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TEACHING

SKILLS

Physical Science

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MICRO

LESSON

PLAN

Skill of Introducing the Lesson / Set Introduction

Name - Rubal College RollNo - 28
 Concept Fiction Duration - 6-8 min Date -
 Previous knowledge Assumed. Students will know
 about the fiction, we study, what is the
 fiction?

PT Activities	Student's Activities	Devices Used
Student, Did you slide the ball?	Yes	Oral work
Does the ball stop	Yes	Oral work
Can, the ball slide easily on the road	No	Oral work
When you walk on sand, what will happen	Foot go inside the sand	Oral work
PT write the letter 'R' on the black board	students are listening carefully	
What is the reason that we can write on black board.	Problematik question	

Announcement of the Topic → Teacher while announcing true topic says that student today we will study what is the fiction.

OBSERVATION SCHEDULE

Name _____ RollNo - _____
 Duration - 6-8 min Date - _____
 Name of Observer _____ Skill of introducing lesson
 RollNo. of Observer _____

Component	Rating Scale
→ Teaching used previous knowledge of the students	0 1 (2) 3 4
→ Device/devices used were appropriate	0 1 2 (3)
→ There were instances of lack in continuity	0 1 2 3
→ PT uttered irrelevant statements and questions	0 1 (2) 3
→ Almost every question of PT was followed by correct response	0 1 2 (3)
→ In the whole the introducing of the lesson was effective	0 1 (2) 3

Signature of Supervisor

Signature of Observer

Skill of Illustrating with Examples

Name - Rubal. College Roll No - 28
Concept - Transfer of Heat Duration - 6-8 min Date -
Approach Used - Inductive

Content	PT. Activities
Transfer of Heat	PT explain this process by help of example.
Example - 1	PT says to the student that put a spoon in hot tea & we see that spoon become hot
Example - 2	Put any utensil on stove when we notice that utensil become hot after sometime.
Practical.	Put one end of copper wire in stand & paste the iron needle at some gap from one another heat at the second end of wire with the help of lamp how we see that middle starts falling.
Conclusion	From the given example, it is clear that there is transfer of heat. It is also clear that heat flows from one body to another.

OBSERVATION SCHEDULE

Name - Roll No -
Concept - Transfer of Heat Duration - 6-8 min
Date - Skill of illustrating with examples
Name of Observer -
Roll No. of Observer -

Component	Rating Scale				
Examples used were simple	0	1	②	3	4
Examples used were interesting	0	1	2	3	④
Examples used were relevant	0	1	2	③	4
Approach used were appropriate	0	1	2	③	4
Pupil's involvement was adequate	0	1	②	3	4

Signature of supervisor

Signature of Observer

Skill of Probing Questions

Name - Rubal
 College Roll No - 28
 Concept - Energy Duration - 6-8 min Date -

P.T. Activities	Student's Activities	Components
1.) Student, can you tell me, what is Energy?	Capacity of doing work, is called energy.	
2.) What are the types of energy?	Kinetic energy & Potential energy.	Seeking further information
3.) Can you tell me any other type of energy?	No answer	Probing and Seeking further information.
4.) For electric which typically energy is used?	Electric energy	
5.) Student inquires, we can use electric energy.	T.V., Radio, Pump, Washing machine, etc.	Decreasing critical awareness
6.) What are the sources of energy?	Solar, wind, fossil fuel & nuclear fusion	Lecture

Testing Student's Understanding (Evaluation Questions)

1. What is kinetic energy?
2. What is electric energy?
3. What is Potential energy?
4. When we can use the energy.

OBSERVATION SCHEDULE

Name -
 College Roll No -
 Concept - Energy Duration - 6-8 min Date -
 Skill of Probing questions
 Name of Observer -
 Roll No -

Component	Rating scale				
Probing	0	1	2	3	4
Seeking further information	0	1	2	3	4
Reprobing	0	1	2	3	4
Redirection	0	1	2	3	4
Increasing Critical Awareness	0	1	2	3	4

Signature of Supervisor

Signature of Observer

STILL OF STIMULUS VARIATION

Name - Rubal
 Concept - Force
 Roll No - 28
 Duration - 6-8 min
 Date -

Content	P.T. Activities	Components
1. Student do you know what is force?	If we push or pull the thing and it will change its position of that thing. Then we call it is force.	gestures
2. what will be the change in speed due to force.	No answer	
3. When we pull the bicycle then what happen?	Speed of bicycle decreases	Prompting seeking further information.
4. what are the types of forces?	Frictional force, magnetic force.	
5. P.T then pupil Teacher then ask to the student	No answer	
6. If we throw anything in upward dir ⁿ then it come in downward dir ⁿ ?	Due to gravitational force?	oral-visual switching.

OBSERVATION SCHEDULE

Name - Rubal
 Concept - Force
 Skill of stimulus variation
 Name of observer
 Roll No - 28
 Date -
 Roll No -

Component	Rating scale				
Movement	0	1	2	3	4
gestures	0	1	2	3	4
Change in voice	0	1	2	3	4
Focusing	0	1	2	3	4
Change in interaction pattern	0	1	2	3	4
Pausing	0	1	2	3	4
Pupil's physical participation	0	1	2	3	4
Oral-visual switching	0	1	2	3	4

Signature of supervisor

Signature of observer

SKILL OF REINFORCEMENT

Name - Rubal
Concept - force

College Roll No - 28
Duration - 6-8 min Date -

Content	P.T. Activities	Student's Activities
1. student do you know what is force?	If we push or pull the thing and it will change the pos ⁿ of that thing then we call it is force	Use of non-overall action
2. what will be the change in speed due to force?	No answer.	
3. when we pull the bicycle when what happen?	Speed of bicycle decreases	Prompting seeking further information.
4. what are the types of forces	Frictional force Negative force	
5. Repit teacher than ask to the student.	Electrical force	
6. Is there we throw anything in up-ward dir ⁿ then it come in downward dir ⁿ .	Due to gravita-tional force,	Use of praise words.

OBSERVATION SCHEDULE

Name - Rubal
Concept - force

Roll No - 28
Duration - 6-8 min Date -

skill of reinforcement
Name of observer

Roll No -

Component	Rating scale				
Use of Praise words	0	1	2	3	4
Use of statements accepting pupils	0	1	2	3	4
Repeating and rephrasing pupils	0	1	2	3	4
Writing pupils responses on the blackboard.	0	1	2	3	4
Use of non-verbal actions	0	1	2	3	4
Use of discouraging words	0	1	2	3	4
Use of discouraging cues	0	1	2	3	4
Inappropriate use of Reinforcement	0	1	2	3	4

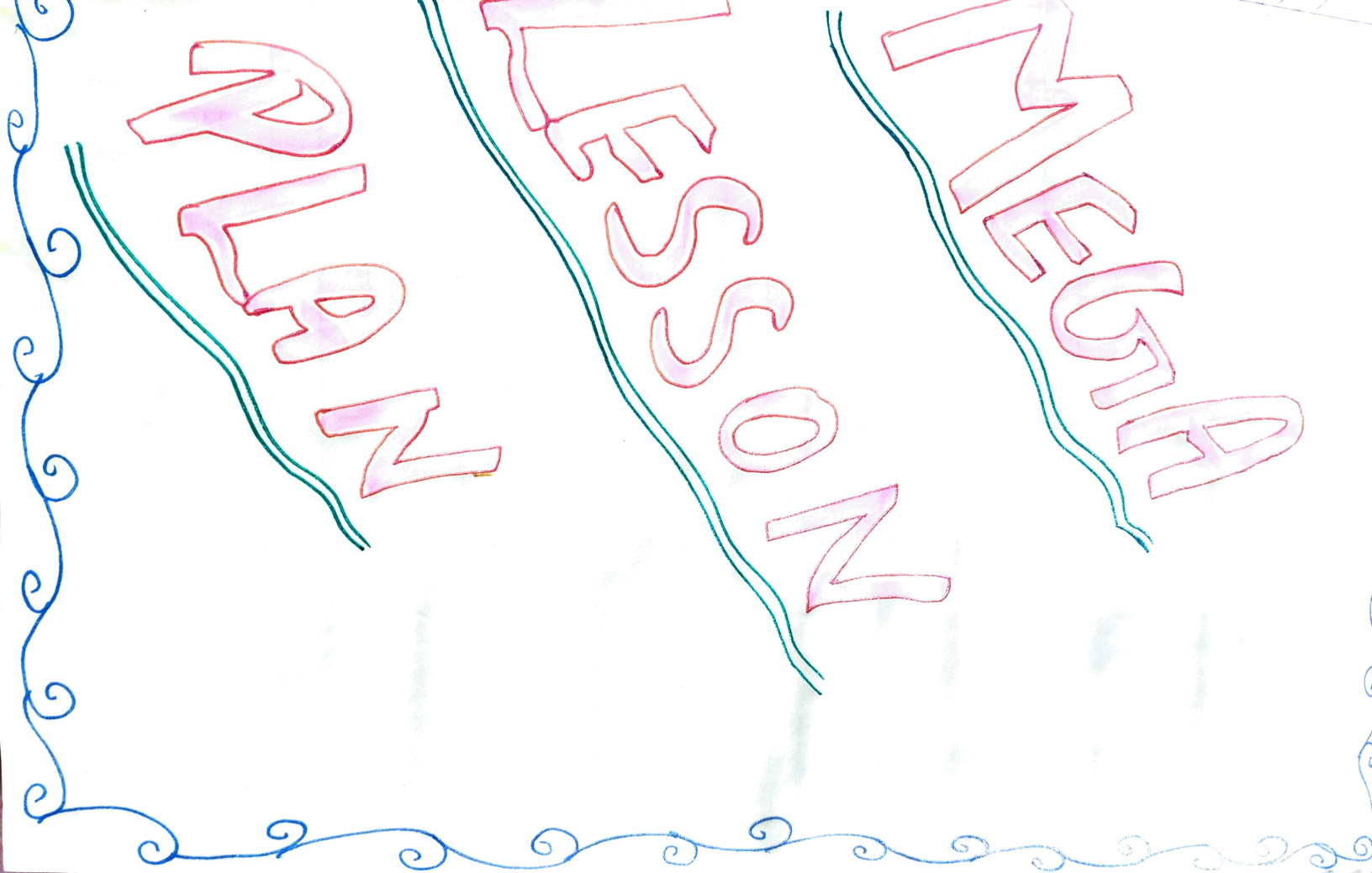
Signature of supervisor

Signature of observer

PLAN

LESSON

MEMBER



Mega Lesson-1

Roll No- 28

Subject- Physical science

Topic- Green house effect

Class- VIII

Date-

Time - 15-20 min

General Objectives

- 1) To create logical thinking among students.
- 2) To develop training among students.
- 3) To lay foundation to higher studies.

Instructional Aids to be used.

- 1) General aids - chalk, duster, pointer, black board.
- 2) Specific aids - pointer, chart showing green house effect.

Instructional Objectives in Behavioural Terms

- 1) Knowledge - students will be able to get the knowledge about - green house effect.
- 2) Understanding - students will be able to understand about green house.
- 3) Application - students will be able to explain about green house effect.
- 4) Creativity - student will be able to make chart of different green house effect.

Previous Knowledge. Assumed.

Previous knowledge testing.

Pt's Activity

T's Activity

In green house effect
The heat is trap in?

Glass

what is green house
effect?

No Response

Announcement of the topic

Well students! today we shall discuss
about the topic
"Green house effect"

Presentation

Teaching point	Pupil teacher's activity	Pupil activity
Green house	Heat is trapped in glass and hence the temperature inside a glass enclosure will be much higher than the surroundings. This phenomenon was used to create an enclosure	Students will listing.

Heat is transferred in glass and hence the temperature inside a glass will be much higher

where tropical plants are kept warm during the winters. In colder climate such enclosures are called as green house effect.

Effect of
Green house
effect

Green house absorb their name to the atmospheric phenomenon. Some gases present the escape of heat from the sun/earth. An increase in percentage to inc. of such gas in the atmosphere would cause the average temperature to inc. would wide this is called as green house gases. An inc. in CO_2 content in atmosphere would more heat to be retained.

students
will
listening

Green house
absorb
their name
to the atm-
osphere
phenomenon

Generalization

green house effect. ^{do, students today we learn about}

Recapitulation

- 1) What is green house?
- 2) What gas is formed in green house?

Homework

Q. Explain the phenomenon of green house effect?

Mega Lesson-2

P.T. Roll No - 28

Class - Physical Science
Date - Ozon layer

Subject - VIII

Topic - Ozone layer

Duration - 15-20 min

General Objectives

- 1) To create logical thinking among students.
- 2) To develop scientific thinking among students.
- 3) To lay foundation to higher studies.

Instructional aids to be used

- 1) General aids - chalk, duster, pointer, chalk board.
- 2) Specific aids - pointer, chart showing ozone layer.

Instructional Objective in Behavioural Terms

- 1) Knowledge - Students will be able to get the knowledge and ozone layer.
- 2) Understanding - The students will be able to understand about - ozone layer.
- 3) Application - The students will be able to explain about - ozone layer.
- 4) Creativity - Students will be able to identify the ozone layer.

Previous knowledge assumed.

25

26

Previous Knowledge testing

<u>P.T's Activity</u>	<u>P's Activity</u>
Where is the ozone layer found?	In diatomic molecules
What is ozone layer?	No response

Announcement of the topic

Well students! Today we shall discuss about the topic 'Ozone layer' in detail.

Presentation

<u>Teaching points</u>	<u>Pupil teacher's activity</u>	<u>Pupil activity</u>	<u>Elemental</u>
Ozone layer	Elemental oxygen is normally found in the form of a diatomic molecules. However, in the upper atmosphere of a molecule, containing three atoms of oxygen is found this would mean a formula of O_3 and this is called ozone.		O_3 is normally found in the form of a diatomic molecules & it reach to the atmosphere

the diatomic molecules of oxygen, ozone is poisonous and we are lucky that it is not stable near to the earth's surface. where it may damage forms of life as it is discovered that this ozone layer was getting depleted various man-made compound like CF_2 were found to persist in the atmosphere. Once they reached to the ozone molecules.

It is discovered that this O_3 layer was getting depleted.

Generalization

So, students today we have learnt about ozone layer.

Recapitulation

- 1) What is ozone layer?
- 2) How ozone layer is formed?

Homework

- Q. How is ozone layer formed?
- Q. What is a ozone layer?

Mega Lesson-3

Roll no- 28

Subject - Physical Science

Topic - Method of separation

Class - VIII

Duration - 35-40 min

Date -

General objectives

- 1) To lay foundation for higher studies.
- 2) To develop scientific knowledge to the student.
- 3) To provide training to the student.

Instructional aid

- 1) General aid → Board chalk, duster.
- 2) Specific aid → flashcard.

Instructional objectives

- 1) Knowledge - The student will be able to recall substances which can be separated.
- 2) Understanding - The student will be able to understand basis of method of separation.
- 3) Application - The student will be able to formulate the knowledge of method.
- 4) Skill - The student will be able to analyse method of separation.

Previous knowledge testing.

- PT's activity
- 1) If you are given a basket containing mangoes and cummberly. How will you separate them?
 - 2) Do you know the method of separation?

Pupil activity
Simply by picking

No response

Announcement of topic

Student today we shall learn and discuss about method.

Presentation

Content	PT's activity	Student activity	B-B-w
Meaning	The quantity of such impurity is not very large in such situation we find hand picking. The process that is used to separate grain from stalks is called thrashing. In this process the stalks are beaten to free grain seeds. Sometime thrashing is done in the help of bullocks.	Students will listening	B-B-w

Machine are also used to thrashing. This method is used for separating slight impurities like piece of dirt or stone and husk from wheat, rice or pulses. Students will listen

Generalisation

Student today we have learnt about method of separation.

Recapitulation

Learn about the method of separation.

Homework

Learn and write the short type questions answers of this chapter.

Lesson Plan-4

P.T. Ref No. - 28

Class - VII

Subject - Physical Science

Date -

Topic - Mode of intake of Food

Time - 35-40 min

General Objectives -

- 1) To develop scientific knowledge in the student
- 2) To provide scientific training among the students.
- 3) To lay foundation for higher studies.

Instructional aids to be used

- 1) General aids - chalk, duster, black board.
- 2) Specific aids - chart, flash card.

Instructional Objectives in Behavioural Terms

- 1) Knowledge - The students will be able to recall about intake of food.
- 2) Understanding - students will be able to understand about intake of food.
- 3) Application - students will be able to explain intake of food.
- 4) Creativity - students will be able to take intake of food.

Previous knowledge assumed.

Previous knowledge testing

PT's Activity	PT's Activity
Q On what bases the mode of nutrition divided.	Autotrophs & heterotrophs
Q How can we take food?	No response

Announcement of the topic

Well students! Topic we shall discuss about the topic 'mode of intake of food'

Presentation

Content	Pupil teachers activity	pupil activity
What is Food?	The substances which we eat in our daily routine is called as food.	Students will listening.
Taking of food	The methods of taking in food is different in different organisms. The certain parts of their body is modified in such a manner that they can easily eat food.	

The substances which we eat in our daily routine is called as the food & illustrated method of taking food.

As a sparrow has a short beak to pick up seeds and worms. The long, tubular beak of hummingbird helps it to suck nectar from the flowers. The cow has a sharp incisor and flat molar teeth that helps to cut and grind the plant materials. The jaws of many snakes swallows them to swallow the animals much larger than the size of their head.

students will listening carefully

On basis of modes of nutrition. All the organisms are divided into two major groups - autotrophs and heterotrophs. Their corresponding mode of nutrition are known as

- 1) autotrophic mode of nutrition
- 2) Heterotrophic mode of nutrition

nutrients The two main types of nutrients, macronutrients and micronutrients. The three main categories of macronutrients include protein, fats and carbohydrates. The

Two types of micronutrients are vitamins and minerals and these are extra molecules that cells needs to make energy. students will listening

Generalization



if we have learnt about mode of food.

of food?

nutrients or nutrients? what is food with examples?

R.T Roll No - 28
Lesson Plan - 5

Subject - Physical Sci
Topic - Food Habits of Animals

class - VIII
date -
time - 35-40 min

General Objectives

- 1) To develop scientific knowledge of the students.
- 2) To provide scientific training among the students.
- 3) To lay foundation for higher studies.

Instructional aids to be used

- 1) General aids - chalk, duster, black board
- 2) Specific aids - chart, or flash cards.

Instructional Objectives in Behavioural Terms

- 1) Knowledge - Students will be able to recall about good habits of animals.
- 2) Understanding - Students will be able to understand different food habits of animals.
- 3) Application - Students will be able to explain good habits of animals.
- 4) Creativity - Students will be able to know about variety of food habits.

Previous knowledge assumed.

74

Previous knowledge stating

PT's Activity	P's Activity
Q How many types of nutrition are there?	three
Q What is Parasitic nutrition?	No response

Announcement of the topic

Well students! Today we shall discuss about the topic 'Food habits of Animals'

Presentation

Content	Pupil teacher Activity	Pupil activity	Chalk-board work
Herbivorous	The animals that feed on plants & plants product are called as Herbivorous.	students will listening.	In plant the nutrition is occurs. Heterotrophic nutrition and types of nutrition.
Types of nutrition	In plants heterotrophic nutrition is occurs. heterotrophic nutrition is of three types:-		

- (1) Saprotrophic nutrition
- (2) Parasitic nutrition
- (3) Holozoic nutrition

Saprotrophs These are the nutrition nutrition one in which an organisms obtain its nutrients from dead and decaying plant and animal matter.

Parasitic nutrition Parasitic nutrition is one in which an organism obtain their food from some other living organisms of a different group.

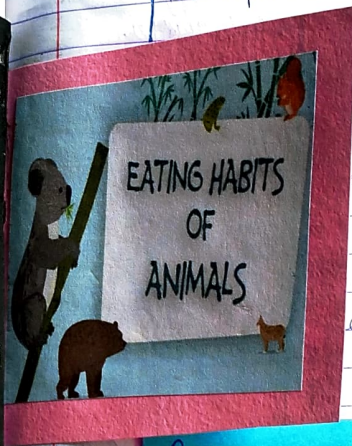
Holozoic nutrition In this type of nutrition organisms like Amoeba and man eat food in solid or liquid state. This food is eaten into the body, or eaten and then it is broken down.

Kind of Animals Different animals eat different kinds of food. They eat either plants or

These are the nutrition one in which an organism obtained its nutrient from dead and decaying plants and the animal matter.

plants eating animals. Some animals like goat and deer eat plant food like grass and leaves directly. Some other animals like tiger and lion eat the flesh of these plant eating animals.

Different animals eat different kinds of food to eat



day we have studied about of animals.

have food?

Q. How many kinds of animals are exist on this earth?

Q. Who are Herbivorous?

DISCUSSION

LESSON

PLAN

Mega Lesson-3
 P.T. Roll No. 28
 Subject - Physical Sci. Class- VIII
 Topic - Nutrition date-
 duration - 15-20 min

General Objectives-

- To create logical thinking among students.
- To develop scientific training among students.
- To foundation to higher studies.

Instructional aids to be used

- General aids - Blackboard, chalk, duster.
- Specific aids - Chart and Material of nutrition.

Instructional Objectives in Behavioural Terms

Knowledge - Students will be able to get the knowledge about nutrition.

Understanding - Students will be able to understand about nutrition.

Application - Students will be able to apply the nutrition in life.

Creativity - Students will be able to explain the types of nutrition.

Previous Knowledge Testing

Previous Knowledge testing

PT's Activity	P's Activity
Q from where we get nutrition?	from food.
Q what is heterotrophic?	No response.

Announcements of the topic
 Well students today we shall discuss about the topic 'nutrition'.

Presentation

Teaching point	Pupil teachers activity	Pupil activity	The process of obtaining food is not the same in all organisms as all different living organisms utilize their food in different ways. This process of obtaining and utilizing food is known as nutrition.
Nutrition			

The process of obtaining food is not the same in all organisms as all different living organisms.

Types of nutrition

The process of obtaining food is not the same in all organisms. In this food habit mode of nutrition can be divided as:

(i) Autotrophic (ii) Heterotrophic

Autotrophic

It is the mode of nutrition in which organisms can make their own food from raw material.

Heterotrophic

It is the mode of nutrition in which organisms cannot prepare their own food.

Students will list the organisms.

It is the mode of nutrition in which the organisms.

REAL LESSON PLAN

Generalisation

So, students today we have learnt about the nutrition.

Recapitulation

- 1) What is nutrition?
- 2) Name the types of nutrition?

Homework

Q. What is the difference b/w the autotrophic and heterotrophic mode of nutrition?

Lesson Plan-1
P.T. Roll No - 28

Subject - Physical Science
Topic - Photosynthesis

Class - VII

date -

time - 35-40 min

General Objectives-

- 1) To develop scientific knowledge of the students.
- 2) To provide scientific training among the students.
- 3) To lay foundation for higher studies.

Instructional aids to be used

- 1) General aids - chalk, duster, blackboard.
- 2) specific aids - pointer, flash card.

Instructional Objectives in Behavioural Terms

- 1) Knowledge - Students today we shall get the knowledge about photosynthesis.
- 2) Understanding - Students today
- 3) Application - Students we will be able to explain about photosynthesis.
- 4) Creativity - Students we will be able to make a look on process of photosynthesis.

Previous Knowledge assumed

Previous Knowledge testing

PT's Activity

Q. What is Photosynthesis?

Q. What is its process?

P's Activity

It is a process used by plants.

No Response.

Announcement of the topic

Well students! Today we shall discuss about the topic 'Photosynthesis'

Presentation

<u>Teaching point</u>	<u>Pupil teachers Activity</u>	<u>Pupil activity</u>	<u>Chalk board work</u>
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Photosynthesis

It is the process used by plants & other organisms to convert light energy into chemical energy that can be later released to fuel as the organisms. This chemical energy is stored in carbohydrates such as sugar, which can

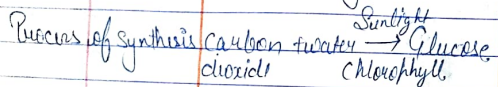
students will listening carefully.

Photosynthesis is the process used by the plants. Oxygen is also released as a waste.

be synthesized from carbon dioxide and water. Oxygen is also released as a waste product. Most plants, algae may perform photosynthesis such organisms are called as photoautotrophic. As photosynthesis is largely responsible for producing and maintaining the oxygen content of the Earth's atmosphere and supplies all the organic compound and most of the energy is necessary for life on Earth. Photosynthesis is performed differently by different species, as this process is always begins when energy from light is absorbed by photosynthesis.

Students will listening carefully.

Product
Most plants algae may perform photosynthesis such oxygen is food is synthesis in leaves, as all the raw materials.

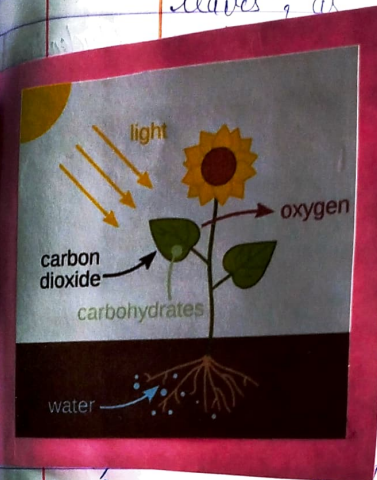


from the above Eqⁿ it is clear that carbon dioxide

and water are the raw material for photosynthesis. The green pigment chlorophyll and presence of sunlight is also very much important.

students will listening.

Since food is synthesized in leaves, all the raw materials are needed. and to of plant



today we have learnt about this.

2.) Name the end product after the process of photosynthesis?

Home work -

- Q. Write the process and the end product of the photosynthesis?
- Q. What is a photosynthesis?

Lesson Plan-2

P.T. Roll No - 28

Subject - Physical Science

Topic - Photosynthesis Raw material

Class - VII

date -

time - 35-40 min

General objectives

- 1) To develop scientific knowledge to the students.
- 2) To provide scientific training among the students.
- 3) To lay foundation for higher studies.

Instructional aids

- 1) General aids - chalk, duster, blackboard
- 2) Specific aids - pointer, flash cards.

Instructional objectives in Behavioural Terms

- 1) Knowledge - students will be able to recall about raw material for photosynthesis.
- 2) Understanding - students will understand about the raw material for photosynthesis.
- 3) Application - students will be able to learn how to utilise photosynthesis.
- 4) Creativity - students will be able to explain how many materials are required.

Previous knowledge assumed

25

Previous Knowledge, testing

PT's Activity

what is photosynthesis?

what is sunlight?

P's Activity

Process which is used by the plants?
No response

Announcement of the topic

Well students! Topic we will discuss about the topic "Raw Material for photosynthesis."

Presentations

Teaching point

Pupil teachers activity

Pupil activity

Chalk boards work

Photosynthesis is ↓

It is the process used by plants & other organisms to convert light energy to the chemical energy that can be later used to fuel as the organisms. This chemical energy is stored in carbohydrates such as sugar which can be synthesized from CO_2 & H_2O

students will listening.

It is the process used by we plants & others Raw Material

Raw material for photosynthesis The materials which is very necessary for photosynthesis are called as Raw material of photosynthesis

Water and mineral These are absorbed by the roots from the soil. From there water and mineral are transported to other parts of the plant by the vessels. As vessels are the tubes that run through out the roots, the stem, the branches and the leaves.

Carbon dioxide. As plants take CO_2 from the atmosphere. Carbon dioxide enters the leaves through tiny pores present on the underside of the leaves called as stomata. The stomata are surrounded by the species of the cells called as guard cells.

Sunlight Energy from the sun is called as solar energy. This energy is used by the plants to prepare their own food making

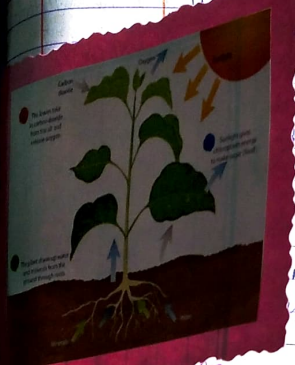
lets do very necessary for photosynthesis are called as Raw material of photosynthesis present in green plants.

Chlorophyll

process in plants are called photosynthesis.

The leaves are green due to presence of green pigment called chlorophyll. The leaves do solar energy. They use it to make food from CO_2 and water.

Leaves are green due to presence of Chlorophyll



Today we have learnt about plants for photosynthesis.

- Q1) What do you mean by raw material?
Q2) What are the raw material for photosynthesis?

Homework-

- Q- What is a chlorophyll?
- Q- How can we obtain material for photosynthesis?

Lesson Plan-3

PT. Roll No - 28

Class - VII

Subject - Physical Sci.

date -

Topic - Nutrition in Human

time - 35-40 min

General Objectives

- (1) To develop scientific knowledge to the student.
- (2) To provide scientific training among the students.
- (3) To lay foundation for higher classes.

Instructional aids to be used

- (1) General aids - chalk, duster, pointer, blackboard
- (2) Specific aids - chart and flash cards.

Instructional Objectives in Behavioural terms

- (1) Knowledge - The students will be able to recall about nutrition in humans.
- (2) Understanding - The students will be able to understand about nutrition in humans.
- (3) Application - The students will be able to explain nutrition in humans.
- (4) Creativity - The students will be able to explain about variety of nutrition in humans.

Previous Knowledge assumed.

Previous knowledge testing

PT's Activity

- Q. Food is break down into
- Q. what is elementary canal?

P's Activity
2 molecules

No response

Announcement of the topic

Well students! Today we shall discuss about the topic 'nutrition' in humans.

Presentation

Content	Pupil teachers activity	Pupil Activity	chalk-board work
Nutrition	The food that we take of eat passes through a long muscular tube present inside our body called alimentary canal. this canal begins at the mouth and ends at the anus. the food breaks down into two molecules that are carried by blood to all parts of the body. the various steps involved in this process are describe below:-	students will listening	Food that we take of eat passes through a various steps of eating.

Ingestion The act of getting and eating food is called as ingestion. In human, it takes place through mouth. Teeth help in chewing of food.

The break down of complex molecules into simple and soluble ones is called as digestion. Digestion starts from the mouth and is completed in the intestine.

Dissimilation The absorbed food is utilized by the body for growth and development and formation of the body parts. This process is known as assimilation.

Egestion The elimination of an undigested food from the alimentary canal is known as egestion.

How do humans obtain their nutrition? Most autotrophic organisms make their own food by photosynthesis. They use carbon dioxide, water & the sun's energy to

The act of getting and eating the food is called as Ingestion and In humans it takes place through mouth and teeth help in chewing. Most autotrophic organisms make their own

accomplish this. Heterotrophs can be further categorised as being parasitic if they obtain nutrients from a live host or dead organisms. Students will listening.

Generalisation -

So, students today we are going to study about nutrition in humans.

Recapitulations -

- 1) Define nutrition?
- 2) What is difference between digestion and Egestion?

Homework -

Q How do the human obtain their nutrition for life process?

Q What is nutrition?

Lesson Plan-7

P.T. Roll No- 28

Subject- Physical Sci

Topic- Mouth and Buccal Cavity

Class- VII

Date-

Time- 35-40 min

General Objectives-

- (1) To develop scientific knowledge to the student.
- (2) To develop scientific training among student.
- (3) To lay foundation for higher studies.

Instructional aids to be used

- (1) General aids - chalk, board, black board.
- (2) Specific aids - pointer, flash card.

Instructional Objectives in Behavioural Terms

- (1) Knowledge - students will recall about mouth & Buccal cavity.
- (2) Understanding - students will understand about mouth and Buccal cavity.
- (3) Application - students will explain about mouth and Buccal cavity.
- (4) Continuity - students will be able various types of cavity.

Previous Knowledge assumed

Previous Knowledge testing

PT's Activity

P's Activity

Q. Another name of mouth is

Oral Cavity

Q. what is oral cavity?

No response.

Announcement of the topic

Well students! Today we shall about the topic "Mouth and Buccal Cavity".

Presentation

Content

Pupil teachers activity

Pupil activity

Chalk-board work

Mouth & Buccal Cavity

Mouth is also called as oral cavity or Buccal cavity, in human anatomy, through which food and air enter the body. The mouth opens to the outside at the lips and empties into the throat at the rear, its boundaries are be like lips, cheeks, hard and soft palates and glottis.

Students will listening

Mouth is also called as oral cavity or the buccal cavity. In humans

Buccal Cavity

In humans, the food is taken in through the mouth into the

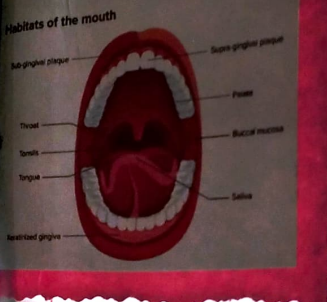
buccal cavity contains teeth and tongue. Salivary glands secrete saliva into the buccal cavity.

Mouth Cavity the oral cavity includes the lips, inside lining of the lips and cheeks (buccal cavity or buccal mucosa), the teeth, the gums, the front two third of the tongue the floor of the mouth, below the tongue and the bony roof of the mouth (hard palate). The oesophagus is the part of the throat just behind the mouth.

Enamel Teeth are rooted in the sockets of jaw bones. These are covered by a white strong, shining, protective material called as an Enamel.

Milky teeth The first set of teeth in the growth development of humans and other diphyodont mammals. They develop during the growing stage

Teeth are rooted in the socket of jaw bones & covered by a white strong, shining, protective. The colour is white of teeth. Buccal Cavity.



of development, they become visible in the mouth during infancy.

permanent teeth A second set of 32 teeth as students will listen. 16 in each jaw are permanent teeth that push out of the gums they replace from milk teeth.

A second set of 32 teeth as 16 mm each jaw are permanent teeth.

today we have discussed about buccal cavity.

and permanent teeth?

- Q. What is a Buccal cavity?
- Q. Whose teeth is known as Milk teeth?

Lesson Plan-B

P.T. Roll No - 28

Subject - Physical Science
Topic - The stomach

Class - VII

Date -

Time - 35-40 min

General Objectives -

- (1) To develop the scientific knowledge to the students.
- (2) To develop scientific attitude among the students.
- (3) To lay foundation for higher studies.

Instructional Objects to be used

- (1) General aids - chalk, duster, blackboard
- (2) Specific aids - duster, pointer, flashcard.

Instructional Objectives in Behavioural terms

- (1) Knowledge - students will be able to get the knowledge about stomach.
- (2) Understanding - students will be able to understand about stomach.
- (3) Application - students will be able to explain stomach.
- (4) Creativity - students will be able to explain about various types of stomach.

Previous Knowledge assumed

Previous Knowledge testing

PT's Activity

- Q. Stomach is a which type of organ?
Q. What is its structure?

P's Activity

Muscular

No response.

Announcement of the topic

Well students! Today we will discuss about the topic "Stomach"

Presentation

Content	Pupil teachers activity	Pupil Activity	Chalk-board Work
Stomach	It is a muscular organ located on the left side of the upper abdomen. The stomach receives food from the Oesophagus. As food reaches the end of the oesophagus, it enters the stomach through a muscular valve called the lower oesophageal sphincter. The stomach secretes acid and enzymes that digest food.	students will listen	Stomach is a muscular organ located on the L.H.S of upper abdomen.
	The stomach secretes acid and enzymes that digest food. Ridge of muscle tissue called rugae.		

line the stomach. The stomach muscles contract periodically, churning food to enhance digestion. The Pyloric sphincter is a muscular valve that opens to allow food to pass from the stomach to the small intestine.

structure of the stomach
In humans, the stomach lies between the oesophagus and the duodenum (the first part of small intestine). It is in the left upper part of the abdominal cavity. The top of the stomach lies against the diaphragm lying behind the stomach in the pancreas. A large double fold of visceral peritoneum called the greater omentum hangs down from the greater curvature of the stomach. The two sphincters keep the contents of the stomach the lower oesophagus, the lower sphincter at the junction of the oesophagus and stomach and the pyloric sphincter at the junction of the stomach with the duodenum.

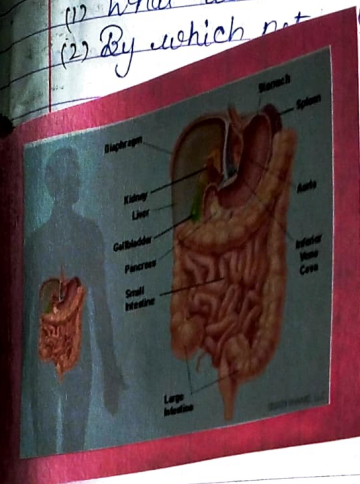
Stomach
Secretes
acid
and
enzymes
that
digest
food
& the
ridges
of the
muscle
tissue
called
rugae
line
the
stomach
allow
food
Pyloric
sphincter
at the
junction

Generalisation

So, students today we have discuss about the stomach.

Recapitulation

- (1) What is stomach?
- (2) By which part stomach is surrounded?



the shape and
ion of a
stomach?

Lesson Plan-6

Class- VII

P.T. Rollno-

Subject- Physical sci.

Topic- The small intestine

Date-

Time- 35-40 min

General Objectives

- (1) To develop scientific knowledge of the student.
- (2) To provide scientific training among the student.
- (3) To lay foundation for higher studies.

Instructional Aids to be used

- (1) General aids- chalk, dusty, blackboard
- (2) Specific aids- chart, and flash card

Instructional Objectives in Behavioural Terms

- (1) Knowledge- The students will be able to recall and get knowledge about small intestine.
- (2) Understanding- The students will be able to understand about small intestine.
- (3) Application- Students will explain about small intestine.
- (4) Creativity- Students will be able to explain about small intestine.

Previous Knowledge Assumed

Previous Knowledge Testing

P's Activity

- Q. What is the length of small intestine?
- Q. What is the location?

P's Activity

20 feet

No response

Announcement of the Topic

Well students! Today we will discuss about the topic "The small intestine"

Presentation

Content	Pupil teachers activity	Pupil activity	chalk-board work
Small intestine	It is about 20 feet long and about an inch in diameter. Its job is to absorb most of the nutrients from what we eat and drink. Velvety tissue lines as the small intestine, which is divided into the duodenum, jejunum and ileum.	Students will listening	Small intestine is 20 feet long & 1 inch in diameter is the short where pup- action.
Location	It lies between the stomach and large intestine and receive bile juice and pancreatic juice through the pancreatic duct to aid in digestion.		

villi It is the shortest where preparation for absorption through small finger like projection called as villi begins

duodenum It is specialized for the absorption through its lining by enterocytes as small nutrient particles which have been previously digested by enzymes in the duodenum

Ileum It is used to absorb vitamin B₁₂, bile salts, and the product of digestion were not absorbed by the jejunum.

Function of small intestine The small intestine is where most chemical digestion takes place. Many of digestive enzymes that act in the small intestine are secreted by the pancreas and liver and enter the small intestine via the pancreatic duct.

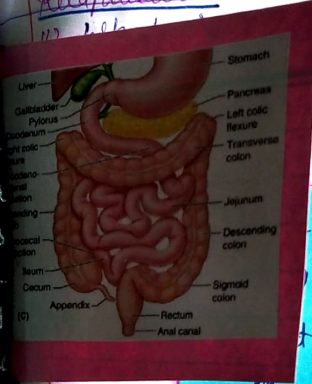
Students will listen carefully

It is the shortest where preparation for the absorption through small finger like projection called as villi begins. Small intestine is most chemical digestion.

Generalization

do, students we have discuss about the Small intestine.

Recapitulation



What is the size and location of small intestine?

What is the function of small Intestine?
What is the location of Ileum?

Lesson Plan-07

P.T. Roll No-

Class- VIII

Subject- Physical Sci.

Date-

Topic- Absorption of food in small intestine
time- 35-40 min

General Objectives

- (1) To develop Scientific knowledge to the student.
- (2) To develop scientific attitude among student.
- (3) To lay foundation for higher studies.

Instructional aids to be used

- (1) General aids - chalk, duster, blackboard.
- (2) Specific aids - pointer, flash card.

Instructional objectives in Behavioural terms

- (1) Knowledge - students will be able to get the knowledge about absorption of food.
- (2) Understanding - students will be able to understand about absorption of food.
- (3) Application - students will be able to explain about absorption of food.
- (4) Creativity - students will be able to explain about various absorptions of food.

Previous knowledge assumed

Previous Knowledge testing

PT's Activity

- Q. Where is the absorption of food occur?
- Q. How it works?

TA's activity

It occurs in small intestine
No response

Announcement of the topic

Well students! Today we will discuss about the topic "Absorption of food in small intestine".

Presentation

<u>Content</u>	<u>Pupil teachers activity</u>	<u>Pupil activity</u>	<u>Chalk-board work</u>
Absorption of food in small intestine	The primary function of the small intestine is the absorption of nutrients and minerals found in food. Digested nutrients pass into the blood vessels in the wall of the intestine through a process of diffusion. The inner wall or mucosa of the small intestine is lined with simple columnar epithelial tissue.	students will distinguish.	Primary function of the small intestine is the absorption of food.

Why does absorption occur in small intestine?
 After the digestion of food, the absorption of food occurs in small intestine. As the presence of villi gives the inner walls of small intestine greater surface area which helps in rapid absorption of food.

Students will listening carefully.

How small intestine works
 Food comes into the small intestine from the stomach through the uppermost part of the small intestine, known as duodenum. This section of small intestine makes up about one fifth of the total length of the organ and receives semi-solid sludge of digested food from the stomach.

What does small intestine absorb?
 The small intestine is the part of intestine where 90% of the digestion & absorption of food occurs, the other 10% taking place in the stomach & large intestine is absorption of nutrients and minerals from food.

Students will listening carefully.

In to Small intestine from the stomach through the small intestine. I know absorb. In small intestine food is digested.

Generalization

Students today we have discussed about Absorption of food in small intestine.

Recapitulation

What is absorption of food? Why absorption take place in small intestine?



Where is the small intestine located?
 What does the small intestine absorb?

Lesson Plan-8

P.T. Roll No- 28

Subject- Physical sci.

Topic- Nutrition in grass eating animals

Class- VII

Date-

Time- 35-40 min

General Objectives

- (1) To develop Scientific Knowledge to the students.
- (2) To develop scientific training among the students.
- (3) To lay foundation for higher studies.

Instructional aids to be used

- (1) General aids chalk, duster, blackboard.
- (2) Specific aids - chart and flash cards.

Instructional objectives in Behavioural terms

- (1) Knowledge - students will be able to recall and get the knowledge about nutrition in grass eating animals.
- (2) Understanding - Students will be able to understand about nutrition in grass eating animals.
- (3) Application - students will be able to explain about herbivorous animals.
- (4) Creativity - students will be able to explain about nutrition in animals.

Previous Knowledge assumed

Previous Knowledge Testing

PT's Activity

Q what is the first chamber in ruminants

Q what is second chamber

P's Activity

Rumen

No response.

Announcement of the topic

Well students! Today we will discuss about the topic "Nutrition in grass eating animals".

Presentation

<u>Content</u>	<u>PT's Activity</u>	<u>P's Activity</u>
<u>Digestion in ruminants</u>	Grass eating animals (herbivorous) like cow, deer, or, buffalo etc swallow food without chewing. After feeding, they bring the food from the stomach back into the mouth and chew it. This process is called as rumination and such animals are called ruminants. Their main diet is plants, they are unable to digest, because of lack of cellulose breaking.	Students will listen carefully

Grass eating animals like cow, deer, or, buffalo, etc. Swallow food without chewing.

enzymes for this then maintain a symbiotic relation with microorganisms. Microbes help in breaking down of cellulose that constituent of plant cell wall. Ruminants have one stomach in four compartment or chambers for digestion of food.

First Chamber - Rumen - The largest organ that allows for bacterial and chemical breakdown of fibres.

Second Chamber - Reticulum - It is also called as "honeycomb" because of the honeycomb appearance of its lining. It collects smaller particles and moves them into the omasum, while the larger particles remain in the Rumen for further digest.

Third Chamber - It helps in the absorption of water, magnesium and the volatile fatty acids produced by rumen fermentation, they have not absorbed.

Students will listening carefully.

Fourth Chamber

This is called as true stomach, most similar to a stomach in non-ruminant as Majority of chemical breakdown of food.

Generalization

As students today we have discussed about nutrition in grass eating animals.

Recapitulation

(1) What is Ruminantion?

(2) Name the four chambers for digestion of food?

Homework

Q Write the functions of all the chambers of the ruminants for food?

The main reason is plant and they come to digest because of the lack of cellulase breaking enzymes & maintain an symbiotic relation Chamber.

Lesson Plan-19

P.T. Roll No - 28

Class - VI

Subject - Physical Sci.

Date -

Topic - Nutrition in Amoeba

Time - 35-40 min

General Objectives -

- (1) To develop scientific knowledge to the students.
- (2) To develop scientific attitude among the students.
- (3) To lay foundation for higher studies.

Instructional aids to be used

- (1) Knowledge - Students will be able to recall and apply knowledge about nutrition in Amoeba.
- (2) Understanding - Students will be able to understand about nutrition in Amoeba.
- (3) Application - Students will be able to explain about nutrition in Amoeba.
- (4) Creativity - Students will be able to explain types of nutrition in Amoeba.

Previous knowledge assumed

Previous Knowledge testing

P.T's Activity

Q. What is Amoeba?

P's Activity

It is a single celled organisms found in freshwater. No response.

Q. What is unicellular organism?

Assessment of the topic

to all students! Today we will discuss about the topic "nutrition in Amoeba".

Introduction

Content

P.T's Activity

Amoeba is an important single-celled organism found in freshwater. These microscopic protozoans are omnivorous, which mostly feed on both plants and animals. They mostly feed on algae, microscopic organisms & their other dead organic matter present in water. The mode of nutrition in amoeba is Holozoic.

P's Activity

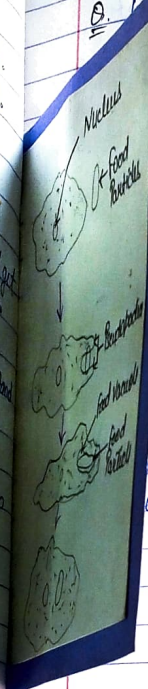
Students will listen carefully

Blackboard

Amoeba is an important single-celled organism found in water.

Occurrence of Amoeba

Nutrition in an amoeba occurs through a process through a process called phagocytosis where.



the entire organism. pretty much engulfs the food it plans on eating up.

unicellular organism An amoeba is a unicellular organism as it does not have any specialized organs for the mechanism of nutrition.

students will listen carefully

Its entire process is carried through the body surface with the help of pseudopodia.

Mechanism of nutrition Ingestion - It is the process of taking in the food into the body either by swallowing or absorbing it.

Digestion It is the process of breaking the insoluble and large food molecules into soluble and minute molecules.

students will listen

Absorption - The nutrients from the digested food materials are absorbed into cells cytoplasm by leaving behind the undigested food material through the wall of the food vacuole.

Students will listen carefully

Generalization

So, students today we have discussed about nutrition in Amoeba?

Recapitalation

- (1) What is Amoeba?
- (2) How Amoeba absorb food?

Homework

Q What is Digestion?
Q How can we absorb the food in our body?

Lesson Plan-10

Class- VIII

Date-

Time- 35-40 min

PT's Roll No- 88
Subject- Physical Sci
Topic- Acids

General objectives

- (1) To develop knowledge to the students.
- (2) To develop scientific knowledge among the students.
- (3) To lay foundation to higher studies.

Instructional aids to be used

- (1) General aids - chalk, duster, black board.
- (2) Specific aids - chart and flash cards.

Instructional Objectives in Behavioural terms

- (1) Knowledge - The students will be able to recall and get knowledge about acids.
- (2) Understanding - The students will be able to understand about acids.
- (3) Application - The students will be able to explain about acids.
- (4) Creativity - The students will be able to explain about types of acids.

Previous knowledge assumed

Previous knowledge testing

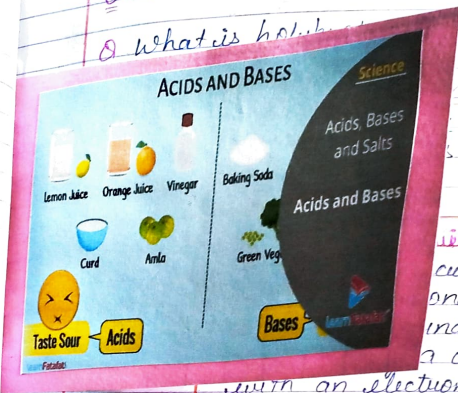
PT's Activity

Q What is acid?

It is a molecule capable of donating a proton? No response.

Q What is hydrochloric acid?

we will discuss about the



ity
cult or a ion
onating a pro-
inate capable
a covalent bond
with an electron pair

PT's Activity
Students
will
listening
carefully

It is a molecule or an ion capable of donating a proton or alternately. It is the acid or base.

chemical characteristics

- (1) Monoprotic acid -> It is also known as monobasic acids, and these acids that are able to donate one proton per molecule during the process of dissociation.
Example -> hydrochloric acid, nitric acid (HNO₃)

12) Polyprotic acids also known as polybasic acids are able to donate more than one proton per acid molecule, in contrast to monoprotic acid that only donate one proton per molecule.

13) Neutralization - It is the sum of a/c on acid and base, producing a salt and neutralized base.
For Example - hydrochloric acid and sodium hydroxide form sodium chloride and water.

Application of Acids - Acids exist universally in our life. There are both natural and synthetic kinds of natural acid compounds with biological function and massive synthesized acids.

In Industry - Acids are fundamental reagents in treating almost all processes in today's industry. Sulphuric acid is most widely used acid in industry.

Preserving Salt and neutral base like hydrochloric acid
2. Sodium hydroxide
Tartaric acid is an important component of some common used food.

In food

Tartaric acid is an important component of some common used foods like tamarind and unripe mangoes. Natural fruits and vegetables also contain acid.

Students will listening carefully

Generalisation

So, students today we have discussed about acids.

Recapitulation

- 1) What are acids?
- 2) Give some uses of acids?

Homework

- 1) Write the characteristics of food?
- 2) What is an acid?