectives.**
 - Indian, American, Italian, German
- 3. Capitalize titles of works.**
 - A Tale of Two Cities, Titanic, Ode to A Nightingale, Beats
- 4. Use a capital at the beginning of a sentence.** The first word of every sentence should be capitalized, regardless of what kind of word.
- 5. Capitalize the first word of a full sentence in a quotation.** You also need to capitalize the first word of sentences in quotes.
He said to me, "I'd rather have pizza."
- 6. Use capitalization when referring to a period or an event.**
 - The Chola Period.

7. Capitalization with the pronoun "I." One of the most notable words to make sure to capitalize is the pronoun "I." I refer to oneself, and is as a result, a unique and a specific usage of a word.

8. Capitalize family relationships.

- Aunt Preethi" or "Cousin Ajith."

9. Capitalize people's titles.

- Mr. Ms. Miss, and Dr.

Remember these punctuation rules while writing:

PUNCTUATION RULES ENGLISH PUNCTUATION

RULE 1 Every sentence must end with a full stop.

Proper nouns (names of people, places, brands, etc, i.e. unique instances of a class) must always be capitalised.

RULE 2

RULE 3 When you use opening quotation marks, do not forget to use closing quotation marks at the end of the quoted word or phrase.

Quotation marks are when quoting or sometimes to convey irony, not for emphasis; emphasis is conveyed by emboldening or italicisation, followed by an exclamation mark.

RULE 4

RULE 5 Do not use an apostrophe when you are pluralising a word. The plural of toy is toys, not toy's. Apostrophes are used to form contractions (it is = it's) and indicate possession.

The ellipsis, used to indicate variously the intentional omission of a section of text, an unfinished thought, and a trailing off into silence, consists of only 3 dots. It is pointless to add more dots to an ellipsis

RULE 6

RULE 7 As per the rules of British English, any punctuation mark that is not part of a quoted section of text must be placed outside the quotation marks.

Do not link independent clauses with commas. Independent clauses are groupings of words that can stand alone as sentences.

RULE 8

RULE 9 Use a comma after the introductory element of a sentence. The introductory element is a word or a phrase that begins a sentence by providing background, or simply modifies it.

www.eslgrammar.org

Activity 1

Analyse the Story given below and list down the various punctuations mentioned in the story and write their definition.

E.g.

1. **Comma** – Used for pausing; took its place between words; without the break commas provide, words run amok, becoming jumbled, unwieldy, and confusing; a well-placed comma can change the meaning of a sentence.

The Day Punctuation Came to Town

Written by Kimberlee Gard | Illustrated by Sandie Sonke

The Punctuations had just moved to Alphabet City and the kids—Exclamation Point, Question Mark, Period, and Comma—were excited about their first day of school. Exclamation Point was in a rush to get there. “We are going to have so much fun!” he said. He “was always excited about something.” Question Mark was a little more subdued. She wondered if the other kids would be nice and even pondered whether they were walking in the right direction. “Comma kept pausing,” and Period said she would let her siblings know when to stop.



When they got to school and introduced themselves, the student letters were confused. They'd never seen anyone like the Punctuations before. As the letters practiced forming words, Exclamation Point joined W, O, and W; Question Mark helped out W, H, and O; and “Period brought each sentence to a tidy end.” For Comma, though, it wasn't so easy. As he tried to squeeze in between letters, he began to feel as if he was just a bother. Undetected, he tiptoed away.



Meanwhile in the classroom, Exclamation Point had all the letters scrambling to make more and more exciting words. There was a lot of cheering and booming, ducking, and running. Question Mark asked if maybe they shouldn't all quiet down a bit, but no one was listening. Even Period couldn't get them to stop. Pretty soon, there was a huge word pileup. In the next moment it came crashing down and all the letters "tumbled through the door, spilling into the hall." There, they found Comma, who just stared in disbelief. His siblings wondered why he was in the hall instead of in the classroom. Comma told them how he felt. But "Comma, without you, things become a disaster!" Exclamation Point said. Period and Question Mark agreed.

The Punctuations joined the class. The letters worked to make words. Exclamation Point, Question Mark, and Period joined in the fun.



Exclamation Point added excitement to words. Question Mark asked a lot of questions.



Period brought each sentence to a tidy end.

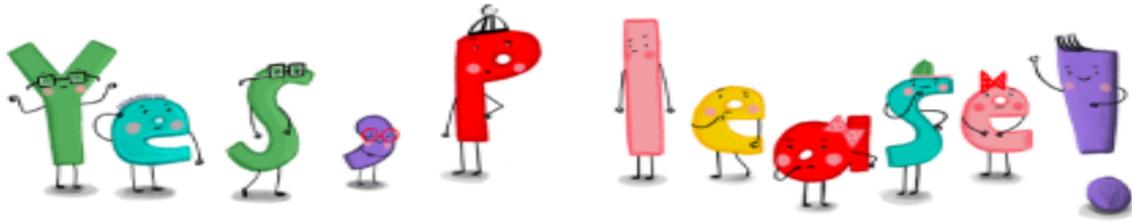


Comma tried not to get stepped on and fit in wherever he could.

Then his siblings gently reminded little Comma about how each member of their family has a certain purpose. They told him, "we all work together to help letters and the words they make." Once everyone had gone back into the classroom, the letters continued making words. But now Comma took his place between them. When the letters looked confused, he explained that it was his job to keep order and that words and punctuation needed each other to make good and clear sentences.

For children just learning about sentence structure and how punctuation and words fit together to create meaning, Kimberlee Gard's lively story helps them visualize and understand the different roles of each punctuation mark. Coming at the end of a sentence and accompanied by vocal clues, exclamation points, question marks, and periods are more familiar to kids. But what about that comma, which seems to float around here and there? Gard demonstrates that without the break commas provide, words run amok, becoming jumbled, unwieldy, and confusing. Readers will respond to the classroom setting, where the

letters work and play together during lessons, and they will be eager to make friends with the Punctuation family themselves.



If any readers think learning about punctuation is dry and dull, Sandie Sonke's vibrant colors and cartoon characters will change their mind. The Punctuations (and their butterfly friend Apostrophe) are sweet and earnest, wanting to fit into the class and make a difference. As the letters form words, the purple Punctuations are easy for kids to pick out, allowing for discussion of their distinct roles. The tangled piles of letters invite kids to make words from the muddle. After Comma realizes his own importance and the letters embrace him, the story ends with a familiar and funny example of just how a well-placed comma can change the meaning of a sentence.

Image copyright Sandie Sonke, 2019, text copyright Kimberlee Gard, 2019. Courtesy of Familius.
<https://celebratepicturebooks.com/tag/writing-resources-for-kids/>

Activity 2

Explore the following websites and complete the Punctuation Marks Graphic Organizer.

Punctuation Tree: <http://guidetogrammar.org/grammar/marks/marks.htm>

English Club: <https://www.englishclub.com/writing/punctuation.htm>

Grammar Book: https://www.grammarbook.com/english_rules.asp

Punctuation Marks Graphic Organizer

Write the rules for using each of the punctuation marks below. Each row represents a different rule. In the right-hand column, provide an example of the rule in use.

Symbol (!?, etc.)	Punctuation Name	Rule	Example of Rule in Use



PROFESSIONAL ENGLISH FOR LIFE SCIENCES - II



TAMIL NADU STATE COUNCIL FOR HIGHER EDUCATION (TANSCH)

Professional English for Life Sciences

Semester-II

[Part-III – Add-on Course]

Syllabus

Weightage : 4 credits

Duration: 90 hours

Objectives:

The Professional Communication Skills Course is intended to help Learners in Arts and Science colleges,

- Develop their competence in the use of English with particular reference to the workplace situation.
- Enhance the creativity of the students, which will enable them to think of innovative ways to solve issues in the workplace.
- Develop their competence and competitiveness and thereby improve their employability skills.
- Help students with a research bent of mind develop their skills in writing reports and research proposals.

Unit 1- Communicative Competence

(18 hours)

Listening – Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions)

Reading: Two subject-based reading texts followed by comprehension activities/exercises

Writing: Summary writing based on the reading passages.

Unit 2 - Persuasive Communication

(18 hours)

Listening: listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: debates – Just-A Minute Activities

Reading: reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: dialogue writing- writing an argumentative /persuasive essay.

Unit 3- Digital Competence (18 hours)

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related)

Reading: Selected sample of Web Page (subject area)

Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

The essay will address all aspects of digital competence in relation to MS Office and how they can be utilized in relation to work in the subject area

Unit 4 - Creativity and Imagination (18 hours)

Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites – E.g. <https://www.youtube.com/watch?v=tpvicScuDy0>)

Speaking: Making oral presentations through short films – subject based

Reading : Essay on Creativity and Imagination (subject based)

Writing – Basic Script Writing for short films (subject based)

- Creating blogs, flyers and brochures (subject based)
- Poster making – writing slogans/captions (subject based)

Unit 5- Workplace Communication & Basics of Academic Writing (18 hours)

Speaking: Short academic presentation using PowerPoint

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis)

Capitalization (use of upper case)

Outcome of the Course:

At the end of the course, learners will be able to,

- Attend interviews with boldness and confidence.
- Adapt easily into the workplace context, having become communicatively competent.
- Apply to the Research & Development organisations/ sections in companies and offices with winning proposals.

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PREFACE

The textbook on Professional English visualized under the leadership of the Hon. Chief Minister of Tamilnadu, Thiru. Edappadi K.Palaniswami by the Honorable Minister for Higher Education Thiru. K.P. Anbalagan, and the Principal Secretary to Government, Department of Higher Education, Selvi. Apoorva, I.A.S., is a pioneering venture and strategic intervention in higher education of Tamil Nadu. It has been prepared with the ample support of Thiru. Vivekanandan, I.A.S. Member Secretary, TANSCH (Tamil Nadu State Council for Higher Education)

Tamil Nadu has the distinction of having the highest GER (Gross Enrolment Ratio) of 49%, in higher education in the country: this figure manifests the efforts of the government to empower the youth of the state by enhancing access to higher education.

After duly examining the need of the students in learning their subjects and with a vision to equip them with 21st century skills, four textbooks, *English for Physical Science*, *English for Life Sciences*, *English for Arts and Social Sciences* and *English for Commerce and Management* have been prepared for the second semester.

As language is an essential tool with regard to the learning process, a textbook which focuses on the contextual usage of language to leverage language learning is an ideal approach and fulfills the dual objective language proficiency and professional competence.

The book is meant for promoting learner autonomy and defines the role of teachers as facilitators and learners as highly motivated stakeholders.

Disclaimer

Some of the passages given for Listening, Speaking, Reading and Writing lend themselves to the teaching of Grammar items. However, testing and evaluation does not include Grammar.

This material is not for publication: it is only for training purposes.

Unit 1

Communicative Competence

Listening : Listening to two talks/lectures by specialists on selected subject specific topics - (TED Talks) and answering comprehension exercises (inferential questions)

Speaking: Small group discussions (the discussions could be based on the listening and reading passages- open ended questions

Reading: Two subject-based reading texts followed by comprehension activities/exercises

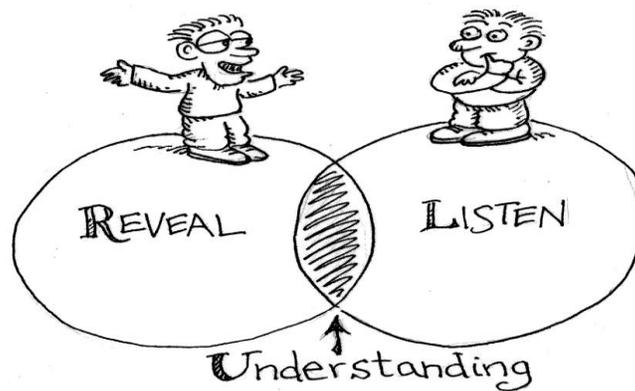
Writing: Summary writing based on the reading passages.

Unit 1 Communicative Competence

Listening:

“Communication is a process of passing information and understanding from one another.”

This definition of communication by Davis explains the purpose of communication. When an information is passed on from one person to the other, one needs to listen to understand its meaning. Listening is thus inevitable in communication process.



Source: <https://pixy.org/4608973/>

While communicating one engages in listening for various reasons – to appreciate, to be empathetic, to comprehend, and for critical analysis. All these happen only when we listen because it is an active process of decoding the message in accordance with the speaker’s language use and intonation. It is not necessary that all the types occur in all situations. The language use and the intonation, by itself, sways the listeners to respond accordingly.



Source: https://www.photosforclass.com/download/px_3182808

Listening Activity:

Pre-task

Vocabulary List:

Coral	a hard red, pink or white substance that forms in the sea from the bones of very small sea animals.
Devour	eat or do something quickly and completely
Metamorphosis	a complete change of form
Nook and cranny	every place; everywhere
Problematic	full of problems
Lethal	very dangerous and able to kill
Scrap	something that is discarded
Manage	to handle
Disrupt	to stop or disturb something

Task 1

Listen to the content given in the below link and familiarize with the different types of listening to strengthen and improve your ability of listening.

<https://ed.ted.com/lessons/the-big-beaked-rock-munching-fish-that-protect-coral-reefs-mike-gil>



Source: [https://commons.wikimedia.org/wiki/File:Parrot_fish_on_coral_reefs_\(27324293082\).jpg](https://commons.wikimedia.org/wiki/File:Parrot_fish_on_coral_reefs_(27324293082).jpg)

Task 2

Answer the comprehension questions based on the link given above.

1. What do Parrotfish feed on?

2. How does the coral larvae help the fishes in the marine system?

3. How is overfishing a threat to coral reefs?

4. Why are reef eco-systems becoming fragile?

5. How does reef guard coastlines?

Speaking

Speaking skill can otherwise be called as a conversation skill. Speaking is the primary competency that has to be developed in communication process. To acquire speaking competence various aspects of the skill such as pronunciation, structure, vocabulary, content, accuracy and fluency are to be focused on equally.

In order to achieve the structure, vocabulary, accuracy and fluency the content of the subject matter must be well-known. To aid in this practice a set of open-ended questions are given below.

Answer the following questions in the conversation between Biology students.(This is based on listening skill exercise)

Vinay: Hey! What is Scarridae?

You : It is a type of fish whose common name is Parrotfish.

Vinay: I haven't heard of it. Can you describe its physical features?

You : _____

Vinay: What does it survive on?

You : _____

Vinay: How does it even eat them?

You : _____

Vinay: Umm...I am not aware of what larvae and polyps are...

You : _____

Vinay: How do you say that it helps the marine eco-system?

You : _____

Vinay: I am amazed at the facts of this species! I, now understand the ecological importance of its existence.

Reading

Reading Comprehension exercises are aimed at improving comprehension. One could also develop strategies to comprehend various types of texts.

Reading Comprehension develops the cognitive ability to understand the functional information and the inferential information of a given text.

The ability to make inference is to use two or more pieces of information from a text to arrive at a conclusion.

Inferential information are understood by means of deduction, speculation and examination of the given text. The inferential questions on a reading comprehension task drives the human mind to analyze, synthesize and evaluate the given information. This, in turn, trains the learner's mind to understand the nuances of real-life communication process and develop their communicational competence.

Read the given passages and answer the questions that follow.

Task 1

Ayurveda emphasizes that individual well-being should not come into conflict with social well-being. A happy life is that which achieves individual well-being, whereas a wholesome life is that which is conducive to social well-being. These concepts are currently in application and we have countries projecting their personal and national well-being indices, which match exactly the Ayurvedic notion of a happy and wholesome life. Integrative approach to healthcare Ayurveda is perhaps the earliest form of Integrative Medicine practised by humanity.



Source : <https://www.flickr.com/photos/189590028@N07/50191955812/>

The definition of Ayurveda is in tune with modern notions of Integrative Medicine. Integrative Medicine attempts to heal the body, mind and self at the same time or treats the human being as a complete whole. Integrative Medicine combines mainstream medical therapies and

complementary and alternative medical therapies for which there is some high-quality scientific evidence of safety and effectiveness. Ayurveda states that human life rests on the tripod of the body, mind and self. Ayurvedic texts also advise that there are multiple approaches to healing that are prevalent in the world and that we must examine and integrate the most effective methods to make a complete system of healing.

Balance of inner environment and personalized medicine Ayurveda defines health as a dynamic balance of the internal environment that positively impacts the sense organs, mind and the self. Just like the sun, the moon and the wind maintain the balance of the external environment, the body maintains itself by balancing anabolic (building up) and catabolic (breaking down) activities by self-regulation.

Each individual is unique and has a specific mental and physical constitution, which define the vulnerability to disease and the scope for achieving higher levels of health. Ayurveda has also been at the forefront of advocating an approach to personalized medicine from historical times. Advances in human genetics and medical genetics have heralded the emergence of a personalized approach to medicine today that tailors medical intervention to suit individual needs.

1. How does Ayurveda help in individual well-being?

2. In what way does Ayurveda conform to the concept of integrative medicine?

3. What is inferred from fourth paragraph?

4. Why does Ayurvedic medicine have variations in treating each individual?

5. How would you relate medical genetics with Ayurveda?



Task 2

A few weeks ago, a newspaper article quoted a well-known scientist saying, 'IT has destroyed Indian science'. One can speculate about the various ways in which the growth of the IT sector and other similar knowledge industries such as biotechnology has led to a decline in basic scientific research in India. The most obvious reason is money; pay scales in IT and BT are much higher than one can aspire for in academia. The argument goes why should a bright, B Tech or M Sc student enroll in a Ph.D programme when she can make a lot more money writing code? Not only does a fresh IT employee make a lot more than a fresh M.Tech student, her pay will rise much faster in IT than in academia. A professor's pay at a

government-run university, even after the Sixth Pay Commission, tops out at far less than a senior executive's salary in a major industry.

Second, the social status of IT and BT jobs equal or even exceed the social status of corresponding academic positions, since they are seen as knowledge industries, which plays to the best and worst instincts of the societal order. As quintessential white-collar professions, neither do they compel a successful entrepreneur to resort to violence and corruption, nor do they demand any physical labour. Unlike real estate or road construction, it is felt that IT workers can become rich while staying honest and sweat-free, assuming that the labour pool for academia and IT is roughly the same, the difference in our collective preferences biases the labour market towards IT and away from academia.

Further, when the imbalance between IT and academia continues for decades, a destructive loop, from academia's point of view, is created. When our best and brightest take IT jobs over academic ones for a decade or more, faculty positions in our universities and research centres are no longer filled by the best candidates. As faculty quality goes down, so does the capacity to train top-class graduate students who, after all, are 'teachers in training. In response to decreasing faculty quality, even those students who would otherwise choose an academic profession, decide to join industry or go abroad for their studies. These foreign trained graduates prefer to come back to corporate India, if at all they do come back and the downward cycle replicates itself in each generation.

In other words, academia is trapped within a perfect storm created by a combination of social and economic factors. In this

socio-economic calculus, the members of our societal classes should prefer an IT job to an academic one. Or, to put it another way, the knowledge economy, i.e. the creation of knowledge for profit, trumps the knowledge society, i.e. the creation of knowledge for its own sake or for the sake of the greater good. As is said, "Knowledge is power, but money is even more power". Perhaps the scientist was alluding to this victory of Capitalism over the pursuit of pure knowledge when he accused IT of having a negative influence on Indian science. Surely, knowledge has become a commodity like any other and as a result, knowledge workers are like any other labourers, who will sell their wares to the highest bidder.

1. What did the scientist actually mean when he said, "IT has destroyed Indian Science"?

2. What could be the appropriate title for the given content?

3. Why does the author say that knowledge has become a commodity?

4. What does knowledge economy refer to?

5. What perception towards IT jobs is given in the passage?

Writing

Writing skill is a part of academic learning. It helps to communicate verbally in written form. It is the knowledge and ability to express one's ideas through written words. Acquisition of writing skill helps to communicate with clarity. Besides, it is also an easier way to convey a message to a mass audience.

In academic writing, writing a summary is considered important. This is because, summary is something a student has to write from his/her understanding of the topic. In this effort, the use of the language by the student in expressing his/her own idea would be exhibited.

Here are a few guidelines to write summary on any given topic.

- ✓ Write in present tense.
- ✓ Do not copy sentences from the original work.
- ✓ Paraphrase the information in your words.
- ✓ Do not add your own ideas, opinions, or interpretations while writing a summary of a factual topic.
- ✓ Add connective words for clarity and coherence.

The skeleton of the summary:

- ✚ Introduction- introduce the topic
- ✚ Paragraphs- each summary can have minimum three paragraphs excluding introduction and conclusion

Each paragraph must revolve around one main idea. The other sentences in that paragraph must be the supporting points of that main idea.

- ✚ Conclusion- summarise the entire points; do not add any new point here.

Task 1

Using the above given guidelines write a summary on Ayurvedic treatment and its benefits. (Task 1 of Reading Comprehension can be taken as a material to summarise its ideas)

Unit 2

Persuasive Communication

Listening: Listening to a product launch- sensitizing learners to the nuances of persuasive communication

Speaking: Debates – Just-A Minute Activities

Reading: Reading texts on advertisements (on products relevant to the subject areas) and answering inferential questions

Writing: Dialogue writing- writing an argumentative /persuasive essay.

Unit 2 Persuasive Communication

A strong message can influence **thinking**, **behaviour** and **belief**



Source: <http://www.aventislearning.com/images/Keys%20to%20Persuasive%20Communication.png>

LISTENING

Pre-listening:

Think:

1. Have you ever tried to persuade others through communication?
2. Do you possess the art of persuasion?

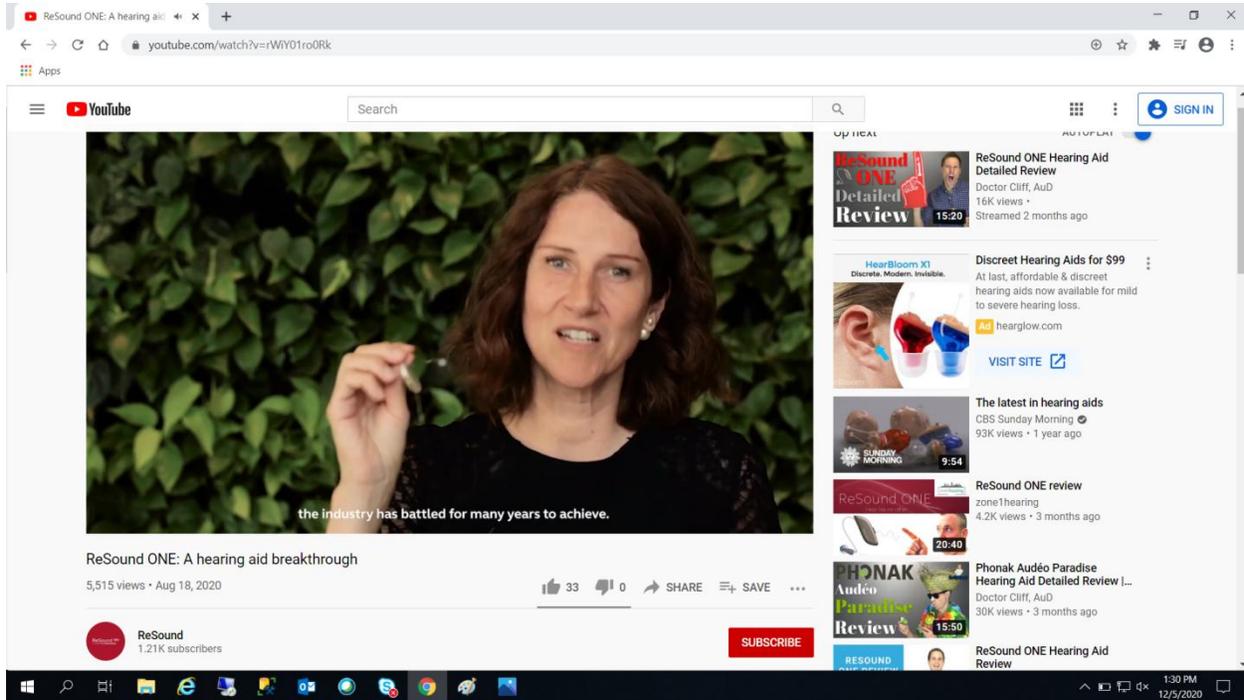
Definition of persuasive communication:

- According to U.S. National Library of Medicine, Persuasive Communication is "a mode of communication concerned with inducing or urging the adoption of certain beliefs, theories, or lines of action by others."
(Source: <https://www.definitions.net/definition/persuasive+communication#:~:text=Library%20of%20Medicine-,Persuasive%20Communication,lines%20of%20action%20by%20others.>)
- According to APA Dictionary of Psychology, "Persuasive communication conveys "information that is intended to change or bolster a person's attitude or course of action and is presented in written, audio, visual, or audiovisual form."
(Source: <https://dictionary.apa.org/persuasive-communication>)

In a nutshell, persuasive communication is a form of communication that deals with influencing or persuading others. It helps the speaker to appeal to the listeners' or viewers' brain and encourage him/ her to move from resistance to consensus. Learning the nuances of persuasive communication becomes important as it help us to be successful at achieving goals.

Listening:

Listen to the following video which is about the launch of ReSound ONE, a revolutionary new hearing aid.

A screenshot of a YouTube video player. The main video shows a woman with brown hair speaking, with the subtitle "the industry has battled for many years to achieve." below her. The video title is "ReSound ONE: A hearing aid breakthrough" and it has 5,515 views as of August 18, 2020. The ReSound channel logo and name are visible at the bottom left of the video player. To the right of the video player, there is a list of recommended videos, including "ReSound ONE Hearing Aid Detailed Review" by Doctor Cliff, AuD, and "Discreet Hearing Aids for \$99" by hearglow.com. The Windows taskbar is visible at the bottom of the screen.

<https://www.youtube.com/watch?v=rWiY01ro0Rk>

Transcription:

Voiceover: Just like a fingerprint, every person's hearing is unique. Yet the most commonly worn hearing aids use a standardized approach modelled on an average ear which can often compromise sound quality globally 79 million people wear hearing aids but 93% say that they have trouble hearing in noisy environments and 55% get confused about where sounds come from. All this changes today, as GN hearing launch ReSound ONE, a revolutionary new hearing aid that places an additional microphone inside the ear canal also called an M&RIE, Microphone and Receiver in ear design. This for the first time allows those relying on hearing aids to experience the world with their own ears. People can now enjoy the benefits of superior sound quality and hear conversations better in noisy environments.

Gitte Aabo (GN Hearing CEO & President): I am very proud that once again, we are first in the industry with groundbreaking innovation that makes a genuine difference in how people experience conversations and sounds around them. This way of placing a microphone inside the ear canal, is something the industry has battled for many years to achieve. ReSound ONE will allow people with hearing loss to feel that they are literally getting their own hearing back, hearing the way nature intended.

Ray Weave (Musician, Voice Over Artist & Writer): I am seriously surprised at how much I like them because I'm naturally skeptical about things and I know that as the years go on it's going to be even more important to me because you know as we all know you get older your hearing doesn't get better all of a sudden. It doesn't improve when I'm 75 or 80 and I'm as time goes on I'm going to be even more happy that I have these things and I think that having them. You will feel differently about yourself the way I do and I think that you just go give it a try.

Voiceover: To find out more about ReSound ONE, visit resound.com forward slash press or check out our social channels.

ReSound One, hear like no other.

Glossary:

- Unique – being the only one of its kind
- Hearing aid – A small amplifying device which fits on the ear and helps in hearing.
- Compromise – an agreement of a dispute that is reached by each side making concessions.
- Revolutionary – causing complete change
- Genuine - authentic
- Groundbreaking – pioneering
- Innovation – featuring new methods

- Ear canal – A pathway running from the outer ear to the middle ear
- Microphone – an instrument for converting sound waves into electrical energy variations which may then be amplified, transmitted, or recorded
- Skeptical – having an attitude of doubt

Discussion:

The above listening passage is a model on how a product is launched. For any product launch, it is important to use persuasive words or expressions that would influence the consumers to buy the product.

According to entrepreneur.com, the following are the ten important persuasive words that would instantly grab the attention of the consumers.

1. Free: Though the word “free” is overused, it tops the list of persuasive words as the products could be sold just by giving something free.

2. Exclusive: When the product is given a tag as “exclusive”, it makes the people, want it more.

3. Easy: Consumers are easily drawn to the products which claim to make their lives “Easy”.

4. Limited: It is a general psychology of the people to buy products when the products have only “limited offer” or “limited version”

5. Get: It is an action word that psychologically puts the reader in charge and prepares them for action. “Get” is also typically followed by a benefit.

Example: Get a flat stomach in six weeks.

6. Guaranteed: Authenticity is a legitimate concern which any customer would have. The word “Guaranteed” is the right word which gives the reassurance about the product which triggers the consumer to buy the product.

7. You: When the sales copy is written always use 'first-person language' to persuade. It makes the consumers attentive and makes them feel special. Moreover, using "you" makes the writing conversational, and it brings the tone down to a friendly level where the psychological connection is made with the buyer.

8. Because: Human brains love explanations. Tie the product which you want people to buy with a reason, and people will be more compelled to take action.

Example: Why do you need that feature? *Because* it will help you get . . .

9. Best: The following examples will highlight the difference which the persuasive word "best" would bring to the sales.

Example 1: "The way to change a Flat Tire"

Example 2: "The Best Way to Change a Flat Tire."

Which of these examples sound better? We know its example 2. The word "best" always has the tendency to grab the buyers' attention.

10. Compare: Before buying any product, it is the tendency of any buyer to make comparisons between different brands available in the market. When the seller shows the consumers the difference between his/ her product and the competitors', it makes him/ her, the reliable seller.

Source: <https://www.entrepreneur.com/article/279224>

Post-listening:

I. Discuss in pairs and pick the persuasive words/ phrases/ expressions that you think would convince the consumers to buy the product, from the listening passage given above ,

II. Considering the listening passage as a model, write a detailed description about a product related to your subject using the above mentioned persuasive words.

SPEAKING

1. DEBATE

Debate is a logical argument carried out between two teams aimed at getting a conclusion on a topic. The two teams involved will hold opposite views of the same topic. The team which has the most cogent argument will be considered as the winner.

The following are useful expressions for debating:

Welcoming the audience:

- Ladies and Gentlemen, Welcome to this debate.

Stating the issue:

- The motion for debate today is ...
- Let's first define some important concepts...

Phrases to present the most important point:

- This argument/idea is of paramount importance.
- The most important argument for ... is ...
- The most important idea is...
- The primary argument for... is...

Conceding an argument:

- It's true/obvious/evident that ... However, ...
- While you might say that ..., it's important to remember that ...
- I agree with you that ... On the other hand, ...
- I agree/admit/concede that ... , but we must remember that...

Sequencing a list of arguments:

- First of all, I'd like to state ...
- Firstly, ... Secondly, ...Thirdly, ...
- The second argument in favour of ...
- To begin with, ...
- The next argument I'd like to state is...

Adding an argument to strengthen your point:

- In addition to that,...
- You also have to consider...
- Furthermore,...
- Moreover,...
- I might also add that...
- Not only that but also...

Concluding:

- Let me recap/recapitulate my point ...
- As a final word, let me summarize my point of view ...
- To reiterate my point of view, ...
- My final thought is ...
- In a nutshell, what I am trying to say is ...
- To sum up, ...
- Finally, ...

The following are the five important benefits of debating:

- It improves the critical thinking skills
- Students acquire the public speaking skills
- It develops the teamwork skills.
- It helps the student on how to persuade the listener
- It helps students in structuring their thoughts in a coherent manner.

Source: https://www.myenglishpages.com/site_php_files/communication-lesson-useful-expressions-for-debating.php

Task 1:

Divide the class into two teams and conduct the debate for the following topics:

1. Is it ethical regulate/allow genetically engineered food?
2. Should we support the cloning for tissues and organs?

2. Just A Minute (JAM)

The activity Just A Minute (JAM) is a spontaneous speech where the speaker articulates the ideas on the topic in a minute. The topic could be of the speaker's choice or a given topic. This activity helps the student condense the information precisely in his/ her mind and speak only the most relevant details within a minute. This helps the students improve their communication skills. Hence, JAM session is included in the job recruitment process to test the communication capability of the candidates. So it becomes important for the students to master the impromptu speaking skill which can be learnt through practice and training.

To conduct JAM session in your classroom:

1. The teacher should divide the class into two groups.
2. He/ she should ask each team to prepare the list of topics (related to your subject) on which they want their opponents to speak.
3. The teacher should ensure that each and every student gets a chance to speak for a minute.
4. The teacher can ensure that the contestant adheres to the rules of JAM.

Rules that are to be followed during JAM session:

1. Once the topic is chosen/ given, try to analyse and assimilate your ideas.
2. Think about the facts that are related to the topic.
3. Start your speech without any hesitation.
4. Stress on the facts by giving examples.
5. Use proverbs and anecdotes to persuade the interest of your listeners.
6. Be brief and speak to the point.
7. Frame simple sentences.
8. Remember to follow the sequential order.
9. Do not deviate from the topic given.
10. Do not drag your point.
11. Do not give too many pauses.

12. Do not repeat your ideas and words.
13. Be time cautious.

Benefits of JAM

1. It improves the students' Vocabulary as they are not allowed to repeat the words.
2. It improves their thought process.
3. The students' level of Confidence increases as they asked to speak in front of their class.
4. The students will be able to train and improve their Time Management skill.
5. The students will learn to assimilate and condense their ideas.

TASK 2:

Conduct JAM session for the following topics

1. Forest preservation
2. Healthy food habit
3. Water Conservation
4. Genetic Science
5. Water borne diseases
6. COVID 19
7. Effects of music on the brain
8. Intelligence of Dolphins
9. Why Bats hang upside down?
10. Best types of house plants

Suggested videos:

BBC- Nicholas Parson's Just A Minute (JAM):

- <https://youtu.be/2Zu-2eNYmMM>
- <https://www.youtube.com/watch?v=Dp5vqxEot1c>
- <https://youtu.be/pSGV2HZcPQ0>

READING

Pre-reading:

Read the following print advertisements and answer the following questions:



(Source: <https://in.pinterest.com/pin/419819996514536798/>)



(Source: <https://images.app.goo.gl/kJ1P7ZWhUtRQbr8Y6>)

- What do you understand from these images?
- What do the slogans "A warm welcome to death" and "Whose hand are you holding" mean?

Reading:

Advertisement can be defined as the most powerful and persuasive tool that a company uses as one of its marketing tool. It is a form of an effective communication that attempts to persuade the potential customers to use the brand or its services. In other words, a good advertisement helps the firm increase the number of consumers and aids to have control over them. Lot of creativity goes into the process of making an advertisement. There are many important elements like logo, colour, jingle etc that sculpts the advertisement to serve its purpose. Slogan is one such element which makes the advertisement more effective.

A slogan or the tagline is a catchy phrase that helps the consumers remember the product. The Oxford Dictionary of English describes slogan as "a short and striking or memorable phrase used in advertising." When a slogan is combined with music, it is called jingle. The choice of words plays a crucial role in constructing a slogan as it should highlight the message it wants to convey. It shall also express the quality and the uniqueness of the product.

- The main motto of the slogan is to sell the product or the service to as many consumers as possible through the message it provides.
- The innovativeness or the uniqueness of the product should be expressed using the minimum number of words in an alluring way.
- It should shape up the consumers' opinion about the product and influence them to buy it.
- It should be concise and appealing to the consumers.
- It should be easily remembered.
- It should build a positive brand image.
- It should go well with the logo of the brand as they are always displayed together.



(Source: <https://images.app.goo.gl/GPzvuvkt7C8NcMbz7>)

Post-reading:

I. Google and write the slogans for the following popular food products and food brands:

- Oreo
- Kit Kat
- KFC
- Boost
- GRB ghee
- Maggie noodles
- Nestle
- Nescafe

II. Look at the following advertisements carefully and write your inference along with the appropriate slogans.

1.



Source: <https://www.thoughtmedia.com/wp-content/uploads/2019/11/creative-print-ads-9.jpg>

2.



Source: <https://i.pinimg.com/originals/cd/3d/d2/cd3dd26cc002f008de3d3ac7286d8276.jpg>

WRITING

1. Persuasive Essay

While writing a persuasive essay, it is the writer's duty to convince the reader to accept the standpoint which the writer takes about the particular issue. Writing persuasive essay demands a wide research about the topic and about the biases of the target readers to demonstrate not only why the writer's opinion is correct but also why the opponent's opinion is wrong.

Steps to write a persuasive essay:

1. Do the intensive research to understand the topic thoroughly and to gather the convincing evidence.
2. Understand the readers' perspective to design the persuasive technique.
3. Organise the ideas collected to get the right perspective of the issue and pick the side you wish to advocate.
4. With this understanding, give an outline to your essay in a proper sequential order.
5. Reinforce your statement with proper evidences.
6. Support your point of view with fact, examples, analogies etc.
7. Refute the opposing views strongly with the evidences you have.

According to time4writing.com, a Persuasive Essay should have the following Outline:

Introductory Paragraph: The writer should grab the attention of the reader in the introductory paragraph. It should encompass an overview of the argument. It should also contain the thesis statement through which the writer explicitly expresses his/ her standpoint.

Body Paragraphs: Each paragraph should be centered on evidence in the form of statistics, quotes from experts and real-life examples which the writer has gathered during his/ her phase of research. It should also comprise of the supporting statements.

Opposing View Paragraph: This paragraph plays a crucial role in the essay as it describes and disproves the opposing views of the issue.

Concluding Paragraph: It is important for the writer to reaffirm his/ her thesis statement while he/ she summarizes his/ her ideas in this paragraph. This will make certain that the readers will have no doubt in writer's perception.

(Source:https://www.bestessaytips.com/persuasive_essay.php#:~:text=A%20persuasive%20essay%2C%20also%20known,convincing%20facts%20and%20logical%20reasons.)

Sample essay:

Why You Should Not Eat Fast Food



Considering the ever-increasing pace of life in big cities, sometimes it can be easy to lose oneself in overwhelming routine. Being in a hurry all the time, a regular citizen may have no time for satisfying even basic needs such as sleep and nutrition. This is probably why seeing sleeping people in public transport is so common, and why fast food restaurants are crowded all the time. Sleep deprivation in big cities is a well-known problem, and people are gradually becoming more aware of the importance of sleep. In the case of fast food, however, things are not that simple. Even though the majority of people know about the dangers of eating food from McDonald's,

Burger King, Subway, and similar places, they still go there. The factors causing such behaviour should be analysed separately. Instead, this paper focuses on the reasons why you should quit eating fast food as soon as possible.

The most obvious reason everyone is aware of is the increased risk of developing obesity. Sometimes, being overweight is caused by health problems or psychological issues. However, much more often, becoming overweight is evoked by dysfunctional eating habits and the regular consumption of fast food. According to research, people eating fast food regularly develop much higher risks of gaining extra weight. They are also more likely to develop type 2 diabetes. Unfortunately, not only adults are exposed to these risks—teenagers and children are also under threat. Throughout the last 30 years, the rates of adolescent obesity have tripled. For children, this index has doubled over the same period of time. This might be related to sophisticated advertising, but facts remain facts: fast food leads to obesity, and all age groups are at risk (*Lifehack*).

Unlike organic food, which is by default created from pure, natural ingredients, fast food often has a bunch of dubious ingredients in it. To start with, all kinds of flavour enhancers are added into it so that it tastes and smells better. Conservatives and food preservatives may be used as well—in particular, tertiary butyl hydroquinone, which is made from similar ingredients as petroleum. As if this was not enough, fast food may contain the remainders of drugs and antibiotics. How do they get in there? The good news is that fast food does contain real meat. The bad news is that animals are kept in such awful conditions that they often suffer from a number of diseases. To deal with this problem, fast food manufacturers may add antibiotics to animals' nutrition—later, they can get into your body when you eat your next chicken burger (*SheKnows*).

Along with the risks of developing obesity and pumping your body with doubtful chemicals, eating fast food often means exposing almost every organ of your body to dangers. For example, it becomes much easier to get kidney diseases: because fast food is often salty and greasy, it increases blood pressure, makes you want to drink all kinds of soda drinks (which are unhealthy in their own way), and affects kidneys adversely. Besides, due to high amounts of cholesterol and triglyceride contained in fast food, your cardiovascular system suffers as well. This is not to mention the fact that processed fats in fries and other junk food, when supplied to the brain instead of nutrition, affect cognitive abilities in a negative way. In particular, according to research conducted on rats, a week of daily fast food consumption caused memory impairment in test subjects. And, as if this was not enough, junk food increases your chances to get cancer (*Beauty and Tips*).

As it can be seen, cheap and tasty food is not what your body needs. To start with, when eating fast food regularly, you put yourself (or your children, if you tolerate their fast food habits) at risk of developing obesity, and possibly type 2 diabetes. Some crucial organs of your body such as kidneys, heart, and brain, suffer from junk food immensely. And, if adverse health effects are not enough for you, think about preservatives, antibiotics, and other chemicals you stuff your body with when eating fast food.

(Source: <https://academichelp.net/samples/academics/essays/persuasive/should-not-eat-fast-food.html>)

Task 1:

Read the following persuasive essay and identify the persuasive words, thesis statement, facts and supporting statements:

What a lack of sleep can do to your body and mind



All of us have received advice to “take a good rest” at least once in our lives. Probably, this is also one of the most neglected pieces of advice a person may give to another. With the ever-increasing pace of life, especially in big cities, sufficient rest—and sleep, in particular—is gradually becoming more of a luxury than a basic need that should be addressed and satisfied. Everyone knows how sleep is important: health experts, psychologists, self-help books, and other authoritative sources keep talking about the importance of having good sleep—and still exhaustion and fatigue remain one of the biggest problems in a number of developed countries. Perhaps, this is just not enough to make people pay attention to the problem. Supposedly, it would be more convincing to learn about the negative effects of sleep deprivation, poor quality sleep, or just constantly ignoring one’s need for restoration and rest. This essay discusses some of the crippling (and sometimes surprising) effects a simple lack of sleep can do to a person’s mind and body.

First of all, if you ever wondered how someone with schizophrenia or other severe mental disease feels, a sleepless night could get you closer to this condition. As researchers from the University of Bonn and King’s College London discovered, upon missing a night of sleep, a psychologically-healthy person may experience symptoms typical for some forms of

schizophrenia. During the course of the experiment, which led the scientists to such a conclusion, a group of people was offered to first have a night of normal sleep, and then to stay awake by conversations, games, and physical activities. After this, test subjects were to undergo prepulse inhibition measurements. Prepulse is a psychological mechanism helping the brain to filter incoming sensory information: with its help, our minds distinguish between important and unimportant stimuli coming from the environment. After just one sleepless night, this function turned out to be inhibited significantly. Test subjects reported altered bodily sensations, distorted perception, and weird ideas: for instance, some of them believed they could read thoughts. They also became more sensitive to light and loud noises (*Universität Bonn*). After having a good rest, perception returns back to normal, but it takes time to return all psychological and physical functions back to its usual state. In the case of prolonged sleep deprivation, some consequences may be irreversible.

Do you enjoy feeling depressed? Or do you like mood swings, when periods of euphoria quickly change to severe blues? If the answer is yes, then sleep deprivation is for you. Numerous research studies conducted in different sleep laboratories showed that people who did not have enough sleep, or have been deprived of it for certain periods of time, tend to be more irritable and less able to control their negative emotions. They are also more likely to react negatively to something they do not like, even if the trigger is not significant. This is not to mention the increased likelihood of developing depression. Besides, the lack of sleep inhibits friendliness and empathy, and impairs one's ability to stay in a positive mood (*Psychology Today*). In addition, if you have such mental conditions as obsessive-compulsive disorder or chronic depression, their symptoms may become more acute as well. In any case, to avoid prolonged periods of negative mood, you might want to sleep well regularly.

As if it was not enough, sleepless nights can affect your body in a negative way as well. There have been numerous research studies proving that people having problems with falling or staying asleep also had other health issues as well. In particular, sleepless nights can lead to increased risks of heart attacks and failures, strokes, diabetes, and increased blood pressure. Poor sleep can also kill your sex drive, regardless of your gender. In particular, both men and women who suffer from sleep deprivation reported lowered interest in sex and decreased libido in general. In particular, poor sleep caused by the apnea syndrome—a widespread health condition among men—was also connected to abnormally low levels of testosterone secretion during nighttime (*WebMD*).

Among other peculiar and unpleasant consequences of depriving yourself of sleep is the suppression of your immune system, weight gain, memory issues, and problems with concentration. This is not to mention the risk of getting into an accident because of decreased attentiveness and alertness (*Healthline*).

Overall, there is a number of good reasons why you would not want to stay up the next time you feel like working or studying at night. In particular, you may experience altered perception, distortion of cognitive and memory functions, and the inability to concentrate and think straight. Also, your mood will be down, and it will become harder for you to control your negative emotions, such as anger or fear. As if this was not enough, your body suffers as well. In particular, people who regularly deprive themselves of sleep, develop higher risks of heart diseases and diabetes, and report lowered sex drive and libido. So, in general, there is probably nothing that would compensate you for a night spent without sleep.

(Source: <https://academichelp.net/samples/academics/essays/persuasive/lack-of-sleep.html>)

Task 2:

Write Persuasive essays for the following topics:

1. Is human behaviour determined by genetics?
2. Are biological weapons ethical?
3. Should aggressive dogs be euthanized or socialized?

2. Dialogue Writing:

Understand how a seller can persuade the buyer to purchase the products from the following conversation between the shopkeeper of Kelly's Organic Vegetable shop and Sathya, a buyer:

Shopkeeper: Ma'am, welcome to Kelly's Organic shop! How can I help you?

Sathya: Thank You! (*looks at the price of the vegetables*) The price of the vegetables seems costlier when compared to other shops.

Shopkeeper: Yes ma'am! This is an Organic shop.

Sathya: Organic shop? What does 'Organic' mean?

Shopkeeper: 'Organic' refers to the way in which agricultural products are grown and processed.

Sathya: Oh I see! How are organic vegetables different from conventionally grown vegetables?

Shopkeeper: Firstly, Synthetic and chemical fertilizers are used to grow the vegetables in conventional way whereas natural fertilizers like manure are used to grow the vegetables in organic way. Secondly, in conventionally grown vegetables weeds are controlled with chemical herbicides, the residues of which tend to stay on the vegetables even after washing in multiple times but in organic farming, weeds are controlled naturally through the process of crop

rotation, hand weeding, mulching and tiling. Sometimes natural herbicides are also used to control the weeds in organic farming. Thirdly, the pests are controlled with synthetic pesticides in conventional farming whereas in organic farming, pests are controlled using natural methods and naturally derives pesticides.

Sathya: My Goodness! You have compared it so well. Could you please throw some light on the ill effects of synthetic fertilizers and pesticides that are used to grow the vegetables in conventional manner?

Shopkeeper: Sure ma'am! First of all, the synthetic fertilizers deplete the natural nutrition of vegetables. Nitrogen and Phosphate based synthetic fertilizers seep in to the groundwater causing an increase in its toxicity. This results in water pollution. These fertilizers increase the nitrate level of soil and the consumption of vegetables produced from such soil, convert to toxic nitrates in the intestines. These nitrates react with the haemoglobin in the blood and cause suffocation and even death in the extreme cases.

Sathya: My God! These facts are alarming! It is wise to spend money in organic shop rather spending it in the hospital. I appreciate you for explaining the goodness of organic farming. I will share these valuable information with my friends and will convince them to buy vegetables from your organic shop.

Shopkeeper: Thank You, Ma'am!

Sathya: Thank You, Sir!

Task 3:

Rajesh creates awareness about the ill effects that are caused to one's health due to the use of plastic and persuades Suresh to use Eco friendly cloth bags. Write a dialogue between a dialogue between Rajesh and Suresh.

Unit 3

Digital Competence

Listening to interviews (subject related)

Speaking: Interviews with subject specialists (using video conferencing skills)

Creating Vlogs (How to become a vlogger and use vlogging to nurture interests – subject related)

Reading: Selected sample of Web Page (subject area)

Writing: Creating Web Pages

Reading Comprehension: Essay on Digital Competence for Academic and Professional Life.

Unit 3 Digital Competence

Objective:

This Unit enables the students to acquire Digital Competence.

Outcome:

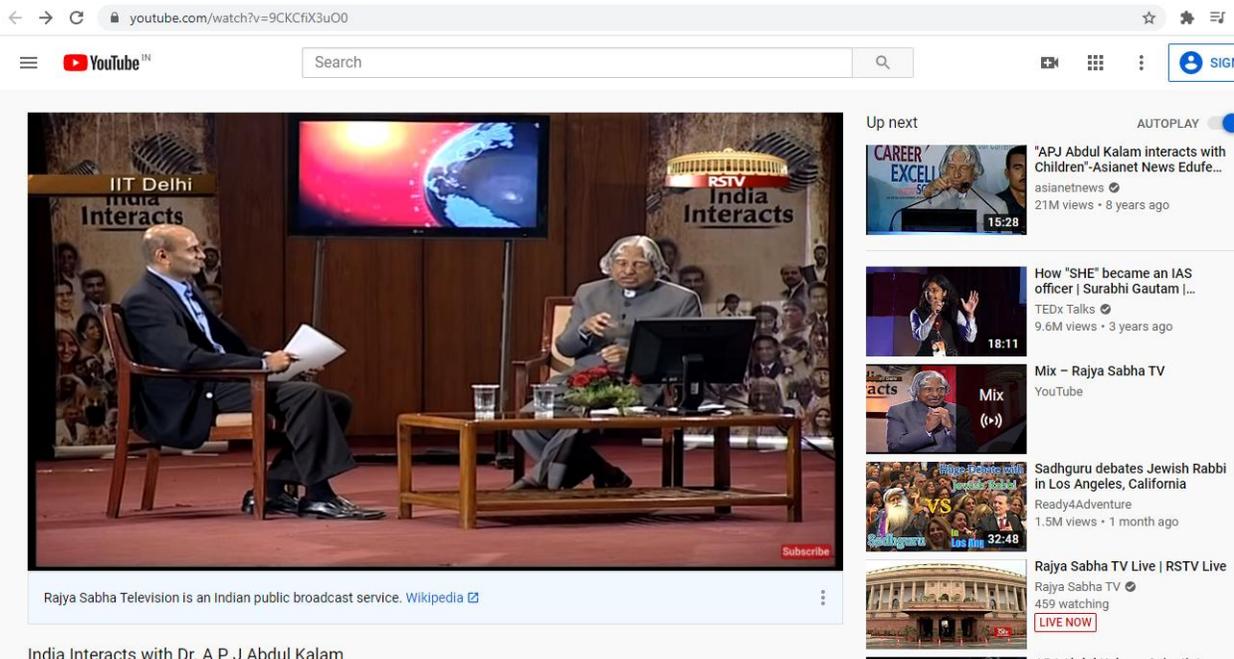
Students will be able to comprehend scientific information from web sources, do video conferencing with experts, create Vlogs and post video clips, create web pages and post multimedia materials in web pages.

Listening to interviews

Listening to interview helps the listener to stay focused and alert in an interview, and will improve conversational skills and competence over the subject. Active listening skills will not only help to succeed in professional life, but they will help the person develop his/her character.

Task 1: Listening to interview - I

Direction: Click on the given YouTube web link and listen to the interview with Dr. A P J Abdul Kalam and answer the following questions.



The screenshot shows a YouTube video player interface. The main video is titled "India Interacts with Dr. A P J Abdul Kalam". The video content shows Dr. A P J Abdul Kalam sitting in a chair, being interviewed by a host. The background features a large screen displaying a globe and the text "IIT Delhi India Interacts" and "RSTV India Interacts". Below the video player, there is a search bar and a list of recommended videos. The recommended videos include "CAREER EXCELL", "How 'SHE' became an IAS officer | Surabhi Gautam |...", "Mix - Rajya Sabha TV", "Sadhguru debates Jewish Rabbi in Los Angeles, California", and "Rajya Sabha TV Live | RSTV Live".

<https://www.youtube.com/watch?v=9CKCfiX3u00>

(Source : India Interacts with Dr. A P J Abdul Kalam, YouToube)

Questions:

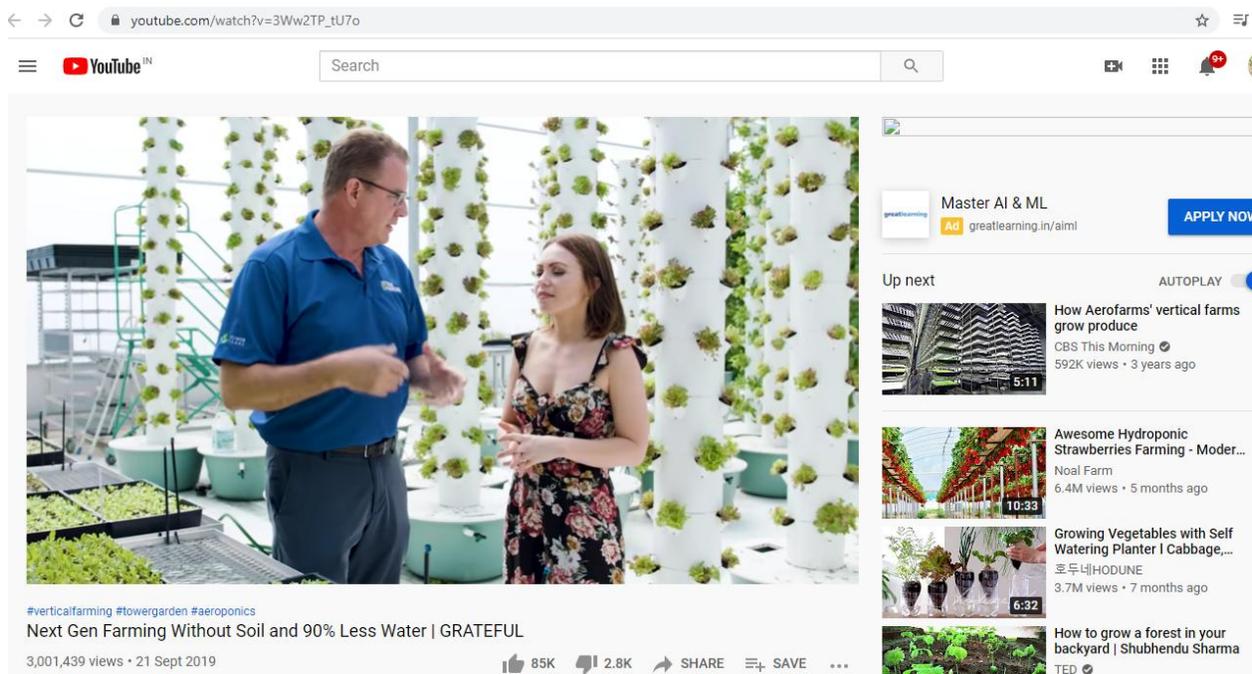
1. Distinguish discovery from invention with relevant examples.
2. Define innovation.
3. Elucidate 'right type of education'.
4. List out the qualities of great teachers.
5. Share your perception on DNA technology

Task 2: Listening to interview – II

Direction: Click on the given YouTube web link and listen to the interview and answer the following questions.

https://www.youtube.com/watch?v=3Ww2TP_tU7o

Aeroponics



#verticalfarming #towergarden #aeroponics
Next Gen Farming Without Soil and 90% Less Water | GRATEFUL
3,001,439 views • 21 Sept 2019

Up next

- How Aerofarms' vertical farms grow produce
CBS This Morning
592K views • 3 years ago
- Awesome Hydroponic Strawberries Farming - Moder...
Noal Farm
6.4M views • 5 months ago
- Growing Vegetables with Self Watering Planter | Cabbage...
포두네|HODUNE
3.7M views • 7 months ago
- How to grow a forest in your backyard | Shubhendu Sharma
TED

(Source: Next Gen Farming Without Soil and 90% Less Water, YouTube)

Questions:

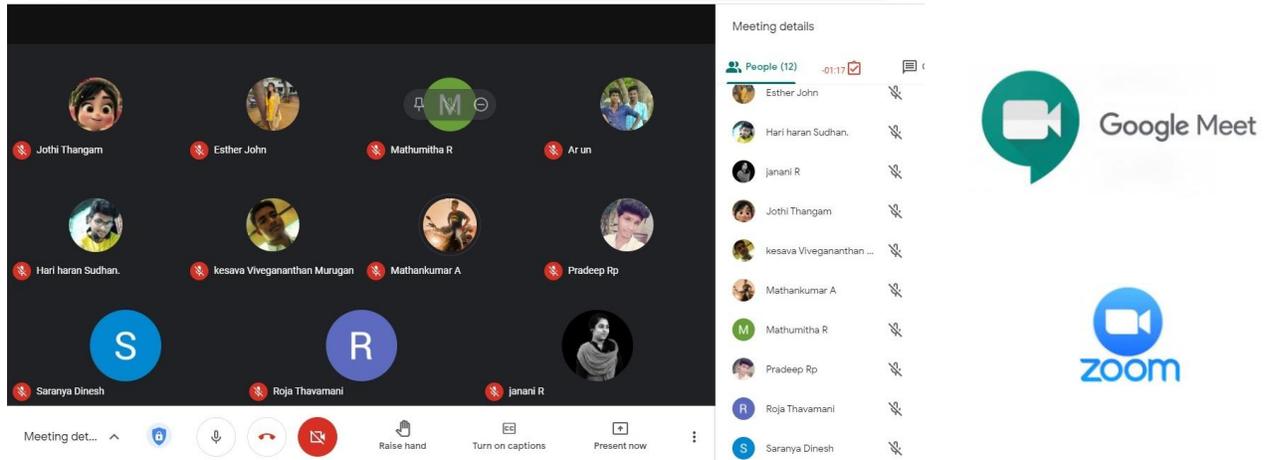
1. Can you compare Aeroponics with conventional farming?
2. How can coconut husk be used to grow plants with less water?
3. Can you defend vertical farming?
4. How does vertical farming bring more outcome?
5. How is nutrient substances supplied to plants in Aeroponics?

Speaking: Interviews with subject specialists

Interview with subject specialists can be made easy through video conferencing.

Video conferencing

Video conferencing is live, visual connection between two or more remote parties over the internet. Desktop video conferencing is a core component of unified communications applications and web conferencing services, while cloud-based virtual meeting room services enable organizations to deploy video conferencing with minimal infrastructure investment.



Video conferencing can be made through the online platforms of Google meet, Zoom, Cisco WebEx, Microsoft Teams, GoToMeeting, Facebook live, YouTube live, Skype etc.

Video conferencing skills

Video conferencing skills include the following;

1. Get to know your technology

One of the best steps is to spend some quality time with your technology. Review features like chat, mute, and background replacement to

make sure you can quickly turn these options on and off as needed during an important meeting.

2. Maintain a Clean Background

Looking neat is important for a video conference. Hence clear out items that colleague shouldn't see.

3. Anticipate Distractions

Video conference users should not only create a distraction-free background, but also make sure their surroundings are relatively quiet. An unexpected phone call and a text message notification can disrupt the flow and create a distraction. Consider silencing your phone.

4. Pay Attention to Body Language

Encourage the habit of looking directly at the camera when speaking, which creates the appearance of eye contact. Avoid excessive gesturing during a video conference, as these movements can appear over-exaggerated when they show up on the screen. Sitting too close to the camera or leaning in during the meeting can also be distracting, Maintaining a comfortable, consistent distance from the camera throughout the meeting matters a lot.

(Source: <https://www.flexjobs.com/employer-blog/4-ways-enhance-teams-video-conferencing-skills/>)

Tutorial - How to Use Google Meet

<https://www.youtube.com/watch?v=wGXI0KpkR50>

Task 1: Download Google Meet App from Playstore and install it in your mobile. After installing the app, start a meeting, copy the meet link/meeting code and send it to an expert / teacher and interview the expert over Climate change.

Task 2: Download Zoom App from Playstore and install it. After installing, start the app, copy the code and password and send it to an expert / teacher and interview the expert over Afforestation.

Creating Vlogs

Vlog stands for video blog where all of the contents are in a video format. A vlogger is a profession where one creates a video on a specific topic then post them to a video sharing platform like YouTube, Facebook, Instagram, blog and other video websites.

There are two types of vlogging: 'talking-head' and 'follow me around.' On 'talking-head', the camera is set on a tripod and it remains static as the vlogger talks about a subject or walks the audience through a process. For example drawing tutorials, cooking videos etc. On the other hand, 'follow me around' vlog creators record clips in different locations. Once you create



your video, you can upload it online or embed the video within a post on your blog or website so your followers can see your latest update.

(Source: <https://www.stokedfortravel.com/gopro-for-vlogging/>)

How to become a vlogger?

1. Determine niche and research

You must consider your interest and the potential of it to attract audiences. This will guarantee you that all your audience will enjoy every

video you shared. After determining your niche, you should research your possible competitor. You should know what works for them and what's not. This will be your guide to always make things right and avoid making the mistakes they'd experience.

2. Create a channel on any video sharing platforms and understand how it works

You've to create your own video channel. There are several video sharing platforms today, choose what you think best fit your interest and skills. Also, take time to familiarize yourself with how it works to have a smooth and organized process.

3. Create video

Once you have a channel, the next thing to do is creating the video. Make sure the videos are Informative, well-researched and original. People research on the internet to find answers, so, make sure your video's content is helpful and true. Use the recommended video format and settings for your videos. Make it mobile-friendly as well to widen your visibility to your audience.

4. Optimize your videos and get discovered

Optimizing videos is a way for the video sharing platform to discover your content and give the attention you deserve. So make sure to include all the important factors in your video such as title, file name, tags, and descriptions.

5. Publish regularly

To keep your audience hook on your channel, you must ensure that you'll stay active and publish more engaging videos.

6. Interact with your audience in the comment section

Vlogging is all about building a relationship with your audience and comment section is the best part of your channel where you can effectively interact with them.

7. Share your video on social media

Social media are effective platform for video sharing. Its free and people are always active in social media comparing to other websites. Make sure to make use of it to broaden your reach and visibility. Vlog requires a lot of hard work, creativity and patience in both researching and building the video.

Video can be edited before uploading it online. Some useful apps helps to edit the video film or add music, titles, credits, logos etc., for iPhone - iMovie, for Android Phone - PowerDirector, VivaVideo, KineMaster etc, for Computer / Laptop - Windows Movie Maker.

(Source: <https://www.shiftcomm.com/insights/7-killer-tips-to-become-a-professional-vlogger/>)

Tutorial - How to Setup a Car Vlog

<https://www.youtube.com/watch?v=xS5-y88C0A0>

Task 1 : Describing Plants

Direction: Using your mobile, shoot a video of plants and describe the benefits of plants. Upload your video in your YouTube channel / blog and share the link in your class whatsapp group / Edmodo/ Google classroom

Task 2: Describing Domestic Animals

Direction: Shoot a video of domestic animals and give voice description. Add title to the video using VivaVideo / KineMaster app. Upload your video in your YouTube channel / blog and share the link in your class whatsapp group / Edmodo/ Google classroom.

Reading

Web Pages

A Web page is a document available on World Wide Web. Web Pages are stored on web server and can be viewed using a web browser. A web page can contain huge information including text, graphics, audio, video and hyper links. These hyper links are the link to other web pages. It is often used to provide information to viewers, including pictures or videos to help illustrate important topics. A web page may also be used as a method to sell products or services to viewers. Collection of linked web pages on a web server is known as website. There is unique Uniform Resource Locator (URL) is associated with each web page.

Static Web page

Static web pages are also known as flat or stationary web page. They are loaded on the client's browser as exactly they are stored on the web server. Such web pages contain only static information. User can only read the information but can't do any modification or interact with the information.

Static web pages are created using only HTML. Static web pages are only used when the information is no more required to be modified.

Dynamic Web page

Dynamic web page shows different information at different point of time. It is possible to change a portion of a web page without loading the entire web page. It has been made possible using Ajax technology.

(Source: https://www.tutorialspoint.com/internet_technologies/web_pages.htm)

Task 1 : Reading Web page - 1

Direction: Click on the web link to read the web pages and answer the following questions.

Title: Human Genome Project

<https://www.genome.gov/human-genome-project>

Questions:

1. What is Genome?
2. What are the three major ways through which human genome was deciphered?
3. What does homologous gene mean?
4. Describe single nucleotide polymorphisms
5. Define Eukaryotic

Task 2 : Reading Web page - 2

Direction: Click on the web link to read the web pages and answer the following questions.

Title: Symbiosis

<https://biologydictionary.net/symbiosis/>

Questions:

1. Describe symbiosis
2. Distinguish endosymbiosis from symbiosis
3. Synthesize the relationship of human beings with ecology
4. Explain the exchange between plants and their pollinators.
5. How does Parasitism occur?

Writing: Creating Web Pages

Google Site:

Google Sites is a website building platform that makes creating a website easy. It has site builder features that make it easy and intuitive to design your site the way you want. You can also add "gadgets" like calendars, maps, spreadsheets, presentations and more to make your site more functional.

Creating Goggle Site:

Before you can start a Google Site, you must have a Google email account . Log into Google Sites to create a new site.

Steps to create a Site:

1. Browse

<https://sites.google.com/>

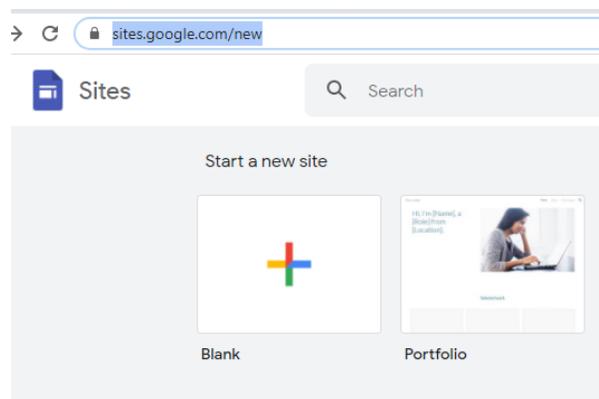
2. Select **Blank template** to design your own site from scratch. For your first site build using a blank template is the easiest way to build your site.

3. **Name your site** – Your name needs to identify its purpose. Once you name it, it cannot be changed.

4. Beneath the site URL, there are also 2 additional sections, **Choose a theme** and **More Options**.

5. Select a design for your site in the **Choose a theme** section.

6. **Add a description and category** for your site. (This is optional)



7. Select the sharing access in the **More Options** section.

(Source: <https://sites.google.com/site/tiesitestutorial/starting-your-google-site>)

Tutorial : Creating Google Site

<https://www.youtube.com/watch?v= Jc79kCWS8E>

Task 1: Create a Google site (<https://sites.google.com/new>) and post content on 'Biodiversity' and share your website link in your class whatsapp group / Edmodo/ Google classroom.

Task 2: Create a Blog in Bloggar.com and post a video, picture and text description on the 'adverse effects of pollution' and share the blog link in your class whatsapp group / Edmodo/ Google classroom

Reading Comprehension:

Digital Competence

Digital competence involves the confident and critical use of electronic media for work, leisure, and communication. These competencies are related to logical and critical thinking, high-level information management skills, and well-developed communication skills.

(Source: <https://www.igi-global.com/dictionary/teaching-digital-competence-and-scholarly-communication/7585>)

Microsoft Office

Microsoft Office is a computer program which includes Word, Power Point, Excel Access, Outlook and Publisher and. It's used to create, view, edit, save and print documents.

In today's world, learning process is technology-driven. Hence every student is expected to have a working knowledge of Microsoft Office programs like Word, Excel, and PowerPoint that will set them up for success in their field.

Microsoft Word:

Microsoft Word is a word processing program that allows for the creation of both simple and refined documents. You can create documents such as resumes, letters, and fax cover sheets. Pie-chart, Bar-chart, Line graph, Fish graph, Tables also can be created in Microsoft word.

Tutorial - Microsoft Word <https://www.youtube.com/watch?v=fUkh3yWm3d4>

PowerPoint:

PowerPoint uses a graphical approach to presentations in the form of slide shows. It is used to create slides adding pictures, videos and different WordArts. PowerPoint suggests word processing, outlining, drawing, graphing and presentation management tools. Pictures, Charts, Videos, Animation can be created using power point.

Tutorial - Creating Animation in PowerPoint

<https://www.youtube.com/watch?v=X1io7tFR6jI>

Excel:

Excel is used to create graphs and charts. Excel also provides functions and formulas, making it possible for your spreadsheet to automatically calculate and update results based on the data you input.

Tutorial - Guide to Excel

<https://www.youtube.com/watch?v=rwbho0CgEAE>

Microsoft Access:

Microsoft Access helps to analyze large amounts of information, and manage related data more competently than Microsoft Excel or other spreadsheet applications.

Tutorial - Microsoft Access

<https://www.youtube.com/watch?v=57jBdK3YVJo>

Task 1: Preparing a Word file

Direction: Type an essay on 'Biodegradable plastics'. Add picture, chart and table and share the Word file in your class whatsapp group / Edmodo/ Google classroom.

Task 2 : Preparing a powerpoint presentation

Direction: Prepare a powerpoint presentations on 'Transgenic Organism'. Add relevant picture, pie chart/ bar chart/ line graph, gif and video file and share the PPT file in your class whatsapp group / Edmodo/ Google classroom.

Unit 4

Creativity and Imagination

Listening to short (2 to 5 minutes) academic videos (prepared by EMRC/ other MOOC videos on Indian academic sites – E.g. <https://www.youtube.com/watch?v=tpvicScuDy0>)

Speaking: Making oral presentations through short films – subject based

Reading: Essay on Creativity and Imagination (subject based)

Writing – Basic Script Writing for short films (subject based)

- Creating blogs, flyers and brochures (subject based)
- Poster making – writing slogans/captions (subject based)

UNIT 4. Creativity and Imagination

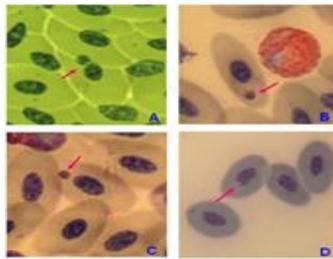
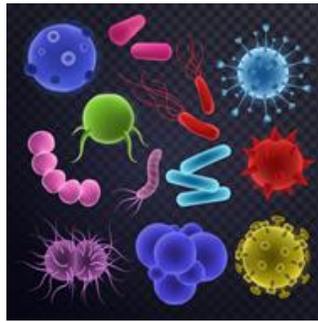
Academic listening

Task : In pairs, discuss your responses to the following questions.

1. How do microbes benefit the environment?
2. Do you think we can live without microbes?
3. Imagine what would happen if all microbes were destroyed from the environment?

I. Pre-listening Task:

Associate your ideas with the word 'micro' along with the pictures given below and list it in the blanks given:



1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____

While Listening:

What is academic listening?

Academic listening is a special kind of listening skill, which helps the learners to encounter, understand, learn, discuss, and remember new ideas.



Academic listening consists content with different forms of multimedia like audio tracks, video clips, web pages and activities like tasks, games, experiments, surveys in order to make listening more engaging and more motivating for the students in an integrated manner with elaborated style of thinking.

Activity: Listen to this academic video prepared by EMRC:

<https://www.youtube.com/watch?v=XIOHEumNf4U>

Post Listening Task 1: Recall the information presented in the video.

Task 2: State whether the statements are true or false from the above listened video clip.

1. Microbes are not present on the surface of our body, inside of a body, in the food we eat, in the water we drink and the air we breathe.
2. Microbes used food and fermentation industries.
3. Immunology is the study of nervous system
4. Growing of animal cells on artificial medium in a controlled environment is done to understand the functioning of cells.
5. Microbiology does not touch our lives in all dimensions.

Speaking: Making oral presentations through short films



In this globalized world, every profession is involved in some aspects of communication which usually involve gathering, analysing, and distributing scientific and/or technical information efficiently and accurately for specific audiences. Making oral presentations through short films links all four aspects of communicative skills (LSRW). Short films act like a bridge between language study and language use. It demonstrates one's potential to communicate through real-world experience between the audience and the presenter. It helps to build creativity, critical thinking and teach life-long skills both personally and professionally.

What is a short film?

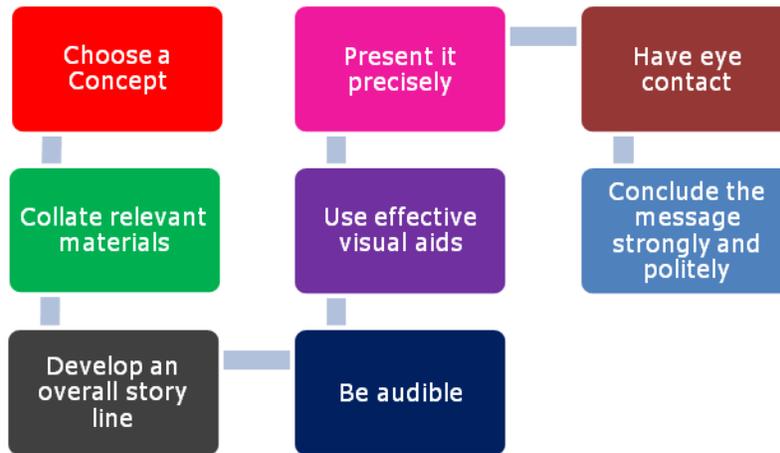
A short film is any motion picture that runs from fifteen seconds to forty five minutes in length. It expresses a single concept with unique ending.

Basic instructional design for oral presentation through short films:

- **Plan** - Plan the topic with important events with focus to your presentation. An oral presentation should never be a monologue, but an active dialogue in verbal communication. First greet the audience and introduce yourself. Explain the purpose of your talk. Start by introducing the topic. Outline the main points. State your purpose and announce the outline of your presentation in very simple and precise language.

- **Structure** – The information in the body needs to be well-structured. State main ideas clearly. Use visual aids to engage the interest of your audience. It could be in chronological order, theme or order of importance.
- **Prepare** – The first thing to be done when preparing a spoken presentation is to identify the audience as precisely as possible. Prepare the oral presentations with key points within time limit. The presentation can have one of these aims: to inform, to persuade, to teach.
- **Present** - Shape the presentation by organizing and selecting the arguments or pieces of information within the time allotted. Introduce appropriate visual aids to impose its effect on the audience. During the presentation a presenter need to face the audience - maintain eye contact with the audience as much as possible. Use natural hand gestures, look presentable and speak in a clear and audible voice.
- **End** - Prepare a closing summary with main points and give a strong concluding remark that reinforces why your information is of value. It reaffirms the connection between the audience and the material presented. Invite questions from the audience at the conclusion of your presentation. Respond to questions politely and briefly.

PROCESS RECAP



Activity:

Watch **BABY – An Experimental Short Film about the beginning of life**

<https://www.youtube.com/watch?v=eYSu2ochIE4>

Task 1:

- **Discuss in pairs about how did the film make you feel?**
- **What aspect of the film did you most engage with?**
- **What will you remember?**
- **What does it make you think about?**
- **Would you watch it again? Why/why not?**
- **How would a second viewing be different?**
- **What would you focus on?**
- **How would different people view this film differently (dependent on gender, age, ethnic background, worldview, etc)?**

Task 2

Prepare a power point presentation with inclusion of pictures and videos of about 5-8 minutes of your own interest based on your subject.

Source: <https://www.youtube.com/watch?v=selYsj94RQg> (A video on how to record a PowerPoint Presentation with Voice-Over Narration and Saving it as a Movie File)

Creativity and Imagination

Introduction:

Creativity surrounds us and expresses itself in the form of innovative ideas in our everyday life. It is a skill that can be practiced daily to solve life's problems as well as discover its opportunities. In fact, it is the ability to apply reason and logic to new or unfamiliar ideas, opinion or situations.

Creativity Defined:

There is a common misconception that creativity belongs to a few gifted individuals, or it pertains to the field of arts. As a result, many who do not consider themselves as the artistic type neglect the development of their creative skills. Let's look at what defines creativity. To be creative means turning new and imaginative ideas into reality. The Dictionary defines creativity as 'the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods and originality' It is also defined as 'progress, or imagination'. As a matter of fact, creativity is characterized by the ability to see the world in new ways, to make connections between seemingly unrelated phenomena and to generate solutions.

As we have seen earlier, creativity should not be tied to a specific discipline or a craft, it is indispensable everywhere. It is pertinent in arts, entertainment, business, mathematics, engineering, medicine, social sciences, and physical sciences and is the cornerstone of civilization.

Reflections on Creativity:

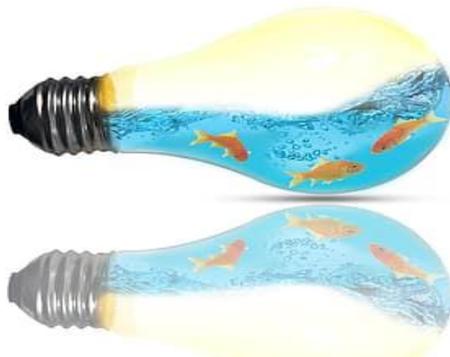
It is important to define creativity because it can mean different things to different people. If you refer to the thesaurus, you will find the following synonyms for the word 'creativity':

Cleverness	imagination	imaginativeness	ingenuity
inspiration			
genius	inventiveness	originality	resourcefulness
vision			talent

The word 'creative' is associated with being

inventive	imaginative	innovative	original	artistic	expressive
inspired	visionary		productive	prolific	
talented					
gifted	resourceful	quick-witted		ingenious	
clever	smart	unconventional	unorthodox	a genius	

Difference between Creativity and Imagination:



Have you ever wondered how creativity manifests itself? Do you know how the inventions come into existence? What is the basis for creative

thinking? **Creativity** relies on imagination, the conscious representation of what is not immediately present to the senses. Remember your imagination is not only an artistic influence but can inspire you as a person or others to add development to your lifestyle, business or work ethic. While **imagination** is the process of seeing the world in new ways and finding the hidden patterns. Creativity helps in converting your new and imaginative ideas into reality. People who believe in imagination cross the boundary of “usual” and “normal” are able to think outside the box. More importantly, if you have ideas, but don’t act on them, you are only imaginative but not creative.

Students of science classes usually get the idea that involve careful observation and analysis of data to test hypotheses. One thing that remains shrouded in mystery, is how scientists decide on the particular question and give an exact answer? You might be surprised to know that they involve in creativity and come out with logical reasoning.

The natural world is highly complex, and really big. Interesting scientific problems (like curing cancer) are usually too difficult to solve directly. The art of being a scientist involves continually re-imagining these big problems, mentally breaking them down into smaller, solvable parts, and then speculating about which of these smaller parts might be key to cracking open the whole subject. In other words, a scientist must imagine, in advance, possible outcomes from different observations, and design a research study that might help to decide between different hypotheses.

How is creativity possible in science?

Logical thinking is always a part of the creative process in any field, from art to science to business. Creativity is not only the ability to come up with new ideas, but also narrowing down those new ideas to focus on one that can be elaborated. Creative people in any field come up with new ways

of looking at the world. They constantly ask, "What if...?" But it doesn't stop there. After a creative person asks "What if...?" they then go on to logically think through the consequences.

Science is creative in much the same way as art, music, or literature are creative. In Science discipline, individuals have to use their imagination to come up with explanations. The explanations should be well informed. They must not be mere guesses. As Peter Medawar explained, "Scientists are building explanatory structures, *telling stories* which are scrupulously (carefully) tested to see if they are stories about real life" (Medawar, 1984, p. 133, emphasis in original). By "telling stories," Medawar does not mean that scientists' are just making things up out of nothing. He means that scientists' piece together bits of information in a way that makes sense, the way writer's piece together characters and events. But a scientist's job doesn't end there. The story they've told is rigorously tested to see if it makes sense in the context of real life.

Conclusion:

Success in science requires a creative mind. Some of the most important questions in science are either too large or too complex to answer directly. So scientists break them down into smaller, solvable questions. Scientists use creativity to determine which questions are likely to yield results or and which will not. They imagine possible answers to their questions, and devise ways to test those answers. To be creative, science students should be curious to know what will happen next through their creativity and imagination through experiments, show interest in their observation and finally try to bring their creative brilliance in reality.

Suggested Reading

1. Bono, Edward de. 1990. *Lateral Thinking: A Textbook of Creativity*. London: Penguin Books.
2. Hussain, S. 1988. *Creativity, Concept and Findings*. Patna: Motilal Banarasidass.
3. Clear, James. *Creativity: How to Unlock Your Hidden Creative Genius*. [.https://jamesclear.com/creativity](https://jamesclear.com/creativity)
4. Medawar, P. B. (1984). *Pluto's republic: Incorporating the art of the soluble and induction and intuition in scientific thought*. Oxford: Oxford University Press.

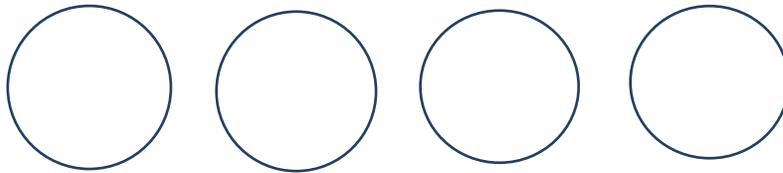
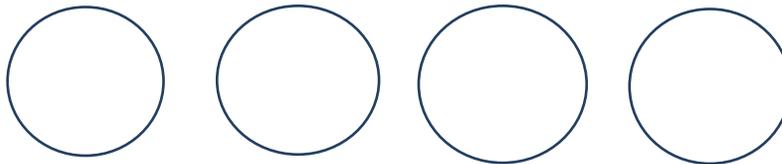
Task 1: Answer ALL the questions:

1. Explain the difference between creativity and imagination.
2. How do scientists find solutions with logical reasoning?
3. Why creativity and imagination is important for science students?
4. What is Medawar's explanation on "telling stories"?
5. Creative people in any field come up with new ways of looking at the world. Explain.

Task 2: Complete the incomplete circles using your creativity and imagination. First circle has been done for you:



by Liam Ashurst



Task 3: Read on how Rene Theophile Hyacinthe Laënnec invented the stethoscope.

Script Writing



(Source: <https://www.masterclass.com/articles/how-to-write-a-film-treatment-in-6-steps>)

A short film is just a short movie with a clear, compelling story. It is an excellent fun side-project for the beginners. A short film can be live-action, animated, or computer generated. Like feature films, short films tell closed-ended stories with a distinct beginning, middle, and end. The best short films have a clear focus and are economical with their storytelling, utilizing only one or two locations and few characters.

Scientific Script Writing for short films:

1. Brainstorm. Jumpstart your creativity remembering any images or events from your childhood. Fix the genre or the style that you want to write. Once, the idea is fixed write down whatever comes to your mind.

2. Research – It is the vital aspect for Science based genre. The film maker has to research the fact in order to give accurate data for the audience.

3. Outline - Begin to outline the idea for the film. Like feature films, short films too have a beginning, middle, and end. This brings the overall structure of the film.

4. Write your first draft - Now that you know the shape of your story, start writing the first draft of your short film script with screenplay structure.

5. Rewrite the script - When you start writing the second draft, you might find to restart the process and create a new outline. Once the story is solid, start refining the dialogue for the scenes.

6. A picture is worth a thousand words - As you write, think creative images and captions. Science offers beautiful and unusual images that can help readers visualise what you are writing about. Spend time on catchy and informative captions — they are indispensable entry points into your story.

Task 1: Watch the video Science and Storytelling | Lucy Hawking | TEDxSalford <https://www.youtube.com/watch?v=E7K-qlQVpgE>

Blogs:

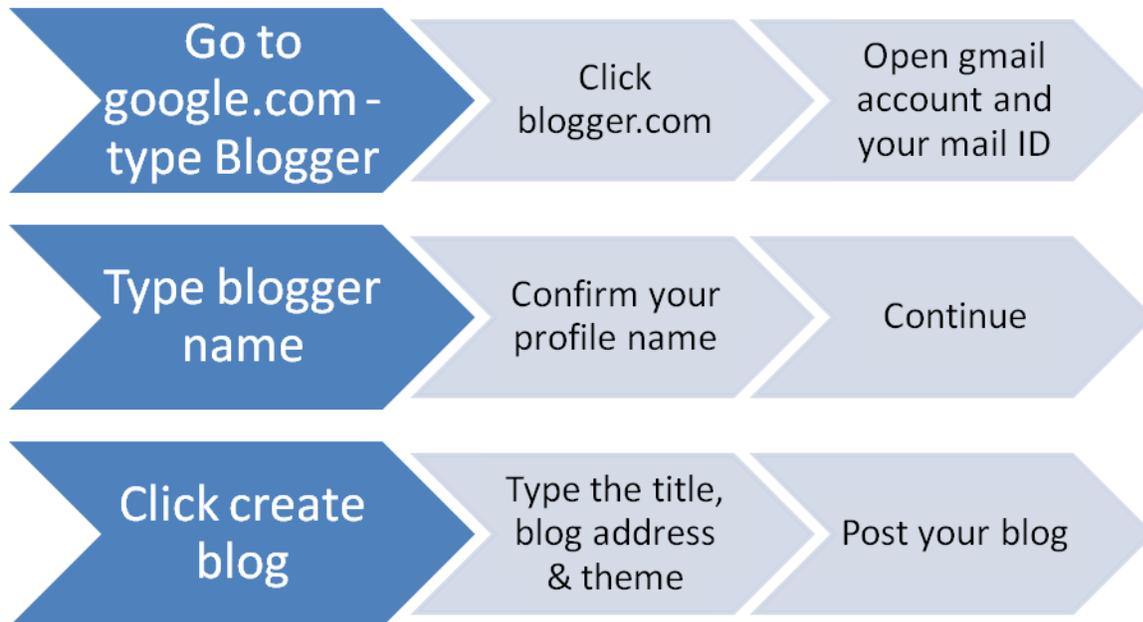
A blog, an online journal in which you share your thoughts about a particular subject with readers.

How to start writing science blogs?

- Exactly what is it that you have found out?
- What methods have you used?
- Why is this research important, and why should my target audience be interested?
- What environmental benefits might this research bring?

- Will this research lead to more sustainable technology?
- Will it lead to less expensive and/or safer technology?
- What is your or your group’s contribution to this field internationally?
- What is needed for this technology to be applied/commercialised?
- Is this project relevant to others in the industry? Will it enable us to attract new clients and win new projects?

How to create a blog?



Source: <https://www.youtube.com/watch?v=X2-v-NnZrVE>

Activity: Create, write and post your desired topics in your blog.

Task 2: Write about the importance of blog creation and its uses.

What is a Flyer?

A **Flyer** is usually a single, unfolded printed sheet that is **used to** draw attention to an event, service, product or idea. A **flyer** usually contains a very simple message that can be conveyed quickly.



<https://www.postermywall.com/index.php/posters/search?s=science%20fair%20flyer>

How to make flyers?

1. Include the basics

Make sure your flyer states the who, what, where, and when of what you're trying to communicate.

2. Go for eye-catching imagery

Flyer design is important, and images speak for themselves and can go a long way to communicating tone and feel. You can use your own imagery or choose from thousands of royalty-free photos we provide for you

3. Keep it brief

When it comes to text, less is more. Be brief. Be concise. Be powerful with your words. Choose your words carefully and make each one count.

4. Take theme into account

Think about what feeling you want to evoke with your flyer. Be mindful of the thematic elements of what you're trying to promote. The images, colours, text you use in your flyer should be theme-appropriate.

5. Let readers know what to do next

Include links, contact information, or a strong call-to-action to let readers know how to learn more.

Source: <https://www.youtube.com/watch?v=dGqpurykz3w>

Task 3: Make a flyer for science exhibition to be conducted in your department.

Brochure:

A Brochure is a single foldable sheet used by marketers to highlight a product, company or service. They are one of the most common and effective tools used by businesses and organizations for relaying information or announcements to a wide audience. Brochures are distributed in many different ways: as newspaper inserts, handed out personally, by mail or placed in brochure racks in high traffic locations especially in tourist places.



Source: <https://in.pinterest.com/pin/448811919100082233/>

How to make a brochure?

Write concisely. Your brochure should focus on one product or service. A trifold brochure only has space for about 350-450 words, so keep words, sentences and paragraphs short. Include only the most relevant information, leaving some white space and images.

Science Brochures:

While making science brochure design, follow three elements:

1. Target audience / people. Be clear for whom you are creating a brochure. Think about marketing concept, what makes an ordinary people while reading your scientific articles. To test, whether you understand your client's needs, ask yourself a simple question: "For what a person really ready to pay money?".
2. USP (unique selling proposition). You must clearly understand your positioning, how to differ from competitors. It should be something that distinguishes you from rivals for the better.
3. Target action. The target action is what the user must do after reading. If you don't offer people any action, the customer could close your science brochure design ideas and leave it.

This is what your brochure for science should convey.

Source: <https://www.youtube.com/watch?v=Gjev8RkqO1k>

Task 4: Design a brochure for your science lab.

POSTER

Poster is another visual to reach the people with specific message. Posters are usually displayed at a height that makes it visible to viewers. So, content and structure are important in a poster.



Source: <https://www.amazon.in/Tamatina-Health-Posters-Coronavirus-Precautions/dp/B085ZZQRJJ>

Instructions to create a poster.

- Decide on the size of the poster
- Make sure it is readable from a distance.
- Create Some Contrast.
- Consider the location of display.
- Let the image be large and catchy.
- Make good use of space in the poster.

(Source: https://www.youtube.com/watch?v=AwMFhyH7_5q)

Task 5: Design a poster with effective slogans on the importance of cleanliness

Unit 5

Workplace Communication & Basics of Academic Writing

Speaking: Short academic presentation using PowerPoint

Reading & Writing: Product Profiles, Circulars, Minutes of Meeting.

Writing an introduction, paraphrasing

Punctuation (period, question mark, exclamation point, comma, semicolon, colon, dash, hyphen, parentheses, brackets, braces, apostrophe, quotation marks, and ellipsis)

Capitalization (use of upper case)

UNIT 5

BUSINESS ENGLISH

Language is a powerful tool that has propelled changes, carved history and sustained culture and tradition. Languages have, since the time of our linguistic revolution, grown and influenced each other. The faculty of language that captures floating thoughts into a timeline, adding memories, feelings, emotions and envisioning a future, is one of the advances of evolution that has made us survive and progress thus far as a species.

We are living in an era of digital revolution wherein language seems to no longer belong to the domain of mouth and related speech organs. It has moved on to the domain of the digital Siri and Alexa. It can be heard when we use google maps directing us. It can be heard, translated, and automated by chatbots.

Thus, when language has transcended to wider domains, humans who were the first to revolutionize it into the digital forms that we have today also need to equip themselves with the required skills to make language an effective medium of communication. The common misconception is that "just because I speak, I am understood". Once we free our minds from this fallacy, therein begins our first attempt to communicate effectively.

Words when timed appropriately, arranged coherently, expressed accurately can make or break a relationship. Communication failure is a new normal in this era of digital communication where emojis and emoticons have taken over determiners in language; determiners that were aimed at accuracy in communicating. Although pictographic representations of what could be described through words, may be an easier way to express the difference between, say for example, a chuckle, a titter, a giggle, a chortle, or a cackle, yet, the constant use of emojis would stunt the usage of accurate

vocabulary, leading to a dilution of meaning. In other words, thanks to social media, we speak more and yet communicate so less.

When words are replaced by feelings that are captured by emojis, the communication becomes more reactive than responsive. In this era of Facebook and Whatsapp we have successfully learnt to react to posts through these five modes of expression- like, anger, love, laughter, hug, sadness, and awe. Of these, like is an all-encompassing positive feeling, anger, love, laughter and sadness are emotions, and hug is an action. Altogether we are reinforced constantly to react only within this framework of limited expressions forgetting that human emotions are complex and can lead to an endless labyrinth of responses. When you are self-aware of these endless possibilities of responses, then you free yourself from the influence of fake news and posts that spread the message of hate.

In a typical business context where the communication is domain specific there is a need to practice the art of effective communication. Businesses today have a wider reach and one major part of business that contributes to its growth is effective communication. With wide networking and collaborative efforts, it is essential to navigate through misinterpretations and assumptions, and create an ambience of meaningful engagements. Self-awareness will make you mindful of the words that you need to choose before you communicate. Along with practicing mindfulness, it is also imperative that you learn techniques and nuances in very specific contexts such as:

- Power Point presentations
- Circular
- Minutes of a Meeting
- Paraphrasing

POWERPOINT PRESENTATION

Pre-task:

Consider image 1 and image 2. Which image do you think has a better appeal?

1

2



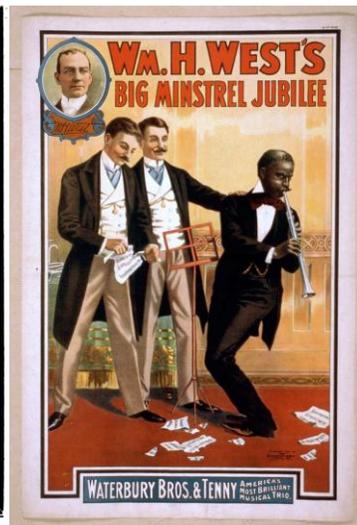
BANJO PLAYERS!
There is only **ONE** Banjo that is built entirely different from ALL other makes—and that is

**THE GREAT
"BACON PROFESSIONAL"**

The hollow sounding chamber attached to inside rim gives it that wonderful, **SUSTAINED** and **LOUD** and yet **SWEET** tone. Handsomest looking banjo in the world. Hundreds of teachers and performers are using the

BACON PROFESSIONAL
and are **PERFECTLY** satisfied. Send for handsome catalog giving prices and testimonials.

ADDRESS
FREDERICK J. BACON
CARE OF
SIEGEL-WYERS SCHOOL OF MUSIC
Steinway Hall Chicago, Illinois



**Wm. H. WEST'S
BIG MINSTREL JUBILEE**

WATERBURY BROS. & TENNY

AMERICAN
MINSTREL
MUSICAL TRIO

Compare the advertisements and explain which advertisement has more visual appeal.

Image sources:

<https://digitalcollections.nypl.org/items/918ed050-cf4e-0133-59bd-00505686a51c>

<https://picryl.com/media/wm-h-wests-big-minstrel-jubilee-2>

It is evident that image 2 displays a greater appeal because it has a visual representation. Advertisements are visual representations of products. They are designed in a way that it can instantly attract a potential buyer. A successful advertisement makes use of image, colours, captions, layout, font, background, foreground etc. in a judicious way that can communicate the essential features of the product in an effective manner.

Power point presentations also play a similar role. Just like how a visual appeal is created in a well-designed advertisement, so also a visual appeal is created by making use of Power point when presenting content.

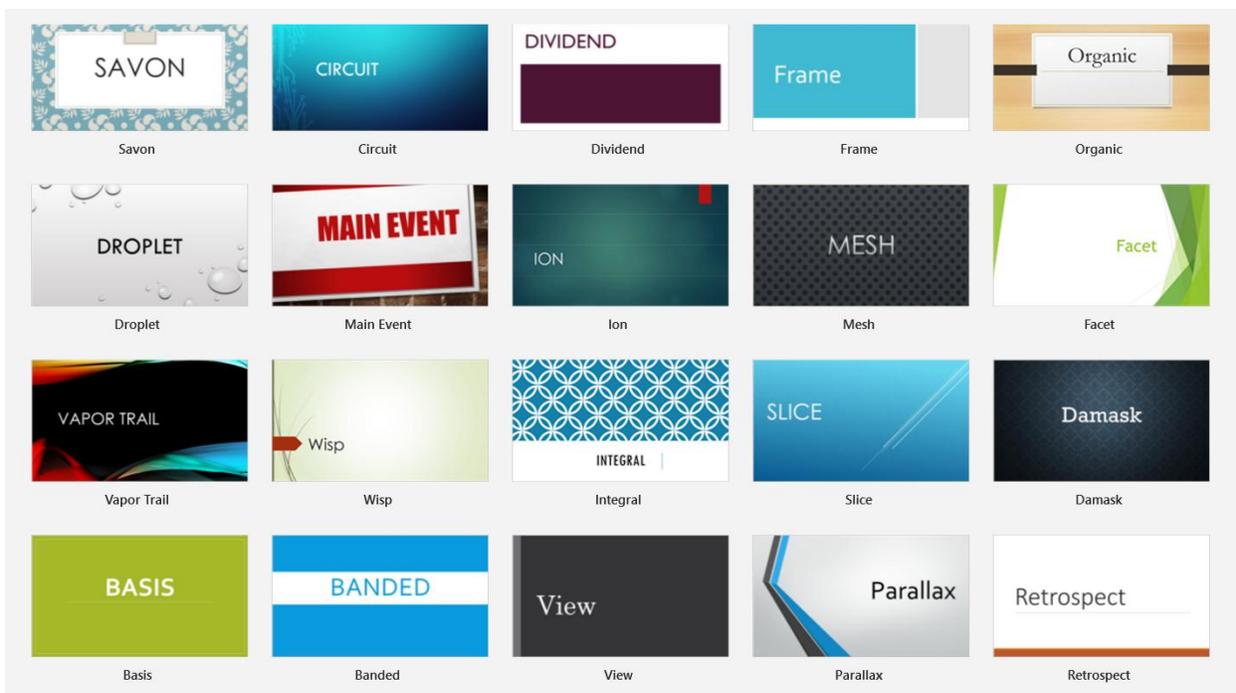
Features of Power Point

Power point can be accessed from Microsoft Office App. 

When you create a new Power Point presentation, there are thousands of themed templates available from which you can choose the one most relevant to the theme of your presentation. In addition to themes, Power Point also provides numerous diagrams and charts as well which will add more visual appeal to your presentation and will also help you to organize your content in a succinct and professional way.

Sample themes, diagrams and charts are presented below.

Themes



Diagrams

← Back

- Multi-color tree diagram
- Plant growth graphic
- Horizontal DNA graphic
- Road builder graphics
- Triple helix DNA graphic
- Underground drill graphic
- Linked chain graphics
- Spiral graphic
- Double helix DNA graphic
- Animated tree growth gra...
- Conveyor belt block graphic
- Animated flower slide
- Multi-color gauge graphics
- Colored block graphics
- Animated scale graphic

Charts

← Back

- Project milestones timeline
- Minimal organization chart
- My family tree
- Infographic resume
- Tech infographic resume
- International infographic...
- Family tree
- Colorful conference prese...
- AccentBox presentation
- Sketch presentation
- Teach a course presentation
- Color-coded organization...
- Horizontal organization c...
- Team organization chart
- Simple organization chart
- Human resources, from 2...
- PowerPoint Graphics Sam...
- Data-driven PowerPoint, f...
- Balanced scorecard, from...
- Dashboard, from 24Slides

Texts, Fonts and Paragraphs

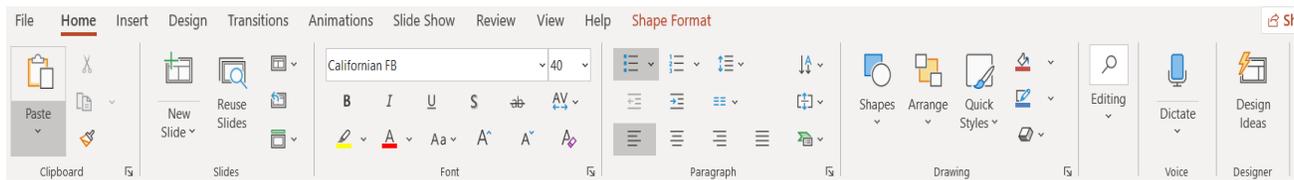
Text Editing: Just like how you can edit (cut/copy/paste) texts in MS Word, so also it is possible to edit texts in the slides

Slides: New slides of various format according to the layout in which you desire the slide to appear can be inserted.

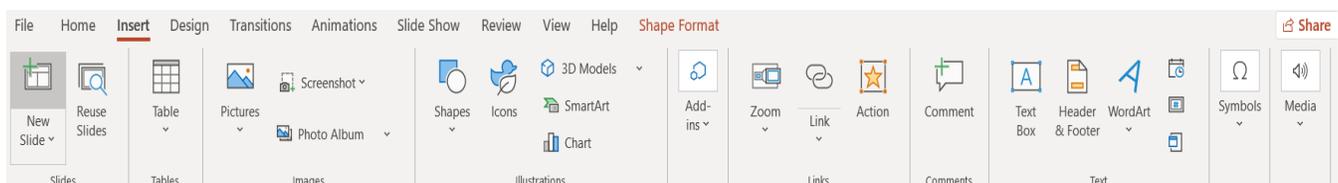
Font: You can apply formatting such as bold, italics, underline, strikethrough, word spacing, font type, size and colour, highlighting text, and capitalization.

Paragraph: Bullets, numbering increasing and decreasing line spacing, indenting texts (left, right, centre, justify), and changing the direction of the texts can be done.

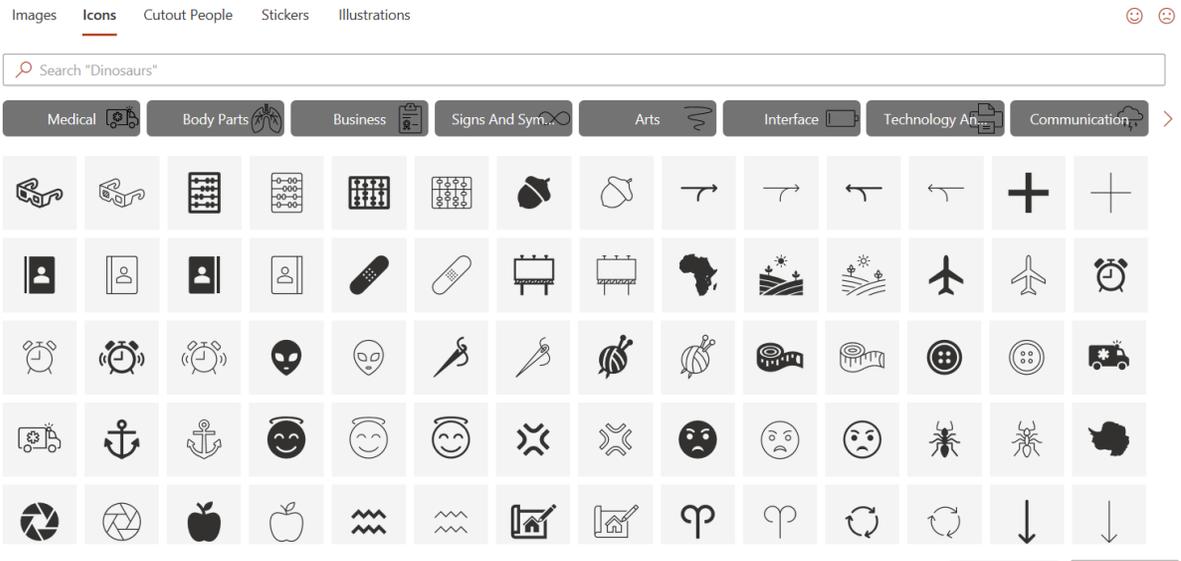
Design ideas: This is a unique feature in the latest version of PPT were the texts you enter in the slides are automatically designed



The **INSERT** option enables you to add more visuals to your slides. You can insert tables, pictures, shapes, icons, 3D models, smart art, charts, add-ons, hyperlinks, comments, text box, Header and footer, word art and symbols.

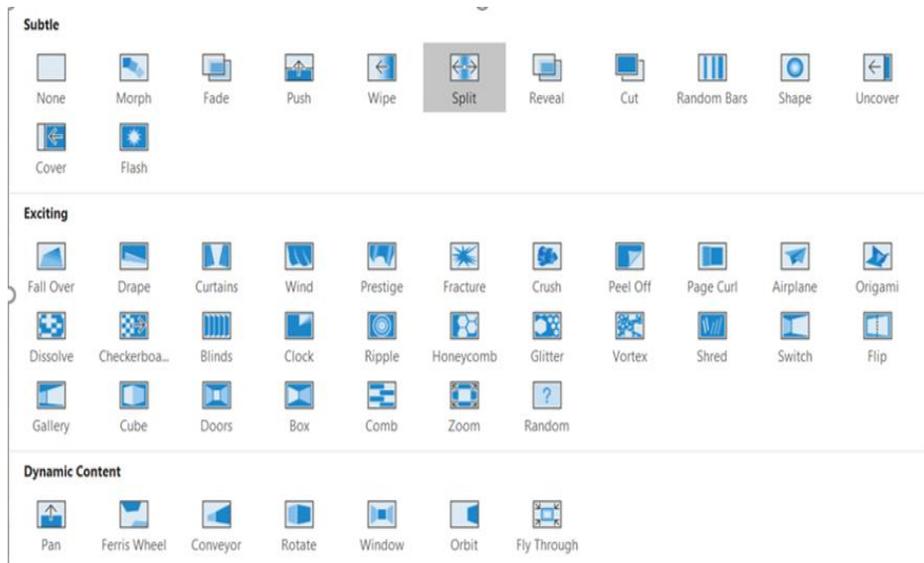


The interesting part is that there are a wide range of items that you can choose from. For instance, the latest version also provides numerous selections of icons which can be used when you are describing specific points in the slides.



Transitions

When navigating from one slide to another, adding transitions will add to the overall effect. But ensure that the transitions are not too jarring to the eyes. There are several smooth transitioning features that you can select from.



Animations

Entrance and exit of points can be animated. If you need to emphasize a point you can add emphasis that can make it stand out.



Slide-Show

The slide show option will enable you to present it in full screen, rehearse timings and use sub-titles. You can also create E-content by using the record option.



Techniques for a captivating presentation

- Images, charts, diagrams, maps etc. communicate more effectively.
- Explain processes using charts
- Use only relevant images which are related to your content
- Limit the words and as the name goes, it is power POINT. Bullet points are sufficient. You need not write elaborate sentences
- Every slide should have a main idea and corresponding ideas in point form
- Too much usage of any feature will look cumbersome, be it colors, font type, animation, or transition
- Ensure that the background and the text are in contrast so that the text appears clear and legible
- Limit the total number of slides and the content in each slide
- There is no one way to prepare and present. Use your creativity and imagination.

Sample Presentation

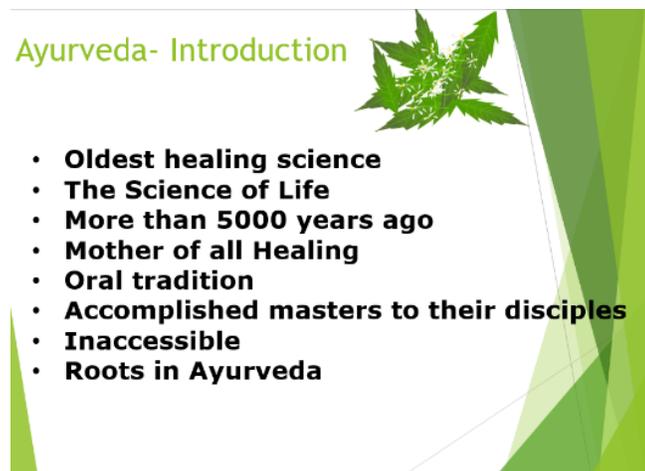
The following is an excerpt from "Ayurveda: A Brief Introduction and Guide" by Vasant Lad. This is the introductory paragraph. The important points that will make up a slide are highlighted.

Ayurveda is considered by many scholars to be the **oldest healing science**. In Sanskrit, Ayurveda means **"The Science of Life."** Ayurvedic knowledge originated in India **more than 5,000 years ago** and is often called the **"Mother of All Healing."** It stems from the ancient Vedic culture and was taught for many thousands of years in an **oral tradition** from accomplished **masters to their disciples**. Some of this knowledge was set to print a few thousand years ago, but much of it is **inaccessible**. The principles of many of the natural healing systems now familiar in the West have their **roots in Ayurveda**, including Homeopathy and Polarity Therapy.

Lad, Vasant. AYURVEDA: A BRIEF INTRODUCTION AND GUIDE. 2006. 2020 12 17.
<<https://www.ayurveda.com/resources/articles/ayurveda-a-brief-introduction-and-guide>>.

In the above content, 8 points are highlighted. You can either have 4 points in two slides (4 points in each slide) or all the 8 points can feature in one slide.

Notice how phrases such as “oldest healing science”, “The Science of Life”, “more than 5000 years ago”, “Mother of all Healing”, “oral tradition”, “accomplished masters to their disciples”, “inaccessible” and “roots in Ayurveda” are highlighted. If these points were to be created as a power point slide it will look something like this.



You must also consider the overall structure of your presentation. Like any piece of writing which has an introduction, a body, and a conclusion, so also a power point must be structured in a way that the ideas are presented seamlessly.

For example, take a look at the following Power Point slides for a presentation on Ayurveda.

The Strategy: Your Constitution and Its Inner Balance

Ayurveda places great emphasis on prevention and encourages the maintenance of health through close attention to balance in one's life, right thinking, diet, lifestyle and the use of herbs. Knowledge of Ayurveda enables one to understand how to create this balance of body, mind and consciousness according to one's own individual constitution and how to make lifestyle changes to bring about and maintain this balance.

Just as everyone has a unique fingerprint, each person has a particular pattern of energy—an individual combination of physical, mental and emotional characteristics—which comprises their own constitution. This constitution is determined at conception by a number of factors and remains the same throughout one's life.

Many factors, both internal and external, act upon us to disturb this balance and are reflected as a change in one's constitution from the balanced state. Examples of these emotional and physical stresses include one's emotional state, diet and food choices, seasons and weather, physical trauma, work and family relationships. Once these factors are understood, one can take appropriate actions to hullify or minimize their effects or eliminate the causes of imbalance and re-establish one's original constitution. Balance is the natural order; imbalance is disorder. Health is order; disease is disorder. Within the body there is a constant interaction between order and disorder. When one understands the nature and structure of disorder, one can re-establish order.

Notice in the content provided above, the phrases underlined in violet are the main headings of the slides. The content highlighted in green are the supporting points. The above content may be designed in four slides as follows:

3

Factors that Disturb Balance

- ▶ Emotional state
- ▶ Diet
- ▶ Food choices
- ▶ Seasons and weather
- ▶ Physical trauma

4

Appropriate Actions

- ▶ Nullify or minimize their effects
- ▶ Eliminate the causes of imbalance
- ▶ Understand the nature and structure of disorder
- ▶ Re-establish order

Balance is the natural order; imbalance is disorder.
Health is order; disease is disorder.

1

Emphasis on Prevention

- ▶ Balance
- ▶ Right thinking
- ▶ Diet
- ▶ Lifestyle
- ▶ Use of herbs
- ▶ Balance of body, mind and consciousness
- ▶ Make lifestyle changes

2

Pattern of Energy

- ▶ Physical, mental and emotional characteristics
- ▶ Determined at conception
- ▶ Remains the same throughout one's life.

You may observe the following in the above slides:

- Simple design
- Colour theme according to the central topic of Ayurveda
- Similar pattern repeated in all slides
- Words and/or phrases are used as points
- Heading is in a different colour and is emphasized
- Slide 4 has a sentence that is highlighted. Important quotes may be highlighted in this way

Now that you have an idea of how to prepare a power point presentation, complete the following tasks as instructed.

Task 1

Read the following passage. This passage is an excerpt from the same content provided so far about Ayurveda. You may follow these steps:

Step 1: Read the passage

Step 2: Identify the main idea in each paragraph

Step 3: Identify the supporting ideas under each main idea

Step 4: Look for visuals that can be incorporated

Step 5: Structure the main ideas and supporting ideas in various slides

Step 6: Add transition and animation

Step 7: Rehearse the timing to see if you can complete it within 5 minutes

Step 8: Present your slides in class

Balancing the Three Principal Energies of the Body

Ayurveda identifies three basic types of energy or functional principles that are present in everyone and everything. Since there are no single words in English that convey these concepts, we use the original Sanskrit words vata, pitta and kapha. These principles can be related to the basic biology of the body.

Energy is required to create movement so that fluids and nutrients get to the cells, enabling the body to function. Energy is also required to metabolize the nutrients in the cells, and is called for to lubricate and maintain the structure of the cell. Vata is the energy of movement; pitta is the energy of digestion or metabolism and kapha, the energy of lubrication and structure. All people have the qualities of vata, pitta and kapha, but one is usually primary, one secondary and the third is usually least prominent. The cause of disease in Ayurveda is viewed as a lack of proper cellular function due to an excess or deficiency of vata, pitta or kapha. Disease can also be caused by the presence of toxins.

In Ayurveda, body, mind and consciousness work together in maintaining balance. They are simply viewed as different facets of one's being. To learn how to balance the body, mind and consciousness requires an understanding of how vata, pitta and kapha work together. According to Ayurvedic philosophy the entire cosmos is an interplay of the energies of the five great elements—Space, Air, Fire, Water and Earth. Vata, pitta and kapha are combinations and permutations of these five elements that manifest as patterns present in all creation. In the physical body, vata is the subtle energy of movement, pitta the energy of digestion and metabolism, and kapha the energy that forms the body's structure.

Vata is the subtle energy associated with movement — composed of Space and Air. It governs breathing, blinking, muscle and tissue movement, pulsation of the heart, and all movements in the cytoplasm and cell membranes. In balance, vata promotes creativity and flexibility. Out of balance, vata produces fear and anxiety.

Pitta expresses as the body's metabolic system — made up of Fire and Water. It governs digestion, absorption, assimilation, nutrition, metabolism and body temperature. In balance, pitta promotes understanding and intelligence. Out of balance, pitta arouses anger, hatred and jealousy.

Kapha is the energy that forms the body's structure — bones, muscles, tendons — and provides the "glue" that holds the cells together, formed from Earth and Water. Kapha supplies the water for all bodily parts and systems. It lubricates joints, moisturizes the skin, and maintains immunity. In balance, kapha is expressed as love, calmness, and forgiveness. Out of balance, it leads to attachment, greed, and envy.

Life presents us with many challenges and opportunities. Although there is much over which we have little control, we do have the power to decide about some things, such as diet and lifestyle. To maintain balance and health, it is important to pay attention to these decisions. Diet and lifestyle appropriate to one's individual constitution strengthen the body, mind and consciousness. Give a passage. Let them prepare slides based on the info in the passage.

Task 2:

Prepare a video either with PowerPoint or using ScreenO'matic software for 5 minutes. You can use the same content as above and the slides you had prepared for the previous task.

PRODUCT DESCRIPTION

Pre task:

Get into groups of two. Ask the following questions to each other.

Are you familiar with online shopping?
From how many sites have you purchased items?
How do you choose a product when you shop online?
What are the advantages and disadvantages of online shopping?

Have a discussion based on the above questions in groups of two and summarize your points. One of you may share it to the class.

Why is Product Description important?

Product description is like a heart-to-heart connect that the advertisers try to establish with potential customers. In this era of consumerism, people are looking for the most trending, most useful yet cost effective product. Many resources are spent in market analysis, product design and manufacturing. Despite all the efforts spend in creating it, if the product is not sold, then all previous efforts are in vain. That is why companies invest a substantiate amount in advertising.

What is the format of a product description?

Consider the following description of the product Oziva Plant Protein. This is found in the product website <https://www.oziva.in/collections/protein-shakes/products/oziva-superfood-plant-protein-finest-vegan-clean-protein-powder-with-plant-protein-ayurvedic-herbs-multivitamins-for-everyday-fitness>



OZiva Superfood Plant Protein with Ayurvedic Herbs & Multivitamins for boosting Immunity & Energy, Soy Free

★★★★★ 74 reviews

One Time Purchase
₹699

Size: 250 gm (16 servings) | Flavour: Coco Vanilla

Subscribe & Save

100% Authentic

Easy Returns

For better safety, we recommend that you opt for online payments to minimize contact at delivery.

An image of the product placed alongside the name of the product and its most unique features “OZiva Superfood Plant Protein with Ayurvedic Herbs & Multivitamins for Boosting Immunity & Energy, Soy Free.”

You can see that the product has a 5-star rating. Its cost, size with details of the number of servings, flavour and the fact that it is authentic and can be returned is also highlighted.

The description doesn't stop there. After having highlighted the most important selling features of the product there is a brief description of the features in a greater detail. The heading “Why Is It A Must Have” surely will draw readers towards it.

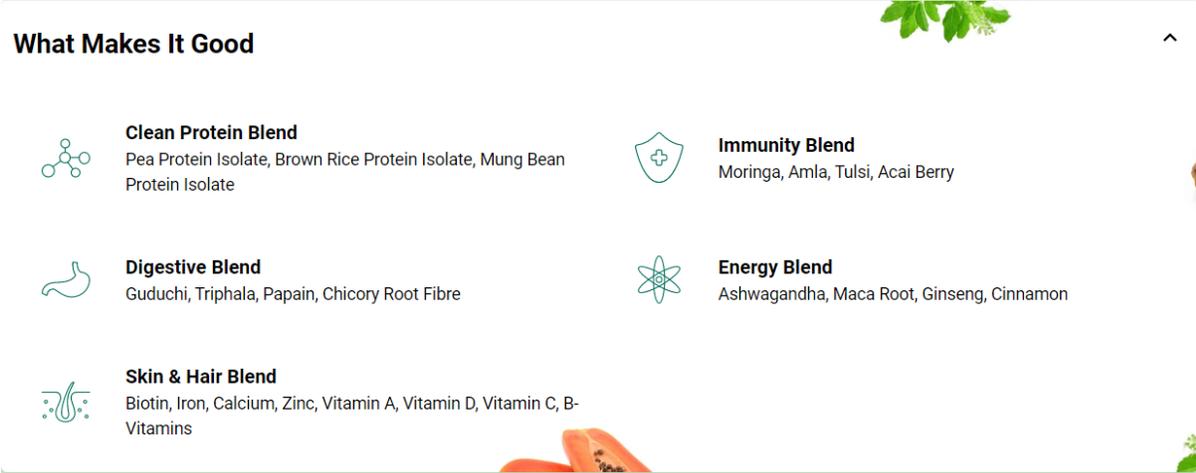
Why Is It A Must Have

OZiva Superfood Plant Protein combines essential amino from Pea Protein Isolate, Brown Rice Protein Isolate, and Mung Bean Protein Isolate to provide holistic health, better energy, and immunity.

- ✓ 20g of Complete Protein, 15 essential Vitamins, and Minerals per serving of Superfood Plant Protein.
- ✓ 100% Vegan-friendly Protein blended with standardized herbal extracts for daily nutrition and fitness.
- ✓ Provides better energy and immunity with specially designed Ayurvedic Herbs blend consisting of Ashwagandha, Maca Root, Amla, Tulsi, etc.
- ✓ Enhances digestion and absorption with Digestive enzymes and herbs.
- ✓ Promotes younger skin and healthier hair with essential Multivitamins like Biotin, Iron, Zinc, Vitamin A, Vitamin D, Vitamin C, B-Vitamins.
- ✓ Soy-free, no trans fat, non-GMO, no artificial sweetener, 0g added sugar.
- ✓ Free diet consultation with nutritionists.

*Results may vary as per the individual's diet and workout

After this, there is another format in which the product features are further reinforced. But this time it is not descriptive sentences. Using icons to represent points is a new design format.



Thus, by saying that it is a must have, the product has created an artificial crisis in the mind of the potential customer. By continuing to explain what makes it good has compensated for the fear of lacking something had created. In other words, creating a need by promoting a lack or a void and then coming up with the solution that the product has to offer is the typical emotional roller-coaster that any product description would take you through. Therefore, it is not more about what you say about your product than how you say it.



In adding components of what makes it better, they have summed up the vitals that fitness lovers look for- vegan, non-GMO, Gluten free, Soy free, No added sugar and No added preservatives. It looks like a dream product for those who are on their path of fitness routines.

One may wonder how to use the product. Is it complicated? In the huge rush to work will one have the time to use this product daily? To address this the usage of the product is explained in one simple step. The product can be mixed or blended. Either ways it is simple to be consumed.

How to Enjoy

Direction to use



1. Mix 1/2-1 scoop in 200 ml of water



2. Shake well or use a blender to mix. Enjoy it!

To make the potential customers feel special the best part is explained last: exclusive benefits. This point will close the deal. The potential customer has already clicked the buy button and in on the way to complete a purchase.

Exclusive Benefits

Once you have purchased the product, you get access to all OZiva Prime Benefits. All you need to do is authenticate your purchase by using the Auth-Code that you receive inside the product.



What You Get



Diet Plan



OZiva Merch

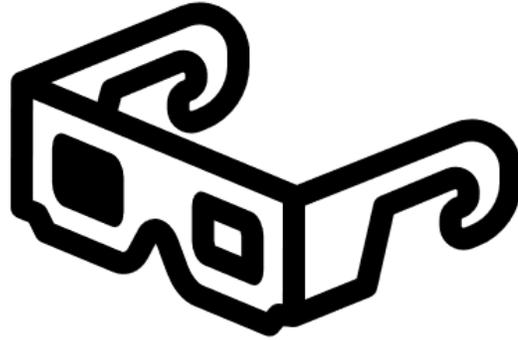


Expert Guidance

To sum up, a typical product description would have the following features:

- An attractive image of the product
- Name of the product with its most unique features
- Display of basic product specifications
- Detailed description of the product features
- Highlighted points of the product features
- Common yet important features of the product
- Exclusive benefits/ product discounts/ coupon codes etc.

Task 3:



Based on this image answer the following Wh questions using your own imagination about the product.

1. Who will use this product?
2. What are the specifications of this product?
3. Where can this product be used?
4. When can this product be used?
5. Why is this product useful or better than other products in the market?

Note down the answers and based on the answers can you tell a story? The story should be brief. Share your story with the class.

Task 4:

Read the following product description. Can you identify the special features of this product? Can you add more features to it? Design a poster in an A4 sheet describing the features in the way OZiva product was described. Creating an image is optional.

Genestra Brands – HMF Forte
Average Cost: \$38.00 [60 Pills, twice daily]
NON-GMO, DAIRY FREE, GLUTEN FREE, SOY FREE

This product received Innovative Medicine’s highest score probiotic and continues to be the supplement recommended in house for many of our patients. It boasts strong adherence to intestinal cells, improving the likelihood of successful colonization. Many have reported almost immediate reduction of gastrointestinal discomfort and no uncomfortable stomach effects immediately swallowing.

With 10 Billion CFUs per serving and containing 4 comprehensive probiotic strains, HMF Forte tosses out fancy fillers for simply effective. This probiotic is trusted among many integrative doctors, including the New York Center of Innovative Medicine’s own practitioners. Its quality ingredients make HMF Forte vegan-friendly and maintain an affordable supplement to your gut health.

Strains included: Lactobacillus acidophilus (CUL-60), Lactobacillus acidophilus (CUL-21) Bifidobacterium bifidum (CUL-20), Bifidobacterium animalis subsp. lactis (CUL-34)

Hah from Colorado noted it helped his Crohn’s symptoms, stating, “HMF Forte keeps me running strong.”

HMF Forte Probiotics - Innovative Medicine

CIRCULAR

Pre-task:

Consider the following channels of communication. Write the various possibilities that each channel of communication has. You may select from the following list and write it in the space provided

Send messages, video chat, voice call, send images, send files, multi-media, social media, browsing, entertainment

Which is the fastest way to communicate? Group the communication channels into fast and slow.



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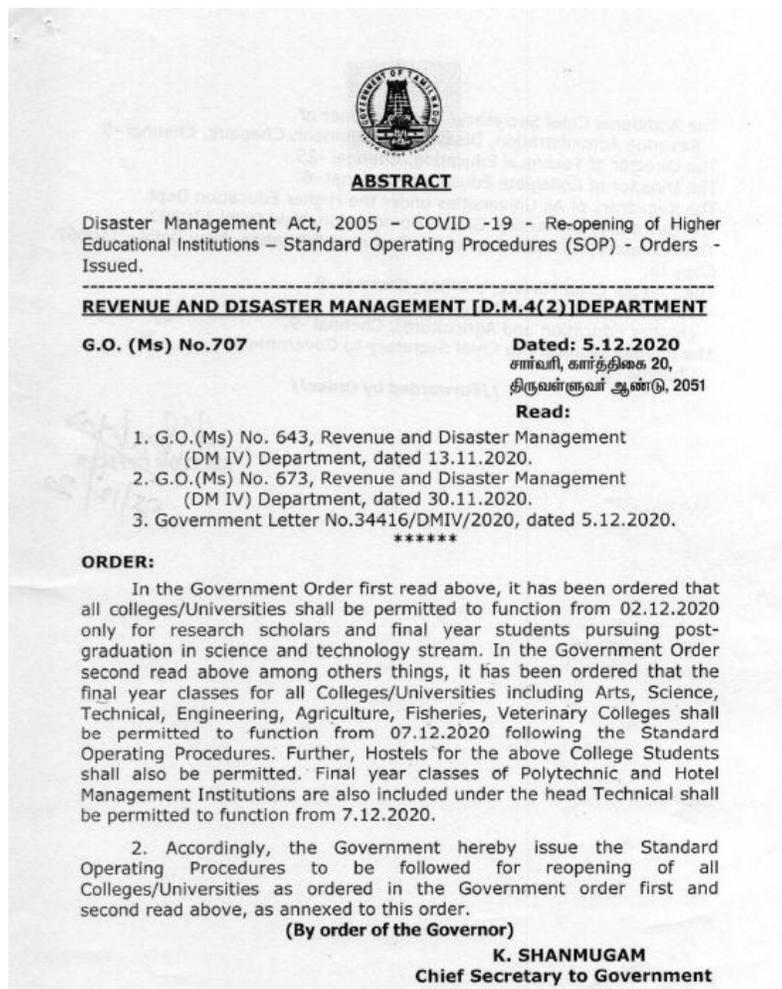


As you have listed, any communication that is digital, is faster and includes multiple features. You can explore the whole world with a smart phone. But in a professional context, it is important to be very clear, concise, precise, accurate, exact, and objective when important information is conveyed. There is no allowance for miscommunication in a professional space. Miscommunication can be costly and may also determine profit or loss for an organization. It can lead to multiple interpretations and employees

performing in different ways leading to various unprecedented outcomes. Damage control at this level may lead to utilizing resources which could have been used to enhance productivity.

Although it might look outdated or slow, CIRCULARS are an effective way to exact communication that will ensure the details in the information provided are not lost in transmission. Take for example the messages you constantly communicate via whatsapp or messenger. Have you not encountered multiple instances where you were misunderstood despite having typed elaborate texts? Therefore, in professional contexts, circulars are used in order to ensure that misunderstandings and misinterpretations or distortion of facts are avoided.

Look at this sample circular. The following circular was obtained from this link: https://www.tn.gov.in/go_view/dept/26



Note the use of passive voice to make the information objective and sound professional. Notice the reference made to two GOs and one Letter while mentioning the streams and educational institutions with reference to two previous communications.

The phrases that are commonly used in a circular as seen in the above example are as follows:

- "first read above"- reference to previous information
- "it has been ordered"- use of present perfect continuous
- "From 02.12.2020"- the exact date is mentioned
- "Accordingly, the Government hereby issues"- formal language
- "As ordered in the Government order first and second read above"- reference to two previous orders is reiterated. Repeating information will avoid ambiguity

This is a crucial circular regarding the reopening of educational institutions during the COVID19 situation in 2020. Colleges, universities, and streams are reopening in a phased manner. This circular conveys the information that Standard Operating Procedures must be followed while reopening the institutions. At a time when thousands of students and faculty are concerned about the course of their education, such a circular is timely and will quench doubts, fears, and apprehension regarding the reopening. Circulars are thus very important without which the employees and major stakeholders will not have the right information to pursue towards the right directions for their actions and decisions.

Task 5

Read the following circular and list the important information conveyed.

SCHOOL FEE CIRCULAR

Dear Parent,

In order to facilitate payment of School fee, DPS Society is introducing online school fee collection through net banking, RTGS/NEFT, Debit / Credit cards. The DPS Society has also successfully launched a Mobile application for collecting school fees. Fee is also being collected offline at fee counter (Saket) for the parents who wish to pay through account payee cheque.

1. Online Payment: Payment can be made through Credit/Debit Card/Net Banking with No extra charges by logging in to our website www.dpsi.ac.in . Click on "Pay Fee Online" > put admission number in the admission no box > Click "Get Details" > Check mark on Month / Quarter > click on pay now. Register your email ID with "PayUMoney" (the payment gateway). Create a password to track your transaction and find out all payment history with PayUMoney and click "Continue". Now PayUMoney redirect you to your banker for payment then follow the instruction.

To get receipt of your previous payments: Logon to our website www.dpsi.ac.in . Click on "Pay Fee Online" > put admission number in the admission no box > Click "Get Details" > Click on "Fee Received" button and print your receipt.

2. Mobile app: To download the mobile app, go to Google Play Store (for Android) or I-Tune Store (for IOS) or Microsoft Store (for Windows). Search for "DPS Connect" and download/install.

Payment through Mobile app: Open application > Select School "DPS International" > Select "OK". First time you need to register your mobile number against the admission number of your ward. After registering your mobile number, put the registered mobile number and click "Search". Select the name of the student for whom you want to make payment and click "Get Details" > Check mark on Month / Quarter > click on "Check Out" > Click "Pay Now". Register your email ID with "PayUMoney" (the payment gateway). Create a password to track your transaction and find out all payment history with PayUMoney and click "Continue". Now PayUMoney redirect you to your banker for payment then follow the instruction.

3. RTGS & NEFT:- Payment to be made in 12 digit A/C No.VADPSSI0<admission no.> (Please note that the 8th character is numeric "Zero"), IFS CODE: RATN0000141,NAME OF THE BANK:- RBL BANK (The Ratnakar Bank)

4. Electronic Cheque Dropbox: - Parents who wish to pay through account payee cheque can deposit in the Electronic Cheque Dropbox placed at fee counter, Saket only except Saturday, Sunday and Gazette Holidays. Please note that cheques will not be accepted at R K Puram. Cheque/Demand Draft / Pay order to be made in favour of "DPS International< Admission No.>". Write Admission No., Name, Class, Contact No. on the reverse of the Cheque. Outstation Cheques and Cash will not be accepted.

Note: For problems related to the fee process contact Mr Sashibhusan Nayak – Accountant. The contact details are:
Fees Department: email ID is dpsi.fees@gmail.com, Phone no.29564889 / 29561187, Extn.- 229
School email ID is dps111@gmail.com

Principal

Source:
https://www.dpsi.ac.in/dpsinternational/UserSpace/UserName/rkpadmin/DynamicFolder/RKP%20NEW%20HOMEPAGE/circular/SCHOOL%20FEE%20CIRCULAR_15.html

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Task 6

Imagine you are the principal of your college. Based in the following information, draft a circular that must be sent to the faculty and students.

- 1. Heavy rain
- 2. Power failure
- 3. Online exam postponed
- 4. Subject: Professional English Course
- 5. Original date of exam: 15.12.2021
- 6. Rescheduled date of exam: 19.12.2021

Write the draft in the space provided

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MINUTES OF MEETING

Pre task:

You must be familiar with the acronyms used in text messaging and internet and such as “OMG” (Oh My God), “LOL” (Laughing Out Loud) “ROTFL” (Rolling on the Floor Laughing) etc. Can you guess the expansion of the following acronyms?

- | | |
|------------|-----------|
| ASAP | EOD |
| IDK | FAQ |
| IDC | TBA |
| BRB | TBC |
| BFF | OT |
| BTW | NA |

Source: <https://www.smart-words.org/abbreviations/text.html> You can refer to this webpage to get more interesting acronyms which you can use in your day to day text messaging and Internet communication.

Acronymns are used in contexts where a shorter version is required so that the focus can be on the other facts and information communicated. When we receive a message from another person, our mind processes the most vital inputs and accordingly prepares the body to react. Dangerous situation that requires flight, fright and fight responses are impulses directed by the minimum information that is processed. It is like the brain telling you “There is a fire, RUN” instead of “There is a fire, see how brightly it burns, wonder how hot it must be, what are the things that it could possibly destroy”. For our own survival evolution has wired our brains to assess situations and respond instantly.

Minutes of a meeting is a written document that records such vital information that happens in a controlled environment. It is a professional document that is empowered with validity, credibility, and sustainability such that any discrepancies in an organization about decisions taken may be sorted out in referring to the minutes. It is an acceptable document by the court of law when it comes to legal disputes.

Since the minutes of meeting is almost a legal document that is filed and circulated among the members who participated in the meeting, care is taken to format it in the right manner and to record the meeting as accurately as possible. Every organization may have its own policies, templates, or requirements about the minutes. Sometimes the final draft needs to be approved by members to be documented. All of these make the Minutes of Meeting an important and essential document.

Preparing for the meeting

Before the meeting commences, learn about the agenda of the meeting. Having a copy of the agenda as a template will be easier to organize the minutes after the meeting. Also have a list of participants and the list of those who are present in-absentia.

During the meeting

Even before the meeting starts, make a note of those participants who have arrived. Keeping the template with you will be easier for noting down minutes.

Note down key points of discussion and action taken. Unless it is very relevant you must not record every word stated by others. During disputes note down those who had disapproved of an action along with their reason. If need be use acronyms and avoid writing full sentences.

After the meeting

It is important to draft the minutes as soon as the meeting is over. The points of deliberations will be freshly remembered and can be recorded accurately. In some contexts, you might need to get the minutes approved before it is circulated among the members. The approving authority can be the chair of the meeting or the CEO or a few members from the board.

Format and proceedings of a meeting

The diagram illustrates the format and proceedings of a meeting, using a sample agenda from Love Douglas Baseball as a reference. The agenda items are listed as follows:

- Love Douglas Baseball
ANNUAL GENERAL MEETING
- 10:00 a.m. SATURDAY, AUGUST 31, 2013
- 5436 Chestnut Crescent, Ladner, BC, V4K 1J4
- AGENDA**
- A. Call to order
- B. Welcome
- C. Acceptance of the Agenda
- D. Approval of the Minutes
- E. President's Report
- F. Treasurer's Report
 - Approval of Financial Statement 2012/2013
 - Confirmation of preparer of Financial Statement for 2012/2013
- G. Introduction of the 2013/2014 Executive Board
- H. Other business
- I. Adjournment

Callouts and annotations include:

- Name of Organization**: Love Douglas Baseball
- Meeting Title**: ANNUAL GENERAL MEETING
- Time, Day, Date**: 10:00 a.m. SATURDAY, AUGUST 31, 2013
- Address/Venue**: 5436 Chestnut Crescent, Ladner, BC, V4K 1J4
- Opening remarks by the Chair & Welcome**: A. Call to order, B. Welcome
- Approval of previous agenda and minutes**: C. Acceptance of the Agenda, D. Approval of the Minutes
- Any other business or issues discussed**: H. Other business
- Main activities**: E. President's Report, F. Treasurer's Report, G. Introduction of the 2013/2014 Executive Board
- You must note down the time when the meeting was adjourned. Also the date and time for the next meeting will be decided.**: I. Adjournment

Additional notes include: "This will be followed by business arising from the minutes" and "love.douglasbaseball.com".

Image
Source: <https://in.pinterest.com/pin/827255025293911484/>

Another sample of Minutes of Meeting

Ethics Committee Meeting Minutes - *Approved*

Date: April 25, 2011

The meeting began at 7 pm in the Town Hall Conference Room.

Members attending: Richard Rubenstein, Joan Landzberg, Laurie Noonan, Robert Garofalo, Ira Forman

Non-voting member/Ethics Board Counsel attending via conference call: Jeannette Koster

1. Regular Business:

- a. The minutes of the March 03, 2011 minutes were distributed.
- b. Attendance was noted.

2. President's Comments:

- a. Richard discussed the Public Hearing scheduled to be held during the upcoming Town Board Meeting. Topics for each Committee member to present at the meeting were suggested.
- b. The Committee agreed that Richard will address the issue of gatekeeper, Bob will address the Disclosure Form, Laurie will review the Mission Statement and commentary prepared by Joan and Ira will address recordkeeping and privacy concerns expressed by various board

3. New Business:

- a. Jeannette indicated that changes to the Amendments to the Code of Ethics have been made to address Committee Chairs and members who are required to complete the Disclosure Form. Points of discussion:
 - i. Committees that don't set policy or have decision-making authority should be removed from the revised list of committees that are required to complete the Disclosure Form.
 - ii. The Affordable Housing and Community Housing Board members should be added to the list.
 - iii. Other committees that should be considered for addition to the list include:
 1. Group Home Committee
 2. Senior Citizens Advisory Committee
 3. Planning Approval Review Committee

4. Next Steps:

- a. The agenda for the next Ethics Committee meeting was discussed. Joan agreed to develop proposed internal operating procedures for the Committee. Bob indicated that he would work on suggested guidelines for handling ethics-related complaints.
- b. The Committee members agreed to schedule the next meeting after the upcoming Town Board Meeting and Work sessions. The next meeting is tentatively scheduled for June 6th at 8pm.

The meeting adjourned at 8:00 pm.

Source of the template:

https://www.yorktownny.org/sites/default/files/fileattachments/town_clerk/meeting/1105/ethics_board_minutes_-_042511_-_approved.pdf

The following template for Minutes of Meeting is available in Microsoft word. However, it is good to learn about the templates and/or format expected or available in your respective organization.

Meeting Title | MINUTES

Meeting date	<i>time Date Time Meeting location Location</i>
Meeting called by	Name Attendees
Type of meeting	Purpose Attendees
Facilitator	Name
Note taker	Name
Timekeeper	Name

AGENDA TOPICS

Time allotted	<i>Time Agenda topic Topic Presenter Name</i>
Discussion	Conversation
Conclusion	Closing

Action items	Person responsible	Deadline
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Time allotted	<i>Time Agenda topic Topic Presenter Name</i>
Discussion	Conversation
Conclusion	Closing

Action items	Person responsible	Deadline
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Time allotted	<i>Time Agenda topic Topic Presenter Name</i>
Discussion	Conversation
Conclusion	Closing

Action items	Person responsible	Deadline
Topic 1	Presenter Name	Date time
Topic 2	Presenter Name	Date time

Task 7:

Imagine you are taking down minutes of Students Union meeting. The topic is how to organize the College Cultural Festival during the ongoing pandemic. The points of discussion could be date, time, venue, online and offline competitions, Standard Operating Procedures (SOPs), budget, sponsorship, PA system, Food and hospitality, decorations, Guests etc. Using the above template prepare Minutes of Meeting and submit it. You may modify this template according to the needs of the meeting.

Task 8:

Watch a YouTube video of a sample Board Meeting. Take down the minutes according to the format of the proceedings.

The link is given below:

<https://www.youtube.com/watch?v=WBXJEJCsULw>

SUMMARY AND PARAPHRASE

Pre task:

The following image captures a crucial part of Ramayana, the Great Indian Epic.



Write one sentence about this image:

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Write about the events related to this image in five sentences:

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The pre-task that you just did shows how one image can be expressed in one sentence and in many sentences. Knowing how to compress ideas into one sentence or a paragraph and to explain ideas in your own words is an essential writing skill which will be very useful in several forms of writing such as: project reports and proposals, formal letters, product description, introductions, and in writing academic research papers.

Read the following article on "Scientific Contributions or Glories of Ancient Tamils. *This article was written by Kandiah Thillaivinayagalingam (Disclaimer: The views expressed are the views of the author Kandiah Thillaivinayagalingam).*

1

In the time of William Shakespeare, there were commonly reckoned to be five wits or five senses. At that time, the words "sense" and "wit" were synonyms, so the senses were known as the five outward wits. This traditional concept of five senses is common today, and Extrasensory perception is often called the sixth sense.

2

The traditional five senses are enumerated as the "five material faculties" (pañcannaṃ indriyānaṃ avakanti) in Buddhist literature. They appear in

allegorical representation as early as in the Katha Upanishad (roughly 6th century BC), as five horses drawing the "chariot" of the body, guided by the mind as "chariot driver".

3 Depictions of the five traditional senses as allegory became a popular subject for seventeenth-century artists, especially among Dutch and Flemish Baroque painters. A typical example is Gérard de Lairesse's *Allegory of the Five Senses* (1668), in which each of the figures in the main group allude to a sense: Sight is the reclining boy with a convex mirror, hearing is the cupid-like boy with a triangle, smell is represented by the girl with flowers, taste is represented by the woman with the fruit, and touch is represented by the woman holding the bird.

4 Ancient Tamil Literature, *Tholkappiyam* is said to be the first written text in the world to describe six senses which related to external body parts. While the exact date of the *Tholkappiyam* is not known, based on linguistic and other evidence, it has been dated variously between the 5th century BCE and the 3rd century CE. While our sensory organs are capable of perceiving information only within the very narrow bandwidth of the particular sense, the mind is where the various perceptions come together to form a consensus of the truth. The individual senses of a person are incapable of knowing the absolute truth. It is impossible to simply touch a surface and know what it is made of. We can perceive, by touch, its surface irregularities, whether it is soft or hard, and a relative indication of its temperature. We can tap on it, and in hearing the sound, determine that perhaps it is metal or glass if it is thin enough to send a true indication, but a sheet of glass that is 2-inches thick cannot be perceived as glass without sight. We need multiple sensory perceptions to be fed to the mind to assist in determining the truth. We hear a sound that may be lightning, a gunshot, or something hitting another thing. In most cases it is extremely

difficult to ascertain the truth from a single instance of sensory perception. we must use our other senses and are mind to better discern the truth. The "oldest Tamil work on grammar, poetics" was the Tolkappiyam. The Tolkappiyam considers all native elements, especially all animate beings, as part of a continuous series graded by degrees of sentience. One of its verses says :

"beings with one sense are those that have the sense of TOUCH.

Beings with two senses are those that have the sense of TASTE along with the above.

Beings with three senses have sense of SMELL in addition.

Beings with four senses have sense of SIGHT, along with the above.

Beings with five senses have sense of HEARING, in addition.

The beings with six senses, have a MIND, along with the above."

Tholkappiyam, does not stop with this classification alone, it's also gives examples of beings in each of these classifications. For example: senses Grass (Pul) and Trees (Maram) have single sense, that is the sense of touch. Similar beings also form part of this branch (kilai). Snails (Nandhu) and Oysters or Molluscs (Mural) have two senses, the sense of touch and taste. Similar beings also form part of this branch (kilai) Termites (Sidhal) and Ants (Erumbu) have three senses, the sense of touch, taste and smell. Similar beings also form part of this branch (kilai). Crabs or Crustaceans (Nandu) and Dragonfly or Beetles (Thumbi) have four senses, the sense of touch, taste, smell and vision. Similar beings also form part of this branch (kilai). Horses, Elephants, Pigs (Maa) and Other similar animals and birds (Maakkal) have five senses, the sense of touch, taste, smell, vision and hearing. Similar beings also form part of this branch (kilai). Only humans have six senses, the sense of touch, taste, smell, vision, hearing and mind. Similar beings also form part of this branch (kilai).

6

Sixth sense, or subtle perception ability, is our ability to understand the subtle cause and effect relationship behind many events, which is beyond the understanding of the intellect. Extrasensory perception (ESP), clairvoyance, premonition, intuition are synonymous with sixth sense or subtle perception ability. Tholkappiyam is said to be the First in the world to describe the sixth sense which related to external body parts. Tholkappiyam verses explanation above is truly an amazing classification and proves that our Tamil ancestors not only an expert in literature and grammar, but obtained higher spiritual knowledge that is progressively of more universal need and of lasting importance in terms of a time span of centuries.

7

There are some errors in his above classifications, Considering the time or period he made these classifications. We can understand these mistakes. For example, beetles have no nose, they use their antennae to smell things. Similarly, Snails are strange-looking creatures with shells and large stalks sticking out of the tops of their heads. Because most snails are small, it can be difficult to see their primary features. However, snails do have eyes and vision, though the exact location of the eyes and their use depends on the specific type of snail. Snails don't rely on sight as much as humans, but it's still one of their senses.

Source: <http://www.ttamil.com/2017/07/scientific-contributionsor-glories-of.html>

A summary contains a gist of a larger content. Any type or genre of text can be summarized. An action that is witnessed live in the cricket stadium is summarized by the commentator in various instances. A person caught speeding summarizes his predicament to the police who will not perhaps listen to elaborate details. A doctor would require you to summarize the details of your ailment as many other patients are waiting with similar if not more ailments. When you are asked the question “tell us something about yourself” although you might have had several years of experience and skills

unmatched, yet you have to summarize and express your best in a minute or two.

The purpose of a summary is to present the best or the essence of the substance in as brief a manner as possible. Care should be taken that the most important information is included in a summary. The challenge is not only to include the essential information but also to ensure that the bits and pieces that are combined make sense.

A summary is also like a big picture or a bird's eye view of the entire content. It will make sense to go through a summary of a document rather than to peruse word for word if there is a time constraint.

Technique to write a good summary:

- Read the entire content and understand it completely
- Identify the core or the theme of the content
- Draw a concept map of the theme and how it is connected to various other themes
- The key words in the concept map should be a part of your summary
- Understand the author's perspective and conclusion.
- Connect the dots and write it all in your own words.

Example of a summary

1 In the time of William Shakespeare, there were commonly reckoned to be five wits or five senses. At that time, the words "sense" and "wit" were synonyms, so the senses were known as the five outward wits. This traditional concept of five senses is common today, and Extrasensory perception is often called the sixth sense.

2

The traditional five senses are enumerated as the "five material faculties" (pañcannaṃ indriyānaṃ avakanti) in Buddhist literature. They appear in allegorical representation as early as in the Katha Upanishad (roughly 6th century BC), as five horses drawing the "chariot" of the body, guided by the mind as "chariot driver".

The traditional concept of five senses common during the time of William Shakespeare which is called five material faculties in Buddhist Literature appear in the Katha Upanishad.

Task 9

Read the above passage and answer the following questions.

1. What is the central idea of the passage?
2. What are the supporting ideas?
3. What is the conclusion?

After having identified the answers to the above questions, write it in a paragraph. What you have is a summary.

A paraphrase is aimed at providing all the information in a content in your own words. It is like explaining a movie in detail to your friend who wants to know everything that happens in a movie before watching it. You may not repeat all the dialogues that appeared in the movie in the exact same way. You will narrate the movie in your own words. A paraphrase serves similar purpose. It is a humble way of saying that the content that you are refereeing to is not written by you. It is to acknowledge that the author of the content is someone else.

Paraphrasing will therefore include all the details in your own words. In case there may be sentences or phrases that need to be included as it is, they can be used within quotations.

Example of a paraphrase

4 Ancient Tamil Literature, Tholkappiyam is said to be the first written text in the world to describe six senses which related to external body parts. While the exact date of the Tholkappiyam is not known, based on linguistic and other evidence, it has been dated variously between the 5th century BCE and the 3rd century CE. While our sensory organs are capable of perceiving information only within the very narrow bandwidth of the particular sense, the mind is where the various perceptions come together to form a consensus of the truth. The individual senses of a person are incapable of knowing the absolute truth. It is impossible to simply touch a surface and know what it is made of. We can perceive, by touch, its surface irregularities, whether it is soft or hard, and a relative indication of its temperature. We can tap on it, and in hearing the sound, determine that perhaps it is metal or glass if it is thin enough to send a true indication, but a sheet of glass that is 2-inches thick cannot be perceived as glass without sight. We need multiple sensory perceptions to be fed to the mind to assist in determining the truth. We hear a sound that may be lightening, a gunshot, or something hitting another thing. In most cases it is extremely difficult to ascertain the truth from a single instance of sensory perception. We must use our other senses and our mind to better discern the truth. The "oldest Tamil work on grammar, poetics" was the Tholkappiyam. The Tholkappiyam considers all native elements, especially all animate beings, as part of a continuous series graded by degrees of sentience. One of its verses says : "beings with one sense are those that have the sense of TOUCH.

Beings with two senses are those that have the sense of TASTE along with the above.

Beings with three senses have sense of SMELL in addition.

Beings with four senses have sense of SIGHT, along with the above.

Beings with five senses have sense of HEARING, in addition.

The beings with six senses, have a MIND, along with the above."

Tholkappiyam of Ancient Tamil Literature describes the six-sense related to external body parts. Although the exact date of its composition is not known it is placed somewhere between 5 BCE and 3 CE. More than our senses it is within our mind that we realize perceptions of truth. Interaction of multiple sensory perceptions are needed to get a complete understanding of the world around us. If objects were perceived with individual senses that do not interact, we would get a distorted view of reality. It is difficult to understand reality from a single sensory perception. Tholkappiyam describes all sentient beings as beings with varied senses such as beings with one, two, three, four, five and six sense having the sense having the sense of touch, taste, smell, sight, hearing, and mind in this order. In each level of sense organism one sense is added beginning with one sense organism through six sense organisms.

Task 10

Paraphrase paragraph 5 and 6 of the above article in your own words.

Punctuation and Capitalization



(Source: <https://www.teachstarter.com/au/blog/26-punctuation-resources-activities/>)

Punctuation

The system of signs or symbols, such as full stop, comma and exclamatory mark, used in written language is called Punctuation. Punctuation marks show a reader how a sentence is constructed and how it should be read. Every sentence should include at least a capital letter at the start, and a full stop / exclamation mark or question mark at the end.

Why Punctuation matters?

Life would be confusing without proper punctuation.

Look at these sentences

1. some people find inspiration in cooking their families and dogs

Vs.

Some people find inspiration in cooking, their families and dogs.

2. let's eat grandpa

Vs

"Let's eat, Grandpa!"

The sentences convey **totally** different things as per the proper usage of punctuations.

For the sake of family members and Grandpa's life, use proper punctuation. Punctuation saves lives and keeps people alive!

3. Now, this is a big one. Depending upon where you place your comma, your sentence could convey an entirely different meaning. Like in this sentence:

a woman without her man is nothing

“A woman, without her man, is nothing.” (A woman’s success depends on her man)

Now, let’s change up where we’re placing the punctuation:

“A woman: without her, man is nothing.” (A man’s success is possible only with the help of a woman)

Here is an infographic on various punctuations used in English

The infographic is titled "PUNCTUATION MARK" in large orange letters. It features a grid of 12 blue boxes, each containing a punctuation mark, its name, and a brief description of its use. The marks are: Full Stop (green dot), Question Mark (blue question mark), Comma (red comma), Exclamation Mark (green exclamation mark), Quotation Mark (pink quotation marks), Colon (pink colon), Semi Colon (blue semi colon), Apostrophe (orange apostrophe), Hyphen (orange hyphen), Slash (green slash), Ellipsis Mark (red ellipsis), and Round Brackets (teal round brackets). The website "www.eslgrammar.org" is mentioned in the top left and bottom center of the infographic.

Full Stop	Question Mark	Comma	Exclamation Mark
Used at the end of a sentence	Used at the end of an interrogative sentence to form a question.	Used to denote a pause in a sentence	Used to denote shock, surprise, anger or a raised voice.
Quotation Mark	Colon	Semi Colon	Apostrophe
Used to show that someone else has said it	Used to indicate what is to follow next.	Used to link two independent clauses.	Used to show possession or for contraction of word.
Hyphen	Slash	Ellipsis Mark	Round Brackets
Used to glue words together.	Used to separate letters, numbers or words.	Used to separate items in a series.	Used to add extra information in a sentence.

www.eslgrammar.org

CAPITALIZATION

Capitalization is one of the most basic and important elements of writing. Capitalization draws the reader's attention to names, titles, and more. Capitalization also marks the start of new sentences and new paragraphs, provides signals to the reader, and helps to create a structure and a hierarchy in written language.

Basic Capitalization Rules

- 1. Capitalize proper nouns.** Proper nouns always begin with a capital letter. Capitals are used
 - To indicate the names of people, such as Vijay, David or Anwar.
 - To denote the names of months and days, such as January, August, Sunday, Thursday
 - To denote days of national/international importance, such as Independence Day, Women's Day
 - Finally, proper nouns also include the names of buildings, landmarks, and companies, such as the Leaning Tower of Pisa, the Statue of Liberty, or Verizon
- 2. Use capitalization with proper adjectives.**
 - Indian, American, Italian, German
- 3. Capitalize titles of works.**
 - A Tale of Two Cities, Titanic, Ode to A Nightingale, Beats
- 4. Use a capital at the beginning of a sentence.** The first word of every sentence should be capitalized, regardless of what kind of word.
- 5. Capitalize the first word of a full sentence in a quotation.** You also need to capitalize the first word of sentences in quotes.
He said to me, "I'd rather have pizza."
- 6. Use capitalization when referring to a period or an event.**
 - The Chola Period.

7. Capitalization with the pronoun "I." One of the most notable words to make sure to capitalize is the pronoun "I." I refer to oneself, and is as a result, a unique and a specific usage of a word.

8. Capitalize family relationships.

- Aunt Preethi" or "Cousin Ajith."

9. Capitalize people's titles.

- Mr. Ms. Miss, and Dr.

Remember these punctuation rules while writing:

PUNCTUATION RULES ENGLISH PUNCTUATION

RULE 1 Every sentence must end with a full stop.

Proper nouns (names of people, places, brands, etc, i.e. unique instances of a class) must always be capitalised.

RULE 2

RULE 3 When you use opening quotation marks, do not forget to use closing quotation marks at the end of the quoted word or phrase.

Quotation marks are when quoting or sometimes to convey irony, not for emphasis; emphasis is conveyed by emboldening or italicisation, followed by an exclamation mark.

RULE 4

RULE 5 Do not use an apostrophe when you are pluralising a word. The plural of toy is toys, not toy's. Apostrophes are used to form contractions (it is = it's) and indicate possession.

The ellipsis, used to indicate variously the intentional omission of a section of text, an unfinished thought, and a trailing off into silence, consists of only 3 dots. It is pointless to add more dots to an ellipsis

RULE 6

RULE 7 As per the rules of British English, any punctuation mark that is not part of a quoted section of text must be placed outside the quotation marks.

Do not link independent clauses with commas. Independent clauses are groupings of words that can stand alone as sentences.

RULE 8

RULE 9 Use a comma after the introductory element of a sentence. The introductory element is a word or a phrase that begins a sentence by providing background, or simply modifies it.

www.eslgrammar.org

Activity 1

Analyse the Story given below and list down the various punctuations mentioned in the story and write their definition.

E.g.

1. **Comma** – Used for pausing; took its place between words; without the break commas provide, words run amok, becoming jumbled, unwieldy, and confusing; a well-placed comma can change the meaning of a sentence.

The Day Punctuation Came to Town

Written by Kimberlee Gard | Illustrated by Sandie Sonke

The Punctuations had just moved to Alphabet City and the kids—Exclamation Point, Question Mark, Period, and Comma—were excited about their first day of school. Exclamation Point was in a rush to get there. “We are going to have so much fun!” he said. He “was always excited about something.” Question Mark was a little more subdued. She wondered if the other kids would be nice and even pondered whether they were walking in the right direction. “Comma kept pausing,” and Period said she would let her siblings know when to stop.



When they got to school and introduced themselves, the student letters were confused. They'd never seen anyone like the Punctuations before. As the letters practiced forming words, Exclamation Point joined W, O, and W; Question Mark helped out W, H, and O; and “Period brought each sentence to a tidy end.” For Comma, though, it wasn't so easy. As he tried to squeeze in between letters, he began to feel as if he was just a bother. Undetected, he tiptoed away.



Meanwhile in the classroom, Exclamation Point had all the letters scrambling to make more and more exciting words. There was a lot of cheering and booming, ducking, and running. Question Mark asked if maybe they shouldn't all quiet down a bit, but no one was listening. Even Period couldn't get them to stop. Pretty soon, there was a huge word pileup. In the next moment it came crashing down and all the letters "tumbled through the door, spilling into the hall." There, they found Comma, who just stared in disbelief. His siblings wondered why he was in the hall instead of in the classroom. Comma told them how he felt. But "Comma, without you, things become a disaster!" Exclamation Point said. Period and Question Mark agreed.

The Punctuations joined the class. The letters worked to make words. Exclamation Point, Question Mark, and Period joined in the fun.



Exclamation Point added excitement to words. Question Mark asked a lot of questions.



Period brought each sentence to a tidy end.

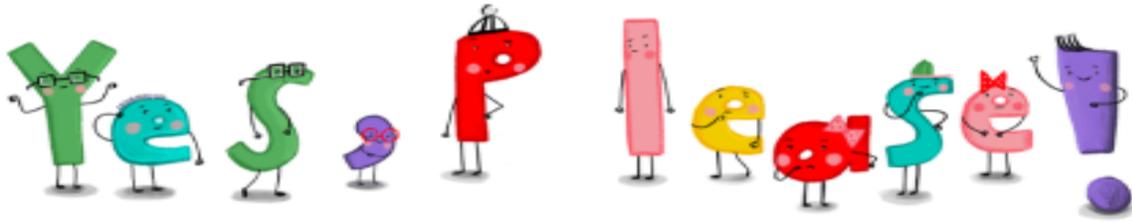


Comma tried not to get stepped on and fit in wherever he could.

Then his siblings gently reminded little Comma about how each member of their family has a certain purpose. They told him, "we all work together to help letters and the words they make." Once everyone had gone back into the classroom, the letters continued making words. But now Comma took his place between them. When the letters looked confused, he explained that it was his job to keep order and that words and punctuation needed each other to make good and clear sentences.

For children just learning about sentence structure and how punctuation and words fit together to create meaning, Kimberlee Gard's lively story helps them visualize and understand the different roles of each punctuation mark. Coming at the end of a sentence and accompanied by vocal clues, exclamation points, question marks, and periods are more familiar to kids. But what about that comma, which seems to float around here and there? Gard demonstrates that without the break commas provide, words run amok, becoming jumbled, unwieldy, and confusing. Readers will respond to the classroom setting, where the

letters work and play together during lessons, and they will be eager to make friends with the Punctuation family themselves.



If any readers think learning about punctuation is dry and dull, Sandie Sonke's vibrant colors and cartoon characters will change their mind. The Punctuations (and their butterfly friend Apostrophe) are sweet and earnest, wanting to fit into the class and make a difference. As the letters form words, the purple Punctuations are easy for kids to pick out, allowing for discussion of their distinct roles. The tangled piles of letters invite kids to make words from the muddle. After Comma realizes his own importance and the letters embrace him, the story ends with a familiar and funny example of just how a well-placed comma can change the meaning of a sentence.

Image copyright Sandie Sonke, 2019, text copyright Kimberlee Gard, 2019. Courtesy of Familius.
<https://celebratepicturebooks.com/tag/writing-resources-for-kids/>

Activity 2

Explore the following websites and complete the Punctuation Marks Graphic Organizer.

Punctuation Tree: <http://guidetogrammar.org/grammar/marks/marks.htm>

English Club: <https://www.englishclub.com/writing/punctuation.htm>

Grammar Book: https://www.grammarbook.com/english_rules.asp

Punctuation Marks Graphic Organizer

Write the rules for using each of the punctuation marks below. Each row represents a different rule. In the right-hand column, provide an example of the rule in use.

Symbol (!?, etc.)	Punctuation Name	Rule	Example of Rule in Use

Communicative English - Semester-II [part-II -English]

Weightage: 3 Credits

Duration: 90 hrs

Unit I

(18 hours)

1. Listening and Speaking
 - a. Listening and responding to complaints (formal situation)
 - b. Listening to problems and offering solutions (informal)
2. Reading and writing
 - a. Reading aloud (brief motivational anecdotes)
 - b. Writing a paragraph on a proverbial expression/motivational idea.
3. Word Power/Vocabulary
 - a. Synonyms & Antonyms
4. Grammar in Context
 - a. Adverbs
 - b. Prepositions

Unit II

(20 hours)

1. Listening and Speaking
 - a. Listening to famous speeches and poems
 - b. Making short speeches- Formal: welcome speech and vote of thanks.
Informal occasions- Farewell party, graduation speech
2. Reading and Writing
 - a. Writing opinion pieces (could be on travel, food, film / book reviews or on any contemporary topic)
 - b. Reading poetry
 - b.i. Reading aloud: (Intonation and Voice Modulation)
 - b.ii. Identifying and using figures of speech - simile, metaphor, personification etc.
3. Word Power
 - a. Idioms & Phrases
4. Grammar in Context
 - a. Conjunctions and Interjections

Unit III

(18 hours)

1. Listening and Speaking

- a. Listening to Ted talks
- b. Making short presentations – Formal presentation with PPT, analytical presentation of graphs and reports of multiple kinds
- c. Interactions during and after the presentations

2. Reading and writing

- a. Writing emails of complaint
- b. Reading aloud famous speeches

3. Word Power

- a. One Word Substitution

4. Grammar in Context

- a. Sentence Patterns

Unit IV

(16 hours)

1. Listening and Speaking

- a. Participating in a meeting: face to face and online
- b. Listening with courtesy and adding ideas and giving opinions during the meeting and making concluding remarks.

2. Reading and Writing

- a. Reading visual texts – advertisements
- b. Preparing first drafts of short assignments

3. Word Power

- a. Denotation and Connotation

4. Grammar in Context:

- a. Sentence Types

Unit V

(18 hours)

1. Listening and Speaking

- a. Informal interview for feature writing
- b. Listening and responding to questions at a formal interview

2. Reading and Writing

- a. Writing letters of application
- b. Readers' Theatre (Script Reading)
- c. Dramatizing everyday situations/social issues through skits. (writing scripts and performing)

3. Word Power

- a. Collocation

4. Grammar in Context

- a. Working With Clauses