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MICRO TEACHING LESSONS

Lesson No :.....1.....

Date.....

Duration of the period.....15 MIN.....

Pupil Teacher's Name..Nilima Kumari

Pupil Teacher's Roll No.....26.....

Class.....VI.....

Average Age of the pupils...11+.....

Subject..LIFE SCIENCE.....

Topic..TYPES OF PLANTS.....

CONTENT ANALYSIS :-

* Kinds of plants
* Herbs
* Shurbs
* Trees
* climbers
* creepers

GENERAL OBJECTIVES :-

* To develop scientific attitual among the students.
* To develop interest in life science among the students.
* To develop reasoning, thinking, analysing attitude among the student.
* To develop the ability to solve the problems using scientific methods.
* To develop logical and rational attitudes among the students

INSTRUCTIONAL OBJECTIVES :-

KNOWLEDGE : The pupil will be able to

* recall the character of herbs.
* recall and recognise different herbs and shurbs character.
* recognise the herbs, shrubs and trees present in their surrou-ndings.
* recall the character of climbers and creepers.
* recognise climbers and creepers plant in their surrounding.

UNDERSTANDING: The pupil will be able to

* discriminate between herbs and shrubs.
* Compare the characters of climbers and creepers.

* Differentiate between the characters of shrubs and trees.
* examples of herbs, shrubs and trees.

SKILL: The pupil will be able to
* draw a chart explaining difference between herbs, shrubs and trees.

APPLICATION: The pupil will be able to apply the knowledge of herbs, shrubs and trees to classify the plants present in their surrounding is one of these categories.

TEACHING AIDS:
Chalk, duster, pointer, chart, plant specimens.

PREVIOUS KNOWLEDGE: The pupil know that all the plants are not of the same kind.

INTRODUCTION:

PUPIL TEACHER ACTIVITY	PUPIL ACTIVITY
* What are different parts of plant?	* Root, stem, leaves, flower.
* What difference do you observe between different plants?	* Different plants have differ-nt height, colour of stem, size of leaves.
* What are different kinds of plants based upon the difference?	* No response.

ANNOUNCEMENT OF THE TOPIC:
well students, Today we will study the various kinds of plants.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
HERBS	Teacher shows a Dhania plant to the students and asks * what is it? * what is its height? * what is the colour of it? * Is the stem of it hard or delicate P.T.S.:- Such plants which are shorter in height and have green and tends stem are called herbs. Now give me some example of herbs?	* Dhania plant. * It is short plant * Green * stem is very delicate. Spinach, Pudina.
SHRUBS	Teacher shows a china rose twig to student. * which plant branch is this? * what is the height of a china rose twig? * what kind of stem does the plant have? * where do the branches appear on the plant? * what do we all such type of plants? P.T.S: Such plant which have medium sized height and have hard and brown coloured stem with branching all over the plant is called as shrubs. * Give me some example of shrubs	* china Rose * slightly taller than other. * Hard & brown is colour * All over the plant. * No response. * Rose plant, Tulsi
TREES	All of you have seen a neem plant * what is the height of a neem plant?	Much taller than us.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* What is the colour of the main stem?	* Brown
	* Is this stem thick or thin?	* Thick
	* Where does the branches appear on this plant?	* Higher upon the stem.
	P.T.S. :- Such type of plants which are taller in height, have thick branches at the top are called trees.	* Neem tree, Peepal tree.
CREEPERS :	There are certain plants which cannot stand upsight & so spread on the ground.	
	* Why do you think they can't stand?	Because they have weaks
	P.T.S. :- yes, Such plants with weak stems that spread on the ground are called creepers.	
	* Give me some examples of creepers.	* water melon.
CLIMBERS :	Name any plant which take supporton neighbouse plant structure to climb.	* Money plant
	P.T.S. :- Good, Such plants that take support on neighbouring structure are called climbers.	

EVALUATION :

* How many kinds of plants ?
* What is the difference between herbs and shrubs ?
* What is the difference between climbers and creepers?

Home TASK :

* Differentiate between climbers and creepers?
* Differentiate between herbs and shrubs with diagram.

REFERENCE BOOK :

NCERT Book of class VIth.

Lesson No : 2

Date ..... Duration of the period 15 MIN.

Pupil Teacher's Name Nilima Kumari Pupil Teacher's Roll No. 26

Class VI Average Age of the pupils 11+

Subject LIFE SCIENCE Topic HABITAT

CONTENT ANALYSIS :

* Definition of habitat
* Components of habitat
* characteristics of habitat
* Types of habitat

GENERAL OBJECTIVES :

* To develop scientific attitude among the students.
* To develop interest in life science among the students.
* To develop reasoning, thinking, analysing attitude among the student.
* To develop the ability to solve the problem and using scientific methods.
* To develop logical and rational attitudes among the students.

INSTRUCTIONAL OBJECTIVES :

KNOWLEDGE : The pupil will be able to

* recall the definition of habitat.
* recall and recognise different types of habitat.
* recall and recognise the component of habitat.
* recognise different habitats they see around them.

UNDERSTANDING : The pupil will be able to

* explain the characteristics of habitat.
* give example of different kinds of habitat.
* explain the different compound of habitat.
* explain the different between different types of habitat.

SKILL : The pupil will be able to make a model on different types of habitat.

APPLICATION : The pupil will be able to identify different types of habitat in surrounding and tell why different organisms live in different habitat.

PREVIOUS KNOWLEDGE: The pupil will be able to different organism live in different places. They know where fish, dogs, earthworms live.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Where do we live?	* House
* Where do fishes live?	* water, pond
* where do birds live?	* on the tree
* Now, What do you conclude from their questions?	* Different animals live in different place.
* Good, what is the biological term for this?	* No response.

ANNOUNCEMENT OF THE TOPIC: Well Student, Today we will study habitat.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
HABITAT	(Teacher shows the marigold flower to the student.) The teacher asks and dissect the flower and shows some insects present inside the flower to the student.	
	* what do you understand from it?	* These insects lives in the flower.
	P.T.S :- Habitat is the Living place of an organism.	
	* Is habitat same for all organism?	* No
	* Why not?	* Because different organisms required different condition for survival.
	P.T.S :- Different habitats offer different food, shelter and appropriate climatic conditions to the organisms living in that habitat.	
	* Give me example of habitat of some animals or plants?	* Habitat of fish in water * Habitat of cold desert.
COMPONENT	* what is included in the term of Habitat?	* The living organism & environment.
	P.T.S :- The habitat consists of two component - Abiotic and biotic.	
	* Biotic is the living component of habitat and abiotic is the non-living component of habitat.	
	* Give me some examples of abiotic component?	* Temperature, humidity
	* Give me some examples of biotic components?	* Living organism surviving in some habitat i.e. plants and animals.
	P.T.S :- All the living organism in that habitat constitutents of biotic component.	
CHARACTERISTICS	* what are the characteristics of the habitat?	* It consist biotic and abiotic component.
	Yes, why are the abiotic component important in habitat?	* It provide necessary condition for organism.
	* what are the biotic component important in habitat?	* It provide food, interaction and balance in population.
	* what will happens if biotic and abiotic components are not balanced?	* organisms will die.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S.:- Yes, Imbalance will lead to death of living organism.	
TYPES OF HABITAT	* Living being are not found everywhere on earth.	
	* These are different types of habitat on earth.	
	* Let's take an examples of fish what will be its habitat?	* Aquatic
	* correct, Now give me some aquatic habitats examples?	* Pond, sea, rivers.
	* Similarly, tell other parts of habitat.	* No response.
	* What kind of animal lion is?	* Terrestrial
	* So its habitat is called?	* Terrestrial habitat
	* Habitat of aerial animal	* Aerial habitat
	* what do you call the habitat of animals which most of their time on tree and branches?	* Arboreal habitat
	P.T.S.:- So their are four types of habitat :- 1) Aquatic 2) Terrestrial 3) Aerial 4) Arboreal	

EVALUATION : 1) What is habitat ?
2) What are the components of habitat ?
3) What are the types of habitat ?

HOME TASK : * What is habitat and write its component with examples ?
* Give the types of habitat with example.

REFERENCE BOOK :
NCERT Book of class VIth.

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Lesson No :.....3.....

Date..... Duration of the period..15 MIN.....

Pupil Teacher's Name..Nilima Kumari Pupil Teacher's Roll No..26.....

Class..VIth..... Average Age of the pupils..11+.....

Subject..LIFE SCIENCE..... Topic..FOREST.....

CONTENT ANALYSIS :
* Definition of forest.
* Relation in plants & animals.
* Balance of CO_2 & O_2 in nature.
* Effect of depletion of forest on man.

GENERAL OBJECTIVES :
* To develop scientific attitude among the Students.
* To develop interest in Life Science among the Students

INSTRUCTIONAL OBJECTIVES :

KNOWLEDGE: Pupil will be able to
* recalls the definition of forest.
* recalls the component effect on forests.

UNDERSTANDING: The pupil will be able to
* Explain the relation between plants and animals.
* Explain different types of forest products.

SKILL : Pupil draws a diagram to show relation between plants and animals

APPLICATION : The students reason out harmful effects of deforestation
* Pupil give reason why natural resources is finished.

TEACHING AIDS : Chart duster, chalk, board.

PREVIOUS KNOWLEDGE :
* Pupil knows about plants and animals.
* Pupil knows importance of afforestation.

INTRODUCTION:

PUPIL TEACHER ACTIVITY	PUPIL'S ACTIVITY
* What are things necessary for survival?	* water, air, food.
* what is the source of food?	* From plants & animals.
* From where we get oxygen?	* Plants
* Where we find plants and animals?	* Forest
* What we call plants and animals found in forest?	* Problem.

ANNOUNCEMENT OF THE TOPIC : well students, today we will study about forest.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
HERBS, SHRUBS AND TREES (Forest wealth).	* Tell me name of some plants?	* Potato plant, Tomato plant.
	* Tell me name of some big plant?	* Neem, Banyan
	* What we call these plants?	* Problem.
	P.T.S.:- Green delicate plants are called herbs. Plants in which stem arise from branches called shrubs. Big plants have thick stem called trees.	
	* Tell me name of some climbers?	* Cuscutta
	* How stem of Cuscuta is?	* delicate
	* what we call them?	* climbers
	* Name some vegetarian animals?	* Rabbit Deer.
	* Name some non-vegetarian animals?	* Lion, Tiger.
INTERDEPENDENCE OF PLANT AND ANIMAL IN FOREST	* How they get their food?	* From Plant & animals
	* what is ecosystem?	* Problem.
	P.T.S.:- In the ecosystem, all living and non-living things are present. We observe plants, animals, hydrosphere, Lithosphere, Biosphere.	
	* How plant & animals relate to one another	* Animals depend on plants for food.
	* Which gas release by plant?	* O_2
	* Which gas we inhale?	* CO_2
	* How plants help us?	* Problem
	P.T.S.:- Plants make relation between O_2 and CO_2 make balance in nature.	
CAUSES OF DEFORESTATION	* What is the main reason of the deforestation?	* Making paper & furniture.
	* Why deforestation occur?	* To make big houses and for commercial Purpose.
	P.T.S:- Main reason of deforestation is population and industries.	
HARMFUL EFFECTS OF DEFORESTATION	* What will happen when all the forest will finish?	* We don't get O_2.
	* What will happen to CO_2?	* CO_2 increase in atmosphere.
	* What are the other effects of deforestation?	* Problem.
	P.T.S:- By deforestation all the ecosystem can be affected. All the animals and plants will die and our natural balance can be damaged.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
METHODS FOR STOPPING DEFORESTATION	* What should be done to stop deforestation? * What should we do? P.T.S:- We should protect the animals species and also grow new plants.	* Afforestation should be done. * Problem

EVALUATION:

* What are shrubs?
* What are the harmful effects of deforestation?
* What is the percentage of CO_2 in atmosphere?

HOME TASK:

* How will you differentiate between vegetarian and non-vegetarian animals?
* What is the cause of deforestation?
* What are the method of stopping deforestation?

REFERENCE BOOK:

NCERT Book of class VIth.

Lesson No : 4

Date..... Duration of the period 15 MIN

Pupil Teacher's Name Nilima Kumari Pupil Teacher's Roll No. 26

Class VIth Average Age of the pupils 11+

Subject LIFE SCIENCE Topic POLLINATION

CONTENT ANALYSIS:

* Definition of pollination
* Types of pollination
* Methods of pollination.

GENERAL OBJECTIVES:

* To develop interest in life science among the students.
* To develop reasoning and thinking power among the students.
* To trained them in scientific manner.
* To develop scientific attitude among the student.
* To create cause and effect relationship among the student.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE: The pupil will be able to

* recall the definition of pollination.
* recall and recognise the types of pollination.
* recognise methods of pollination.

UNDERSTANDING: The pupil will be able to

* explain the process of pollination.
* give examples of pollination.
* Differentiate between self pollination & cross pollination.

APPLICATION: The pupil will be able to

* reason out why flower are usually colourful and sweet smelling.
* reason out the presence of nector in flowers.
* tell how wind helps in pollination

SKILL: The pupil will be able to draw the diagram showing means of pollination.

TEACHING AID: * chart showing types of pollination.
* chart showing means of pollination.

PREVIOUS KNOWLEDGE: Pupil know that the most beautiful part of a plant is flower.
* Pupil know that insects collect nectar from flower.
* Pupil are aware of the male and female part of flower.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Where do seeds forms in a plant?	* In the fruit.
* How do seeds are formed?	* By the fertilization
* How do fertilization takes place in a plants?	* When the pollen reach the pistil.
* What do you call do the process of transference of pollen grain to the stigma is called?	* Problem.

ANNOUNCEMENT OF THE AIM:
Well students, today we will study about pollination.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINATION OF POLLINATION	* How do seeds are formed?	* By the fertilization in flo
	* what is the male part of flower?	* stamen
	* what is the female part of flower?	* Pistil
	* How do fertilization takes place in the plant?	* when pollen reach pistil.
	P.T.S:- For fertilization to occur, the pollen grains must first be transferred from the stamen to the stigma of the pistil. The process	

TEACHING POINT	PUPIL'S TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	of transference of pollen grains from the anthers to the stigma is called pollination.	
TYPES OF POLLINATION	* what do you call those plants?	
	* Which have both the reproductive organs?	* Bisexual
	* which have one reproductive organs.	* Uniesexual.
SELF POLLINATION	P.T.S. :- The pollen grains are carried to the stigma of the same flower, then it is knows/as self pollination.	
CROSS POLLINATION	If pollen grains are carried to the stigma of different flower of the same. It is cross-pollination.	
	* How do pollination takes place?	* By insects, birds, animals.
METHODS OF POLLINATION		
INSECT POLLINATION	P.T.S:- Insect collect nectar, then pollen grains from the anther stick to the insects body. The grains get rubbed off when the insect visit other flowers to reach the nectar.	
	* What do they made from nectar?	
	* what if it does not produce nectar?	* Pollination will not to occur by insects
WIND POLLINATION	* When how do it will take place?	* By winds.
	P.T.S :- In wind pollination, wind can blow pollen grains from one flower to the stigmas of the other flowers.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	e.g. corn, wheat, grasses.	

EVALUATION:

* What is pollination?
* What are the two types of pollination?
* What are the means of pollination?

HOME TASK:

* Define pollination?
* What is cross pollination? How does it take place?

REFERENCE BOOK:

NCERT Book of Class VIth.

MEGA TEACHING LESSONS

Lesson No :....1.....

Date.....

Duration of the period...15 MIN.....

Pupil Teacher's Name...[redacted]

Pupil Teacher's Roll No...26.....

Class...VI.....

Average Age of the pupils...11+.....

Subject...LIFE SCIENCE.....

Topic...PART OF FLOWER.....

CONTENT ANALYSIS :-

* Parts of flower - calyx, coroolla, stamen, pistil.
* Functions of parts of flower.
* Unisexual and bisexual flower.

GENERAL OBJECTIVES :-

* To develop scientific attitude among the student.
* To give the knowledge of biological facts, process, phenomenon, concept
* To create interest in life science.
* To develop creative and innovative thinking among the students.
* To develop reasoning power among the students.
* To provide training in scientific manner.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE: The pupil recalls the part of the flower.

* The pupil recognises the part of the flower.
* The pupil recalls and recognises the reproductive parts of the flower
* The pupil recalls and recognises the types of flowers to label the drawn diagram.

UNDERSTANDING:

* The pupil will be able to differentiate between various parts of flower
* The pupil will be able to differentiate various types of flowers.
* The pupil will be able to explain the various parts of flower.
* The pupil will be able to explain why pistillate differs from staminate flower.

SKILL:

* The pupil will be able to draw the diagram of various part of flower

* The pupil will be able to draw L.S. of the flower.

APPLICATION:

* The pupil will be able to identify the various parts of the flower in different situation.
* The pupil will be able to identify the bisexual and unisexual flower.
* The pupil will be able to identify the missing part of the flower.

TEACHING AIDS:

Flower, forcep, chart to show, duster, pointer, black board.

PREVIOUS KNOWLEDGE:

The students are familiar with various parts of plant underground part, aerial part and the most beautiful part of p

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What are the different name of some flower?	* Rose, Jasmine, Lotus.
* Tell me the name of various parts of the plant?	* Root, stem, leaves.
* Which is the underground part of plant?	* Root
* Which part of plant is known as a aerial part of the plant?	* stem
* Which is the most beautiful part?	* flower
* Tell me the various parts of flower?	* No response.

ANNOUNCEMENT OF THE TOPIC:

Well students, Today we will study the various part of a flower.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
CALYX	* Look what is the colour of this outermost part of flower?	* Green
	* Why it is green?	* due to presence of chlorophyll.
	* How many leaflets are there?	* 5
FUNCTION OF CALYX	* What is the function of chlorophyll present in green leaf?	* To perform the function of photosyn-thesis.
	* So, tell me what is the function of calyx?	* To perform the function of photo-synthesis.
COROLLA	* Now remove the calyx.	
	* What do you observe in the next whorl	* It is colourful part
	* Why this part is called colourful.	* No response.
	* Why this colourful part attract insects.	* No response.
	P.T.S:- This colourful part help to attract insects for pollination. This 2nd outermost whorl is called corolla and its leaflets are known as petals.	
	* How many petals are in this flower?	* 5 petals
	* What is the function of corolla?	* To attract insects for pollination.

HOME TASK :

* What is the function of calyx in pollinization ?
* What are the parts of stamen called ?
* Write the names of different parts of pistil ?

REFERENCE BOOK :

NCERT Book of class VIth.

Lesson No :..2.....

Date..... Duration of the period..15 MIN.....

Pupil Teacher's Name..[illegible].. Pupil Teacher's Roll No..26.....

Class..7th..... Average Age of the pupils..11+.....

Subject..LIFE SCIENCE..... Topic..FOOD CHAIN.....

CONTENT ANALYSIS :

* Concept of Autotrops and Heterotrops.
* Example of Autotrops and Heterotrops.
* Definition of herbivores, Carnivores, Omnivores, food chain and its example in grassland or forest and in aquatic ecosystem.
* Various tropic levels in food chain.

GENERAL OBJECTIVES :

* To develop scientific attitude among the Student.
* To create interest in life science.
* To give the Knowledge of biological facts, process, phenomenon, concepts
* To develop creative and innovative thinking among the students.
* To develop reasoning power among the students.
* To provide training in scientific manner.

INSTRUCTIONAL OBJECTIVES :

KNOWLEDGE: The Student will be able to

* recall the definition of autotrops.
* recognise the autotrops.
* recall the definition of heterotrops.
* recognise the heterotrops.
* recall the definition of food chain
* recall the definition of herbivors, Carnivores and Omnivores.

UNDERSTANDING: The Students will be able to

* explain the definition of autotrops.
* explain the definition of heterotrops.
* distinguish between Autotrops & Heterotrops.

* explain the definition of Herbivores, carnivores, omnivores.
* explain the definition of food chain operate in grassland or in water.

APPLICATION: The students will be able to
* give reason why these is a balance in nature.
* give reason why different food chain operate in different

SKILL:

The pupil will be able to tabulate the different plants in autotrops, heterotrops.

TEACHING AID:

Charts, Duster, pointer, chalk, black board.

PREVIOUS KNOWLEDGE:

The pupil already know what are herbivores, carnivores or omnivores. The pupil already know about organism living in grassland or in forest or in water.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What we eat for living?	* Food
* Name some items which we eat?	* Rice, chapati, pulse
* What else we eat?	* Fruit, vegetable
* What we get from food?	* energy
* What is the function of food?	* It helps in growth of our body
* What are the sources of food?	* Plants and animals
* What is food chain?	* Problem.

ANNOUNCEMENT OF THE TOPIC:

Well student, today we will study the food chain.

INTRODUCTION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINITION OF AUTOTROPS	* Name the living organism?	* Plants, Animals
	* which of them prepare their own food?	* Plants
	* Why leaves of the plants are green?	* Due to the presence of chlorophyll.
	* How plants prepare their food?	* By the process of photosynthesis.
	* What we call them?	* Problem.

P.T.S:-

We call them as Autotrops. Autotrops are those organisms which can prepare their own food with the help of air, water, sunlight, CO_2. Autotrops are also known as producers.

DEFINITION OF HETEROTROPS	Tell me, these organisms which cannot prepare their own food?	Heterotrops
	* Name some example of heterotrops?	* Animal, human being
	*What are the types of heterotrops?	

DEFINITION OF HERBIVORES, CARNIVORES, OMNIVORES.

P.T.S:-

The three types of heterotrops.

Herbivores: Those organisms which eat plants or plant products.

Carnivores:- Those organism which eat flesh or other animals.

Omnivores:- Those organism which eat both plants or animals.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
EXAMPLES OF HETEROTROPS	* What are the example of herbi--vores? * Tell me example of carnivores * Tell me example of omnivores. P.T.S:- Heterotrops are also known as consumers.	* Cow, Goat * Fox, hawn * Man, dog.
DEFINITION OF FOOD CHAIN	* What does deer eat? * What does lion eat? * What we call this sequence of eating one organism to other organism. P.T.S:- We call it food chain. The sequence of living organism in a community in which one organism eat another organism to transfer food energy is called a food chain.	* Plant * Deer * Problem.
EXAMPLE OF FOOD CHAIN	* What do you observe in grass--land or forest? Yes, what do you observe in aquatic ecosystem or in pond. P.T.S:- In grassland we see plants are eaten by deer, and deer is then eaten by lions. In pond, we observe algae	* Plants, lions, deer * Plant, fish, Dolphin.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	is eaten by protozoa, protozoa is then eaten by small fish and small fishes are eaten by big fishes. So, there are different food chain operating in different region.	

FOOD CHAINS IN WATER

1) PHYTOPLANKTON → ZOOPLANKTON / SMALL CRUSTAUS → PREDATOR INSECTS → SMALL FISH → LARGE FISH → CROCODILE

2) PHYTOPLANKTON → ZOOPLANKTON → SMALL CRUSTAUS → PREDATOR INSECTS → SMALL FISH → LARGE FISH

	?	
	ers te	
		* Consumers.
SECOND TROPHIC LEVEL	Yes, herbivores are known as consumers and they constitute "second trophic level" in a food chain.	
THIRD TROPHIC LEVEL	In which trophic level carnivores comes. * What is Trophic level? P.T.S:- The various links in a food chain at which transfer of food or energy takes place are called trophic level. (Showing charts)	* They come under 3rd trophic level * Problem.

EVALUATION :

* What are autotrops ?
* In which nature all green plants are whereas animals are whereas animals are consumers ?
* Define omnivores ?
* Define food chain ?
* Name some organisms found in grassland ?

HOME TASK :

* Define food chain ?
* Give examples of food chain ?

REFERENCE BOOK :

NCERT Book of VI th.

Lesson No : 3

Date ....

Pupil Teacher's Name [illegible]

Class [illegible]

Subject LIFE SCIENCE

Duration of the period 15 MIN

Pupil Teacher's Roll No 26

Average Age of the pupils 11+

Topic ORGANISATION IN MULTICELL-R ORGANISM

CONTENT ANALYSIS :-

* Definition of multicellular levels of
* Organ
* Organ System
* Tissues
* Cells

GENERAL OBJECTIVES :-

* To develop scientific attitude among the students.
* To develop interest in life science.
* To develop creative and innovative thinking among the student
* To give knowledge of biological facts.
* To trained in scientific manners.
* To develop reasoning power.

INSTRUCTIONAL OBJECTIVES :-

KNOWLEDGE:

* Pupil recall and recognise various forms of organism.
* Pupil recall the unicellular and multicellular organism.
* Pupil recall and recognise various levels of organisation in mult-cellular organism.
* Pupil recall the definition of organ and organ system.
* Pupil recall and recognise shape of various organisms.

UNDERSTANDING:

* Pupil explain multicellularity.
* Pupil compare multicellular organism and unicellular organi
* Pupil compare organ and organ system.
* Pupil compare tissue and cell.

* Pupil explain tissue and organ system.

APPLICATION:

* Pupil form hypothesis about the levels of organisation.
* Pupil identify various organ, organ system.
* Pupil identify tissue and cell.
* Pupil show their interest in study of various different organisms.

SKILL:

* Pupil differentiate between organ and organ system.
* Pupil draw the diagram of organ and organ system.
* Pupil differentiate between tissue and cell.
* Pupil draw a diagram of tissue.

TEACHING AID:

A chart showing organ-system and organ chart showing tissue and cell.

PREVIOUS KNOWLEDGE:

Pupil are familiar with the basic activities of the living organism.

INTRODUCTION:

PUPIL TEACHER ACTIVITY	PUPIL ACTIVITY
* Give some examples of living organism?	* Plants and animals are examples of living organisms.
* How an elephant is different from a man?	* Elephant is very big and man is small in size.
* What is the similarity between the man and elephant?	* Both of them take food move, respond to stimuli and reproduce and expel the waste.
* What happens to the food they eat?	* Food gives energy.

PUPIL TEACHER ACTIVITY	PUPIL ACTIVITY
* Where this energy stored?	* It is stored in body parts.
* How the multicellular organism perform various function at the same time?	* Problem.

ANNOUNCEMENT OF THE TOPIC:

Well students, today we will study about the organisation in multicellular organism.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
ORGAN	* What are the various activities performed by a multicellular organism?	* movement, digestion respiration and various functions performed by an multicellular organism
	* Tell me the parts performing these functions?	* No response.
	* What are the parts involved in digestion?	* Intestine, mouth, stomach are the parts involved in digestion.
	* What is the specific term given to these parts of body which perform specific functions?	* No response.
	P.T.S:- The structural parts which perform a definite function of the body are called organs. Stomach is an organ.	
	* Give me examples of organ?	* Lungs, kidney, liver, ear, nose, eyes are some examples of organs.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIV
ORGAN SYSTEM	* What are the various organ involved in process of respiration?	* Nostril, pharyx wind pipe, Lungs various organs
	* What do you call this organisation of organs to perform specific functions?	* No response
	P.T.S :- The collection/organisation of organ to perform a specific function is known as organ system.	
TISSUE :	* What is the function of stomach?	* Digestion of fo is the function o stomach.
	* After Stomach where does the food goes?	* The food goes i Intestine.
	* What happens to food there in Intestine?	* Intestine help absorbtion of fo
	* What is the part involved in absorption?	* No response.
	P.T.S :- The Smaller part of intestine help in absorption. These Smaller part of an organ are called tissue. Tissue is an organ have a particular arrangement which helps organ in performing function properly.	
CELLS	* As organ is made up of tissue of what tissue is made up of?	* small round st

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* How these are present in tissue?	* These are packed side by side to form a whole tissue.
	* What do you call these small round structures?	* No response
	P.T.S :- The small round structures making tissue are called cells. In many called organism the cells are organised into tissue, tissues into organ, organ into (stoma) organisation of organ and organ systems makes the individual. This is how organisation in multicellur organism occurs.	

EVALUATION :

* What are various levels of organisation?
* Define organ System?
* What is tissue?
* What is an organ?

HOME TASK:

* Draw a neat and labelled diagram of digestive system?
* What is the basic unit of organisation?
* Differentiate between organ and organ system.

REFERENCE BOOK:

NCERT Book of class VIth.

Lesson No : 41

Date..... Duration of the period... 15 MIN

Pupil Teacher's Name... Nitika Kumari Pupil Teacher's Roll No... 26

Class... VIth Average Age of the pupils... 11+

Subject... LIFE SCIENCE Topic... VEGETATIVE REPRODUCTION

CONTENT ANALYSIS:

* Definition of vegetative reproduction
* Examples of vegetative reproduction
* Artificial methods of vegetative reproduction.
* Advantages of vegetative reproduction.

GENERAL OBJECTIVES:

* To develop scientific attitude.
* To develop interest in life science.
* To develop creative and innovative thinking among the students.
* To give knowledge of biological facts.
* To trained them in scientific manners.
* To develop reasoning power.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE:

* The pupil will be able to recall the term vegetative reproduction.
* The pupil will be able to recognise various methods of vegetative reproduction.

UNDERSTANDING:

* The pupil will be able to explain the phenomenon of vegetative reproduction.
* The pupil will be able to explain various methods of vegetative reproduction.
* The pupil will be able to differentiate between sexual reproduction and vegetative reproduction.

* The pupil will be able to give examples of vegetative reproduction

APPLICATION:

The pupil will be able to

* Select methods of vegetative propagation for cultivation.
* Give reasons for production of seedless fruits.

SKILL:

The pupil will be able to make a chart and experiment of vegetative reproduction.

TEACHING AIDS: Chart showing diagram, Chalk, duster, pot carrot, potato, Radish, onion, Garlic.

PREVIOUS KNOWLEDGE:

* The pupil are familiar with terms of reproduction.
* Knows various parts of a plant.
* The pupil are familiar with common plants.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITIES
* How do new plants are produced in ferns?	* By showing seeds.
* Where does these seeds originate in a plants?	* In the ovary of gynoecium
* By which method of reproduction these seeds are produced?	* By sexual reproduction.
* What is the other method to produce new plant, other than sexual reproduction.	* Problem.

ANNOUNCEMENT OF THE TOPIC:

Well students, today we will study about vegetative reproduction in plants.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINATION OF VEGETATIVE REPRODUCTION	* How does a new rose plant arise? * What is this method called? P.T.S:- When new plants are produced from parts of mother plant such as root, stem or leaves without the help of any reproductive organ is known as vegetative reproduction.	* From a piece of stem. * Problem.
EXAMPLES OF VEGETATIVE REPRODUCTION	* How a plant of potato is grown? P.T.S:- You must have seen eyes on potato, what will happen when we cut a piece of potato bearing an eye. * What types of reproduction it shows? * Any other examples? P.T.S:- Some examples of vegetative reproduction are through 1) Underground stems → In potato, ginger onions, lily etc. 2) Roots → In sweet potato leves – Bryophyllum.	* No response * A new plant grows * vegetative reproduction * Ginger, onion etc.
METHODS OF VEGETATIVE REPRODUCTION	* How Rose plants are grown? * Any other example?	* By cutting branches of plant. * No response.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S :- Different methods of vegetative reproduction are cutting, grafting, Layering and tissue culture.	
CUTTING	* Rose plant is an example of cutting method of vegetative reproduction.	
GRAFTING	* Which method is used for propagation of mango plant?	* cutting is placed on other plant.
	* What is this method called?	* No response.
	P.T.S :- The method is known as grafting. In this a twing or bud of one plant (called the Scion) is kept over the cut stem of another plant (called the Stock) and tie them together. In this methode new and improved varieties of plants are developed. Examples are lemon, orange, pear etc.	
LAYERING	* What is the method of reproduction in jasmine?	* A branch of pla bends towards gro come in contact w moist soil produc roots and new plant

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* What is this method called?	* No response.
	P.T.S :- It is known as layering. In this type a young branch is bend towards the ground and covered with moist soil. After sometime roots develop from the covered plants which is called layer. Other example of its are mint, rose, Bougainvillia, Bryophyllum.	
TISSUE CULTURE	* What do you knew about tissue culture?	
	P.T.S :- In this method, a piece of tissue is cut off from the growing tip of the plant. The cells are separated and kept in a nutrient medium under controlled conditions. Examples are Asparagus, orchids. In this method new varieties of plant developed quicky.	

EVALUATION :

* Define vegetative reproduction ?
* How potato plants grows ?
* Give examples of grafting layering, cutting and tissue culture ?

HOME TASK :

* What are vegetative reproduction ? Give examples?
* What is tissue culture ?
* what are the advantage of vegetative reproduction?

REFERENCE BOOK :

NCERT Book of Class VIth.

Lesson No :.....5.....

Date..... Duration of the period..15 MIN.....

Pupil Teacher's Name..Nitika Kumari.. Pupil Teacher's Roll No..26.....

Class..VIth..... Average Age of the pupils..11+.....

Subject..LIFE SCIENCE..... Topic..GERMINATION OF SEED

CONTENT ANALYSIS :

* Storage of seeds
* Germination of seeds
* Condition necessary for seed germination.

GENERAL OBJECTIVES :

* To develop scientific attitude among the students.
* To develop interest in Life science among the students.
* To develop the thinking, reasoning, analysing attitudes among the students.
* To develop the ability to solve the problems using scientific methods
* To develop the logical and rational thinking among the students.
* To develop the ability to see the cause and effect relationship.

INSTRUCTIONAL OBJECTIVES :

KNOWLEDGE : The pupil will be able to

* recall the germination of seed
* recognise the seed germination.

UNDERSTANDING : The pupil will be able to

* explain the seed germination
* explain the condition necessary for seed germination

APPLICATION : The pupil will be able to

* give reason of plant formation through seed.
* give suggestion to store the grains.

SKILL:

The pupil will be able to draw a well labelled diagram, showing germination of seed.

TEACHING AIDS:

Chalk, duster, pointer, chart etc.

PREVIOUS KNOWLEDGE:

The pupil already known the names of part of plants.

INTRODUCTION:-

PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
* By showing gram-wheat is this?	* Seed.
* Which type of seed is this ?	* Dicotyledons.
* Give examples of the monocotyledons !	* Maize, Mustard etc.
* Seed helps in which process ?	* Plant formation
* Explain the process of germination of seed.	* Problem.

ANNOUNCEMENT OF THE TOPIC:

Well students ! today we will study about germination of seed.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
STORAGE	* When the seeds are formed in plants what do we do ?	* we store the seeds.
	* what do we call the process of keeping of seeds ?	* Storage.
CONDITION OF SEED STORAGE	* What are the necessary condition for seed storage ?	* Dry place and no moisture.
	* Any other condition for seed storage ?	* No insects.
	Tell me, before storage of seeds	* Seeds are spread in Sunlight.
	P.T.S:- The grains are stored at 14°C temp. due to this we get seed for next crop.	
CONDITION NECESSARY FOR SEED GERMINATION	Tell me, what are the important condition for seed germination ?	* Moistured soil, water, humus etc.
	* Any other condition which is necessary for seed germination ?	* Moderate temp. * Appropriate weath
	* With the help of diagram what is this ?	* Germinating seed.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	* How this germinate ?	* By dipping into Soil and water.
	* What do we call such process?	* Germination.
ROOT FORMATION	Tell me redicle gives which part of plant ?	* Roots.
	* What are the formations of root ?	* Absorbtion of water & minerals
	P.T.S:- The roots absorb water and minerals later on help in plumule formation.	
STEM FORMATION	Now tell me, what does plumule give rise ?	* stem of plants
	* What is colour of stem ?	* Green
	* Why it is green in colour ?	* Due to chlorophyll
	* What is the function of Chlorophyll ?	* Synthesis food for plants.
	* What is the process called by which plants prepare their food ?	* Photosynthesis

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
LEAVES FORMATION	* What does stem gives ?	* Leaves
	* The leaves arise from which part of the plant ?	* Node
	* Tell me other parts of plant ?	* Fruits, flowers etc.
	P.T.S:- The seed germinate takes place in appropriate condition wheather & temperature give rise to whole plant.	

EVALUATION :-

* What do you mean by storage of seed ?
* what are the condition necessary for the storage of seed ?
* What are the condition necessary for the germination of seed ?
* The plumule give rise to which part of the plant ?
* The radicle gives rise to which part of the plant ?

HOME TASK :-

* Explain the germination of seed with the help of well labelled diagram.
* What are the necessary condition for germination of seed ?

REFERENCE BOOK :-

NCERT Book of Class VIth.

DISCUSSION LESSON

Lesson No :....1.....

Date..... Duration of the period...30 MIN.....

Pupil Teacher's Name...Nilima Kumari... Pupil Teacher's Roll No...26.....

Class...VI..... Average Age of the pupils...11+.....

Subject...LIFE SCIENCE..... Topic...PROCESS OF DIGESTION

CONTENT ANALYSIS :-

Definition of digestion
Digestive system
Digestion process

GENERAL OBJECTIVES :-

* To develop scientific attitude among the students.
* To develop interest in life science among the students.
* To provide them training in scientific manner.
* To develop reasoning power among the students.
* To give them the knowledge of biological facts, concepts and process.
* To develop creative and innovative thinking among the students.

INSTRUCTIONAL OBJECTIVES :-

KNOWLEDGE :- The pupil will be able to

* recall the definition of digestion.
* recall the names of various digestive organs.
* recall the terms of ingestion and egestion.

UNDERSTANDING :- The pupil will be able to

* Explain the definition of digestion
* Explain the digestive system
* Differentiate between ingestion and egestion.
* Explain the role of various digestive organ.

SKILL :- The pupil will be able to
* Give and draw the diagram of digestive system.
* Make a flow chart of food passage through digestive system

APPLICATION :- The pupil will be able to
* Give significance of digestive process.
* relate this knowledge with respiration.
* give reason why we should avoid frequent eating.
* give the importance of chewing of food.
* give reason for acidity.

TEACHING AIDS :- Black board, chalk, duster, pointer, roller up board, chart, model.

PREVIOUS KNOWLEDGE :- The student already know
* about the essential things for living beings.
* What we get from food.
* about the various components of food.
* about the organ through which we take food.

INTRODUCTION:

PUPIL TEACHER ACTIVITY	PUPIL ACTIVITY
* What are the essential things for living?	* Food, water, Air
* What do we eat food?	* To grow & to get energy.
* How do we eat food?	* Through mouth.
* What happens to these food in our body?	* Problem.

ANNOUNCEMENT OF THE TOPIC :- Well students, today we will study about the digestion.

PRESENTATION :-

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	* What are the main components of food?	* Carbohydrates, proteins, fats, minerals fibre.
	* Are these components absorbed as such by the body?	* No.
	P.T.S :- These components are com-plex and need to be broken down into simple substance.	
Definition of Digestion	* What we call this process?	* No response
	P.T.S :- The breakdown of complex component of food into simples substances is called digestion.	
	* What are the organs involved in digestion?	* Mouth, buccal cavity, Stomach.
Digestive system	P.T.S :- The organ involved in digestion are buccal cavity, oeso-phagus, stomach, small intestine, large intestine and anus.	
	* What we call these parts together?	* No response

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	P.T.S:- These parts together known as digestive system.	
	* Through which part we take food ?	* Through mouth
	* What we call the process of taking food into body ?	* No response.
Ingestion	P.T.S:- The process of taking food into the body is called ingestion.	
	* What happens to this food in mouth of buccal cavity ?	* chewing of food and breaking of food into small pieces.
Digestion in Buccal	P.T.S:- In buccal cavity, the food mixed with saliva. Saliva contain an enzyme known as salivary amylase which break down the starch into sugar.	
Function of tongue	* Where does the tongue present ?	* In buccal cavity
	* What is the function of tongue ?	* taste the food.
	P.T.S:- Tongue has taste buds which are used in testing the food. Tongue also help in swallowing the food.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	* What is the shape of this structure.	* Tube like.
OESOPHAGUS	* This tube like structure is known as oesophagus or food pipe.	
	* Where does the food goes from the mouth ?	* to oesophagus
	* What is the function of oesophagus ?	* No response.
	P.T.S:→ Oesophagus transfer the food from buccal cavity to the stomach.	
	* What is the shape of this structure ?	* Bag like
STOMACH	P.T.S:- This is a bag like or flattened U shaped structure is known as stomach. It is the widest part of the alimentary canal.	
Role of stomach	* What role does the stomach play in digestion process ?	* It receives the food.
	P.T.S:- The inner lining of the stomach secretes mucous, hydro-chloride acid and digestive juices. The mucous protects the lining of stomach. The acid kills many bacteria and enter along with the food and makes the stomach acidic.	
	* what is the role of digestive juices ?	* digest the food components.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	P.T.S:→ The digestive juices break down the proteins into simpler substances. (By showing the diagram)	
	* How does this structure look like ?	* Coiled
SMALL INTESTINE	P.T.S:- This coiled structure is knows as small intestine. It receives secretions from the liver and pancrase.	
	* What is the Colour Structure?	* Red colour.
LIVER	P.T.S:→ This red colour structure is known as liver.	
ROLE OF LIVER	* What is the role of Liver?	* No respons
	P.T.S:- It secretes bile juice that is stored in a sac called gall bladder. The bile play important role in the digestion of fats.	
	* What is the shape of this structure?	* Leaf like.
PANCREASE	P.T.S:- This leaf like structure is known as pancreas and it	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
	located just below the stomach.	
ROLE OF PANCREASE	* What is the role of pancrease?	* No response.
	P.T.S:- Convert the carbohydrates and proteins into simpler forms.	
	* Where does the food goes from pancrease?	* Small intestine.
	* What happens to food in lower part of small intestine?	* Digestion of food continue.
DIGESTION IN SMALL INTESTINE	P.T.S:- The carbohydrates get broken into simple sugar such as glucose, fat into fatty acids and proteins into amino acids.	
LARGE INTESTINE	* What is the shape of this structure?	* Coiled.
	P.T.S:→ This coiled structure is known as large intestine.	
	* What is its function?	* No response.
	P.T.S:→ Its function is to absorb water and some salts from the undigested food material.	
	* What happen to remaining food?	* Pass out thro the anus.
	* What we call this removal of Wastes through anus.	* No response.
EGESTION:	* This process of removal of wastes through anus is known as egestion.	

EVALUATION :-

* Define digestion.
* What happens to the food in buccal cavity ?
* What changes comes to food in stomach ?
* Give the function of small intestine ?

HOMEWORK :- Write short notes on followings :-

* Digestion of food in stomach.
* Role of pancreas in digestion.
* Digestion in small intestine
* Egestion.

REFERENCE BOOK :-

NCERT Book of science of class VIth.

SCHOOL TEACHING PRACTICE LESSONS

Lesson No :....1.....

Date.....

Duration of the period....30 MIN.....

Pupil Teacher's Name....Nilima Kumari.....

Pupil Teacher's Roll No....26.....

Class....VIth.....

Average Age of the pupils..11+.....

Subject....LIFE SCIENCE.....

Topic....HUMAN RESPIRATORY SYSTEM

CONTENT ANALYSIS :-

* Definition of Respiration
* Human respiratory system
* structure of lungs
* Exchange of gases in lungs.
* Mechanism of breathing.

GENERAL OBJECTIVES :-

* To develop scientific attitude among the students.
* To develop logical skills.
* To give training in scientific methods
* To develop reasoning and thinking power among the students.
* To develop the experimental skills among the students.
* To develop understanding of term, definition and concept.
* To develop creativity and mental activity.

INSTRUCTIONAL OBJECTIVES :-

KNOWLEDGE :- Pupil will be able to

* Define respiration.
* Recall and recognise the respiratory organs.
* Recall and recognise the functions of respiratory organs.

UNDERSTANDING : Pupil will be able to

* Explain the various organ of respiratory system.
* Explain the functions of various respiratory organ.

APPLICATION : Pupil will be able to

* Give reasons that why we breath faster after running.
* Give reasons that why breathing is different from respiration.

* Apply this knowledge in this daily life.

SKILL : The pupil will be able to

* Draw proportinate well labelled diagram of human respiratory s
* Draw diagram showing mechanism of breathing in human.

TEACHING AIDS:- Chalk, Duster, pointer, chart showing huma respiratory system, Roller up board. A model showing mechanism of breathing.

PREVIOUS KNOWLEDGE: Pupil already knowns about the things which are essential for life.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* which things are essential for survival of life.	* Food, water & air.
* what is importance of air ?	* Used in breathing
* Which gas we inhale ?	* O_2
* Which gas we exhale ?	* CO_2
* Now what are the organs used in inhaling and exhaling these gases ?	* Nose, Lungs
* What happens in Lungs ?	* Problem.

ANNOUNCEMENT OF THE TOPIC :

Well students, today we will study about human respir system.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVIT
DEFINITION OF RESPIRATION	* which gas we inhale ?	* O_2
	* Which gas we exhale ?	* CO_2
	* what is this process called ?	* No response.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S :- This process is called respira-tion. It is an energy releasing process by break down of food which involve intake of O_2 and exhale of CO_2. (Showing chart of respiratory system).	
HUMAN RESPIRATORY SYSTEM	* Through which organ the air enter the body ?	* From nostril
	* From the nostrils where the air goes ?	* Nasal cavity
	* What is the role of hair present inside nasal cavity ?	* The hair traps the dust particles and germs and ~~present~~ their entry in the body.
	P.T.S: yes, the hair present inside the nasal cavity at as filteration.	
	* Why we sneeze ?	
	P.T.S: Sometimes the foreign parti-cles of dust pass the hairs. Then they intake the lining. As a result we sneeze and clean and dust free air enter in body.	
TRACHEA	* From nasal cavity where the air goes ?	* Pharynx and Trachea
	* what the trachea look like ?	* Tube/Pipe like
	* What is the other name of trachea ?	* No response.
	P.T.S:- The other name of trachea is called wind pipe.	
	* Now, what is next structure ?	* No response.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- It is epiglottities. It is a flap like structure which prevent food entry into wind pipe and allow the food to go in Oesophagus.	
	* What is Oesophagus?	* Foodpipe.
LUNGS	* In which organ trachea open?	* Lungs.
	* How many lungs are present in human being?	* Two, Left and right
	* What is the difference between both Lungs?	* No response.
	P.T.S:- Right Lung is slightly larger and broader than left lung and present in chest (thoracic) cavity.	
	* What is the colour of Lungs?	* Pinkish.
STRUCTURE OF LUNGS	* What is the structure of lungs? (Showing the diagram of lungs structure)	* No response
	* What are broonchi?	* Small branch wind pipe which into lungs.
	* Which branches arise from bronchi?	* Branchiole
	* What is present next to branchiole?	* Alveloli
	* What the alveloli looks like?	* Bunch of grape
	* How does the exchange of gases takes place in lungs?	* No response.
	P.T.S:- The wall of alveloli are extremly thin and are covered by blood capillaries. So that the exchange of gases take place easily by the process of diffusion.	
	* Now tell me, which part surrounds the Lungs?	* Ribs
	* What is present at the base of Lung?	* Diaphragm.
	* What is the role of ribs and dia-phragm in breathing?	* No response.
	P.T.S:- During inhalation ribs move outward and diaphragm moves down, which increase the volume of chest cavity. Now tell me, what happens during exhalation?	* Ribs move inward (backward) and dia-phragm moves upto decrease the volume of chest cavity.
	P.T.S:- Yes, due to decrease in chest cavity size, pressure increase and air pushed out of lungs.	

EVALUATION:

* Which part closes the windpipe when you swallow the food?
* In lungs exchange of gases takes place between ____ and ____.
* Right lung is broader than left lung. (T/F).
* What happen when diaphragm moves down.?

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* which organs are involved in human respiratory sys

HOME WORK:

* What is epiglottis?
* Where the lungs are present in body?
* which part forms the flo
* what are bronchi?
* what do you understand by inhalation and exhalation?
* what happen during inhalation and exhalation?
* How does the exchange of gases takes place in lungs?
* what is the role of hair present inside the nasal cavity?

REFERENCE BOOK:

NCERT Book of class VIth.

Lesson No :...2.....

Date.....
Duration of the period...15 MIN
Pupil Teacher's Name...Nilima Kumari
Pupil Teacher's Roll No...26
Class...VIth
Average Age of the pupils...11+
Subject...LIFE SCIENCE
Topic...COMPONENTS OF FOOD

CONTENT ANALYSIS:

* Definition of food
* Different component of food.
* Importance of different components of food.

GENERAL OBJECTIVES:

* To develop scientific attitude among the student.
* To give them training in scientific methods.
* To develop interest in life science.
* To trained them in scientific manner.
* To create cause and effect relationship among the student.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE: The pupil will be able to

* recall the definition of food.
* recall the importance of food.
* recognise different component of food and their importance.

UNDERSTANDING: The pupil will be able to

* differentiate between different components of food.
* Explain that why these are necessary in food
* Explain the various functions of components.

SKILL:

Pupil will be able to make a chart on the different components of food.

APPLICATION: Pupil will be able to
* give reason but the importance of different food components.
* Identify various components found in our food.
* Reason out why these components are necessary in our life.

TEACHING AIDS:
Chalk, Duster, pointer, chart

PREVIOUS KNOWLEDGE:
* Students are familiar with various types of food and importance of food in their daily life.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Tell me what is the basic need of living other than air and water?	* Food.
* What is food?	* It is a fuel required by our b
* Why food is needed by our body?	* To do work, for growth, giv energy.
* Now tell me what are the different components of food?	* Problem.

ANNOUNCEMENT OF THE TOPIC:
Well Students Today we will study about different components of food.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	(The P. Teacher shows the chart of different components of food and their sources).	
CARBOHYDRATES	* Why do we eat food like rice, wheat, bananas, sugar etc.	* Because they give energy.
	* Which components of these food gives maximum energy?	* (Problem)
	P.T.S:- Carbohydrates are the main components of these food which give us quick energy.	
	So, what is the function of carbohydrates?	* They give energy for doing work.
	* Why a rickshaw pullar is advised to take more carbohydrate.	* Because they provide more energy
FAT	* What are the sources of fats that we eat?	* Ghee, Butter, oil.
	* What is the function of fat?	* (Problem).
	P.T.S:- Fat is another important components of food which stores energy.	
	* Where generally fats are stored in our body?	* No response.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- It is stored under the skin around hearts and kidney.	
	So, what is the function of fat?	* To store energy
PROTEINS	* Name some milk products?	* Milk, curd Paneer, cheese.
	* What components do they contain?	* No response.
	P.T.S:- They contain protein. Proteins are requised to make new cells and needed to replace old damage cells.	
	So, which component is found in milk, egg and cheese.	* Protein.
	Now tell me some examples of pulses?	* Arhar, urad, Chana, Masoor.
	* What types of protein are they	* Plant protein
VITAMINS	* What is the most important component in mango and lemons?	* Vitamin C
	* What are vitamins?	* No response.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- Vitamins are important components of a balance diet which are required in small quantity. They are needed for proper growth and development.	
MINERALS	* What are minerals?	* No response.
	P.T.S:- Minerals are components required to maintain good health e.g. Iron helps us in the formation of Hb, Ca for strong bones and teeth.	
	So, tell me why Ca is needed?	* For strong bones and teeth.
	* Why Iron is necessary?	* For blood formation
WATER	* What are the vital role which is played by water.	* helps in excretion and transport of food.
	P.T.S:- water makes up almost 70% of our body weight. It transport food, chemicals and gases, helps in excretion and breakdown complex food molecules.	
	Now tell me why you are advised to avoid fast food?	Because they have to lesser no nutritional value.

EVALUATION:

* What are the different components of food?
* What are carbohydrates and why it is required?
* What are the different sources of protein?
* Why iron and calcium is required?

HOME TASK:

* What are the components of food?
* What is the use of fats in our body?
* How does vitamins play a vital role in food diet?

REFERENCE BOOK:

NCERT Book of Class vth.

Satisfactory

* Effective Presentation
* Black board writing good

Lesson No : 3

Date.....

Duration of the period. 15 MIN

Pupil Teacher's Name. Nikita Kumari

Pupil Teacher's Roll No. 26

Class. vth

Average Age of the pupils. 11+

Subject. LIFE SCIENCE

Topic. BACTERIA

CONTENT ANALYSIS:

* Definition of micro-organism.
* Bacteria occurance, types of bacteria, nutrition.
* Importance of bacteria.

GENERAL OBJECTIVES:

* To develop interest in life science.
* To develop scientific attitude among the students.
* To develop reasoning, thinking and analysing power.
* To trained them in scientific manner.
* To create cause and effect relationship.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE: The pupil will be able to

* recall the definition of micro-organism.
* recognise types of bacteria.
* recognise the importance of bacteria.

UNDERSTANDING: The pupil will be able to

* explain the definition of micro-organism.
* Different types of bacteria.
* analyse the importance of bacteria.

APPLICATION:

* The pupil will be able to give reason why curd is formed from the milk.
* The pupil will be able to observe and tell the various uses of bacteria.

SKILL:

* The pupil will be able to draw the diagrams of types of bacteria.

TEACHING AIDS :-
Chart showing structure of bacteria and various types of bacteria.

PREVIOUS KNOWLEDGE :
* Pupil are aware of cell structure.
* Pupil are aware of small organism which are remain micros

INTRODUCTION :

PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
* Name some living organism?	* Plants, Animals, human beings.
* What are unicellular organism?	* Animals made up of only one cell.
* Give example of unicellular organism?	* Virus, bacteria
* What are bacteria ?	* Problem.

ANNOUNCEMENT OF AIM :
Well students, today we will study about bacteria.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINITION OF MICRO-ORGANISM	* what do you mean by micro-organism?	* very small organism.
	* What do you mean by organism?	* which can grow breath and die.
	* Define micro-organism?	* organisms which are small and can't seen with naked eye
	P.T.S :- The organisms which can be only seen through	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	microscope is called micro-organisms or microbes.	
	* What is the study of micro-organism called?	* No response.
	P.T.S :- Study of micro-organisms is called microbiology and the scientist that study them called microbiologist.	
STRUCTURE OF BACTERIA:	* What are bacteria ?	* Organisms which can be seen through microscope.
OCCURANCE OF BACTERIA:	* where do bacteria exists ?	* In garbage & in unhealthy environment.
	P.T.S :- That means, bacteria are present almost everywhere.	
TYPES OF BACTERIA	(Showing chart of diagram of bacteria) * What this structure look like?	* Ball shaped.
	P.T.S :- These round ball shaped bacteria are called micro-organism in pair called diplococcus. (Showing diagram of bacteria).	
	* How this structure look like?	* Rod shaped, zig-zag, comma shaped.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S :- Rod shaped bacteria are called bacillus. Spiral shaped bacteria are called spirillum. comma shaped bacteria are called vibiscls.	
MOVEMENT OF BACTERIA	(Showing diagram of bacteria) * What is this structure at ends of bacteria looks like?	* Hair like.
	P.T.S :- These hair like structu -re are flagella that enables bacteria to swim or move. Some bacteria green in colour.	
	* Which pigment imparts green colour?	* Chlorophyll
	* What is the function of Chlorophyll?	* Synthesis of food.
	P.T.S :- That means green coloured bacteria synthesize their own food and are called autotrophic bacteria where as bacteria which lack chlorophyll and feed on other organisms are called heterotrophic bacteria.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
HELPFUL BACTERIA	* What makes milk to curd?	* Bacteria
	* Antibiotic & vaccines contains	* Bacteria
	* How do dead & decaying plant & animals decompose?	* Due to the action of bacteria.
	P.T.S :- Some bacteria also help in converting ammonia into nitrates called nitrifying bacteria.	
HARMFUL BACTERIA	* How do communicable disease spread?	* through micro--organism.
	* Name a communicable disease which is spread by bacteria?	* Tuberculosis.
	* Any other?	* Typhoid
	* Any other disease caused by bacteria?	* Tetnus.

EVALUATION :

* What are micro-organism?
* How many types of bacteria?
* What are harmful bacteria?

HOME TASK :

* Define bacteria?
* Give the types of bacteria?
* Explain briefly nutrition of bacteria?
* How bacteria moves?

* Write short notes on:
a) Harmful bacteria
b) Useful bacteria

REFERENCE BOOK:
NCERT Book of Class VIth.

L.T

Satisfied

Lesson No :.....4.....

Date.....
Duration of the period.....15 MIN.....
Pupil Teacher's Name.....Nilima Kumari.....
Pupil Teacher's Roll No.....26.....
Class.....VIth.....
Average Age of the pupils.....11+.....
Subject.....LIFE SCIENCE.....
Topic.....GARBAGE IN AND GARBAGE OUT.....

CONTENT ANALYSIS :-

* Definition of Garbage.
* Harmful effect of garbage
* Use of redworm.
* Harmful effect of plastics use.

GENERAL OBJECTIVES :-

* To develop scientific attitude among the students.
* To develop thinking and reasoning power among the students.
* To develop principles and scientific facts among the students.
* To give training in scientific manner.
* To develop scientific and creativity among pupil.

INSTRUCTIONAL OBJECTIVES :-

KNOWLEDGE :

* Pupil recalls the definition of garbage.
* Pupil recalls the waste product of houses.

UNDERSTANDING:

* Pupil explains the harmful effect of garbage.
* Pupil differentiate the useful and non useful components of garbage.
* Pupil explains harmful effect of plastics.
* Pupil explains use of Red worm.

SKILL:

* Pupil draws the diagram of land fill area.

APPLICATION:

* Pupil will be able to explains how red worm form manure for fields
* Pupil will be able to reason out why we should reduce the use of plastic
* Pupil will be able to reason out how recycling of paper takes place.

TEACHING AIDS:
chalk, duster, chalk board, chart.

PREVIOUS KNOWEDGE:
* Pupil knows about the waste product of kitchen and houses.
* Pupil knows where the waste product thrown.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What is the waste product in our kitchen?	* Spoil milk, food, rappers of fruits
* What are the waste product in your house?	* Paper, polythene, plastic, Shoes.
* What happen when we burn the waste product?	* Poisonous gases release in air.
* where you thrown your waste product?	* Dustbin
* where does all the waste thrown?	* In open area away from city.
* what is garbage?	* Problem.

ANNOUNCEMENT OF THE TOPIC:
Well students, today we will study about garbage in air garbage out.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINITION OF GARBAGE:	* what is garbage? P.T.S:- All the waste products wrapping materials plastics polythenes known as garbage.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* Where you thrown the garbage?	* Dustbin.
	* Where all these waste go?	* In an open area, away from city.
	* What is effect of garbage?	* It produces a foul smell.
	* What happens when we burn the plastic equipments or leaves?	* Poisonous gases spread in air.
	* What is the effect of this poisonous gas?	* Air pollution increases.
	* What is the name of the place where garbage is thrown?	* No response.
	P.T.S:- The garbage is thrown in a place is known as land fill and we shouldn't burn polythene plastics. we should covered it under the soil for its decomposition.	
HARMFUL EFFECT OF GARBAGE:	* Which gas release when we burn the plastic?	* CO
	* which organism help in the decom-position of garbage?	* Bacteria
	* How they help in decomposing?	* By break down the pieces into smaller useful manure.
RED WORM USE	* Tell me name of some useful bacteria?	* No response.
	* Red worm are the useful bacteria which decompose the garbage and form fertilizer for the plants.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* How bacteria help the farmers?	* By forming manure.
	Tell me name of some mate-rial which decompose?	* Leaves, food & dead animal.
PLASTIC'S HARMFUL EFFECT:	* Tell me name of somthing which do not decompose?	* Plastic & polythene.
	* We should use the plastic things or other material thing?	* Material things.
	* Why we should not use the plastic ?	* Because it does decompose.
	* Which types of gases from when we burn the leaves?	* SO_2, CO_2, CO
	* What should we do to keep the environment free?	* Bury the waste of plants and food in soil.
	* Which type of bag and equipments we should be used?	* No response.
	P.T.S :- We should uses the maximum clothes and jute bags for shopping and keep eatable things. Plastic is harmful to us so we should stop its use.	
RECYCLING OF PAPERS:	* How the recycling of paper takes place?	* By making new goods.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	* How we can make good from paper?	* No response.
	P.T.S :- By tearing the paper put them into tub of water from a paste. Put colour in it and from many good of it.	
	* Name of kitchen waste which is decompose?	* Food, milk, waste of tea and coffee wrapper of fruits and vegetable.
	* What is verni composting?	* No response.
	P.T.S :- Process of making compost of kitchen garbage using red worm called vermicomposting.	
	* What is compost?	* Conversion of waste product into manure.
	P.T.S :- The compost formed by the red worm and use in the field as fertilizer known as compost.	

EVALUATION:

* What is garbage ?
* What is compost ?
* Write note on vermicompost ?
* How plastics harmful to us ?

HOME TASK:

Fill ups :—

1) Leaves often decomposing form _____.
2) Plastic is ____ to us.
3) Garbage have useful or _____ component.

Short answer type of questions :—

* Write notes on composting ?
* How recycling of paper takes place ?

REFERENCE BOOK:

NCERT Book of class VIth.

Lesson No :.....5.....

Date.....
Duration of the period. 15 MIN
Pupil Teacher's Name. Nilima Khuntia
Pupil Teacher's Roll No. 26
Class. VIth
Average Age of the pupils. 11+
Subject. LIFE SCIENCE
Topic. PHOTOSYNTHESIS

CONTENT ANALYSIS:

* Definition of photosynthesis
* Site of photosynthesis, photosynthesis, photosynthetic pigments.
* Process involving a) Requirements b) Product c) Equation.
* Factors affecting photosynthesis
* Importance of photosynthesis.

GENERAL AWARENESS:

* To develop the interest of life science among the students.
* To create scientific attitude among the students.
* To develop thinking, reasoning and experimental skill.
* To create cause & effect relationship among the students.
* To develop the ability to understand & apply the knowledge of science in day-to-day life.

INSTRUCTIONAL OBJECTIVES:

KNOWLEDGE : The students will be able to

* Recall the term photosynthesis.
* Recognise the site of photosynthesis.
* Recall photosythetic pigment.

UNDERSTANDING : The students will be able to

* differentiate between respiration or photosynthesis.
* Define the term photosynthesis.
* Explain the process of photosynthesis.

SKILL: The students will be able to

* draw the diagram of photosynthesis
* write the equation involving photosynthesis.

APPLICATION:

* The pupil will be able to give reason why we should not sleep under a tree during night and why we should water the plants.
* The students will be able to differentiate between respiration and photosynthesis.

TEACHING AIDS:

Chart showing diagram of photosynthesis a green plant.

PREVIOUS KNOWLEDGE:

Students already know that living beings get their food from plants and know that leaves are green due to presence of chlorophyll.

INTRODUCTION:

PUPIL TEACHER ACTIVITY	PUPIL'S ACTIVITY
* What is essential for human beings for being alive on the earth?	* We need oxygen, water & food.
* From where do you get food?	* From plants & animals.
* From where do animals get their food?	* They eat other animals and plants also.
* Like animals plants also need food for survival, from where do plants get food?	* From fertilizers.
* Plants make their own food what is this process called?	* Problem.

ANNOUNCEMENT OF THE TOPIC:

Well students, today we will study about the process of photosynthesis.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
DEFINITION OF PHOTOSYNTHESIS	* Define photosynthesis?	* No response.
	* What are the things essential for synthesizing the food?	* Sunlight, Greenplant.
	* What are the other things essential?	* Air, water, Soil.
	* Why plants are green in colour?	* Due to presence of chlorophyll.
	P.T.S:- The process by which green plants prepare their own food with the help of CO_2 and water, in the presence of chlorophyll & sunlight is called photosynthesis.	
SITE OF PHOTOSYNTHESIS	* Which part of the plant is green in colour?	* Leaves branches
	* Why it is green?	* Due to the Chlorophyll.
	Tell me, where does photosynthesis occurs?	* Leaves.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- Photosynthesis occur in the green part of a plant.	
EQUATION OF PHOTOSYNTHESIS:	Which gas is inhaled by plants and which gas is exhaled?	* CO_2 gas is inhaled & * O_2 gas is exhaled.
	* What is the formula of carbondioxide and oxygen and water?	* CO_2, H_2O, O_2
	* In which form plants make their food?	* Glucose
	* What is the formulae of Glucose?	* Problem.
	P.T.S:- Green plants make their food in the form of Glucose ($C_6H_{12}O_6$) and O_2 is a by product of photosynthesis.	
IMPORTANCE OF PHOTOSYNTESIS:	* What is the significance of photosynthesis?	* Plants gets their food from photosy
	* What is the bi-produce of photosynthesis process?	* From plant.
	P.T.S:- Green plants use atmos-phere carbon dioxide in the	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	process of photosynthesis and produce oxygen. Hence, green plants purify the atmosphere and provide oxygen, which living beings inhale during breathing process.	
FACTOR AFFE-CTING PHOTOSY-NTHESIS:	* Why role of photosynthesis decrease during rainy season?	* Photosynthesis process needs Sulight it will decrease.
	* If more Sunlight is supplied to the plant then what will be the effect of it on the rate of photosynthesis.	* The role of photosynthesis increase.
	P.T.S:- That means, sunlight is a factor affecting photosynthesis does not occur due to the absence of Sun-light.	
EVALUATION:	* Why leaves are green in colour?	
	* What is the rate of photosynthesis?	
	* Which gas is inhaled by green plants?	
	* What is the equation of photosynthesis?	
HOME WORK:	* What is the effect of Sunlight on the rate of photosynthesis?	

Fill in the blanks:

* Green plants prepare their food, it form of _____
* Leaves are green due to the presence of _____
* _____ are the sites of photosynthesis in plant.

REFERENCE BOOK:
NCERT Book of class VIth.

* Teaching Aids used
* Topic discussed
* Black board writing was good

Ans)

Lesson No: 6

Date.....
Duration of the period. 15 MIN
Pupil Teacher's Name. Nitin Kumar
Pupil Teacher's Roll No. 26
Class. IX
Average Age of the pupils. 14+
Subject. LIFE SCIENCE
Topic. GROUP OF BLOOD

INSTRUCTIONAL OBJECTIVES:

The learners are expected to:

KNOWLEDGE:
* Recall the term blood.
* Name the groups of blood.

UNDERSTANDING:
* classify the various groups of blood.
* Explain the Antigen.
* Differentiate Antigen and antibody.

APPLICATION:
* Give reason, why is the colour of blood red?

SKILL:
* Draw the diagram of three types of cells of blood.

INSTRUCTIONAL MATERIAL USED:

GENERAL AIDS: chalk, chalk board, duster, pointer.

SPECIFIC AIDS: A chart showing groups of blood.

PREVIOUS KNOWLEDGE TESTING

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What happend when we are injured?	* we have pain and blood comes out.

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What is the colour of blood?	* Red
* What is the composition of blood?	* Blood is composed of Red b... cells. R.B.C, blood plasma, hemoglobin and blood cell.
* What is blood?	* Blood is liquid connective ... It is circulated thorough out the ...
* What are the blood groups?	* No response.

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about "groups of blood".

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK B...
BLOOD	* Blood is a liquid connective tissue. It is circulated through out the body by the pumping action of heart. Blood having suspended particles called red blood cells, white blood cells and blood plate lets. The solution part of the blood is called blood plasma when a protein called fibranogen is removed	Pupil will listen carefully and note down in their note book.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BO...
	from the plasma, blood serum is obtained. The red colour of the RBCs is due to the presence of hemoglobin. The white blood cells (WBCs) protect our body from infection by producing antibodies in our body. That is why WBCs are called "Soldiers of the body".		
FUNCTIONS OF BLOOD	The main function of blood is blood transport nutrients from small intestine to the liver and other organs. It also transport waste products to the kidneys for excretion.	Pupil will listen carefully and will note down in their note-book.	
	There are four types of blood groups. (1) A blood group (2) B blood group (3) AB blood group (4) O blood group	Pupil will note their note-book.	
BLOOD GROUP 'A'	* A person having blood group 'A' and 'AB' can receive blood from a person have blood group A and O.		

Teaching Point	Pupil Teacher's Activity	Pupil activity chalk b
BLOOD GROUP 'B'	* A person having blood group 'B' and 'AB', can receive blood from a person having blood group 'B' and 'O'.	
BLOOD GROUP 'AB'	* A person having blood group AB can be donated to a person having blood group AB only and can receive blood from a person having all groups.	
BLOOD GROUP 'O'	* A person having blood group 'O' can donated to person having any blood group and can receive blood only from a person having blood group 'O'.	

RECAPITULATION :

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. What is blood ?	* Blood is liquid connective tissue It is circulated their throughout the body by the pumping actio of heart.

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.2. Name different types of a blood groups.	* Blood groups are four types – 1) 'A' blood group. 2) 'B' blood group. 3) AB blood group 4) O blood group
Q.3. From which blood group 'A' can receive blood.	* AB and A
Q.4. To which blood group A can donated blood.	* A and AB.

HOME WORK :

* very short answer type question.

Q.1. Define Blood.

Q.2. Name the types of blood group.

* Short answer type question.

Q.1. Explain blood group.

Q.2. Differention blood group 'A' and 'AB'.

* Long Question type :

Q.1. Explain blood and its functions.

L.T

Lesson No : 7

Date..........

Duration of the period 15 MIN

Pupil Teacher's Name Nilima Kumari

Pupil Teacher's Roll No. 26

Class IX

Average Age of the pupils 14+

Subject LIFE SCIENCE

Topic AIDS

INSTRUCTIONAL OBJECTIVES:

The Learners are expected to,

KNOWLEDGE:

* Recall the terms 'AIDS'.
* Recognise the symptoms of 'AIDS'

UNDERSTANDING:

* Explain the role of placenta in transmission of AIDS from mother to the developing foetus.
* Explain the mode of communication of AIDS virus.

APPLICATION:

* Predict out that AIDS do not spread by hand-sacking and feeding with HIV person.

SKILL:

* Draw a structure of AIDS virus.

INSTRUCTIONAL MATERIAL USED:

General Aid – chalk, chalk board, duster, pointer etc.

Specific Aid – A chart showing structure up AIDS virus.

PREVIOUS KNOWLEDGE TESTING :

PUPIL-TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. Are you healthy?	* yes
Q.2. How can you say that you are healthy?	* Because we are free from disease.
Q.3. Can you tell me the name of some diseases?	* AIDS, typhoid, T.B., Cholera etc.
Q.4. How AIDS is caused and what are the symptoms of diseases?	* No response (Problematic question).

ANNOUNCEMENT OF THE TOPIC :

Well Student! Today we will study about AIDS.

PRESENTATION :

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
AIDS	The full form of AIDS is 'Acquired Immuno Deficie -ncy Sy drome'. It is very recent disease and is believ -ed to have originated in the African green monkey and has now spread to human beings. In just a decade this fetal disease which was detected in USA in 1981 has spread with alarming	Pupil's listen and write down the full form of AIDS.	AIDS

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	Spread all over the world. The disease is caused by virus which ripset the human defen -ce mechanism by destroying immune system so that the diseased person are unable to defend against infection.		
CAUSATIVE ORGANISM	causative organism of this disease is a virus which is known as (HIV) Human Immuno virus. Recently microbially called mycoplasma and prendy -stic can has been found associated with HIV.		
INCUBATION PERIOD	The entry of virus inside the ~~host~~ host and the apperance of symptoms is known as incubation period of the virus. The incubation period of HIV is very long. It takes years to appear the symptoms.		
	There are different modes of communication of HIV.	Pupil's note down the point.	

Teaching Point	Pupil Teacher's Activity	Pupil's Activity	Chalk Board
	There are following: 1) Unprotected sexual contact. 2) By blood transfusion i.e. by contaminated blood. 3) Use of contaminated syringe in Immuno virus were pireing instruments are sharing razors. 4) From mother to the developing foetus through placenta.		
SYMPTOMS	Peple with HIV may remain symptoms free and healthy 4 years after infection yet transmitting the infection to others. After which the body ability to fight disease weakness appearance of symptoms. The common test for AIDS is ELISA test, some major symptoms are: 1) Prolonged fever 2) Scrollen Lymph glands. 3) Chronic diarrhoea. 4) Unexplained weight loss. 5) Sweating at night 6) Severe damage of brain.		

Teaching Point	Pupil Teacher's Activity	Pupil's Activity	Chalk Board
	Following things should be avoided to present disease:- 1) Suffer sex and with only partner of life. 2) Use a disposed syringe. 3) Use of disposed and deinfected needles and fresh razor for shaving. 4) Using properly tested blood for transfusion. 5) Safe pregancy. Avoid pregancy of HIV infected mother or her child shoud safe from HIV.		

RECAPITULATION:

PUPIL-TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. Write the full name of AIDS.	* Acquired Immuno Deficiency Syndrome.
Q.2. What is the Cause of AIDS?	* It is caused by a virus known as HIV.
	1) Safer sex 2) Use of condom 3) Use of disposal syringe. 4) Avoid pregnancy of HIV injected moth

HOME - WORK :

1) _____ is the caused organism of AIDS.

2) The full form of AIDS is _____.

3) Write a short note on mode of transmission of AIDS.

4) What are the symptoms of AIDS ?

5) Discuss AIDS is disease.

~~3 minutes~~

* Previous Knowledge Tested
* Feedback was taken
* B.B. used

Lesson No :....8.....

Date..... Duration of the period..15 MIN.....

Pupil Teacher's Name..Nilima Kumari Pupil Teacher's Roll No..26.....

Class..IX..... Average Age of the pupils..14+.....

Subject..LIFE SCIENCE Topic..REPRODUCTION OF YEAST

INSTRUCTIONAL OBJECTIVES :

The learners are expected to....

KNOWLEDGE :

* Recall the term yeast.
* Recognise the process of reproduction in yeast.

UNDERSTANDING :

* Explain structure of a yeast.
* classify the various method of reproduction in yeast.

APPLICATIONS :

* Infer the advantages of yeast in day-to-day life.

SKILL :

* Draw a diagram of yeast cells and their reproduction.

INSTRUCTIONAL MATERIAL USED :

General Aids :- Chalk board, Chalk, dusker, pointer.

Specific Aids :- A chart showing yeast cells and their reproduction.

PREVIOUS KNOWLEDGE TESTING :

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What can you see around us?	* Plants, animals, building etc.

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Do everything is made of small particles?	* yes, everything is made-up of small particles.
* Do some micro-organism are not visible with naked eye?	* Yes, some micro-organism are not visible with naked eye.

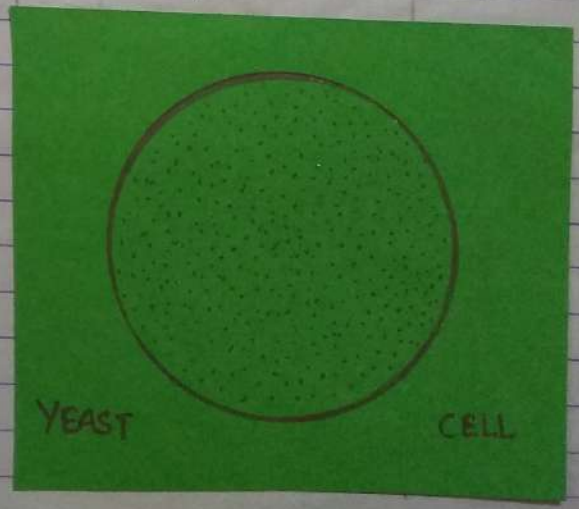
ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about yeast and their reproduction.

PRESENTATION:

Teaching Point	Pupil-Teacher's Activity	Pupil's Activity	Chalk Board.
YEAST	Yeast are unicellular and Saprophytic fungi. They are air and can present in Soil and air can even be stored in dry from up to 4 years. Yeast cells could be spherical, elliptical or cylin-drical in Shaped with visible sizes. Yeast cells has a cell wall cytoplasmic membrane, nucleous, large vacuole, numerous granules and fat glob etc.	Pupil's listen carefully.	YEAST

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	Chalk board
	Indine stains the yeast to raddish boown.		
	Yeast reproduces through a Sexuals mode by budding and Sometimes by binary fission. Sexual reproduction is also reported yeasts are disseminated by insects, air even through dust particles saccharo--myces.	Pupil's note down in their note-book.	
	Cervisiae is a common species of yeast. The yeast get destroyed in a few minutes even at a temp--erature of 60°C.		



RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. Define yeast?	* Yeast are unicellular and saprophytic fungi. They are present in soil and air.
Q.2. What is the biological name of yeast?	* Sachoromy cells ceverisiae.
Q.3. Define the methods of reproduction in yeasts.	* Yeast reproduces through sexual mode by budding and sometimes by biarary fission.
Q.4. What are the uses of yeast?	* Yeast are very important to industries which produce beer, wine and other beverages by the process of fermentation.

HOME - WORK:

Very-short answer type questions:-

Q.1. Define yeast.

Q.2. Write the biological name of yeast.

Short answer type questions:-

Q.1. Write a short note on reproduction in yeast.

Q.2. Define uses of yeast.

Long Answer type questions:-

Q.1. Define yeast and describe its reproduction with suitable diagram.

Controlled class

Topic explained well

Lesson No :....9...........

Date.. Duration of the period...15...MIN...................

Pupil Teacher's Name..Nilima Kumari Pupil Teacher's Roll No.....26.......................

Class......IX............................ Average Age of the pupils...14+......................

Subject...LIFE SCIENCE.................. Topic..ASEXUAL REPRODUCTION

INSTRUCTIONAL OBJECTIVES:

The learners are expected to----

KNOWLEDGE:

* Recall the term Reproduction.
* Recognise the process of A sexual reproduction.

UNDERSTANDING:

* Explain the process of a sexual reproduction.
* Differentiate binary fission and multiple fission.

APPLICATIONS:

* Give reason how two daughter amoeba grow, attain full and split again.

SKILL:

* Draw a diagram of Binary and multiple fission.

INSTRUCTIONAL MATERIAL USED:

General Aids :-

Chalk, duster, chalkboard, pointer.

Special Aids :-

A chart showing a diagram of Binary and multiple fission.

PREVIOUS KNOWLEDGE TESTING:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What happens when a seed grows.	* It becomes a plant.
* From where seeds concess	* A plant, seeds comes out.
* What is reproduction ?	* The process by which a species is continous is called reproduction.
* What is Asexual reproduction?	* No response. (Problematic question)

ANNOUNCEMENT OF THE TOPIC:

Well students! Today we will study about asexual reproduction in unicellular organism.

PRESETATION:

Teaching Point	PUPIL'S TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD.
Reproduc -tion:	The process by which a species is propagated or continues is called reproduction. This process varies from are group of living being to another. Some animals lay eggs from which young ones hatch out birds, reptiles and insects lay eggs females of same animals give birth to young ones.	Students will listen care-fully.	ASEXUAL REPRO

This types of reproduction involves the production of a new organism by a single parent. It occurs when there is plenty of food available and conditions are suitables for growth. Asexual reproduction is common in uni-cellular organism but is also observed in multicellular plants and animals. There are many from of a sexual reproduction fission is the type of a sexual reproduction it occurs in unicellu-lar organism.

Teaching Point	Pupil's Teacher's Activity + B.B work	Pupil's Activity	chalk board.
		Pupil's will listen carefully and noted down in their note-book.	

FISSION: In simple words, fission means division of a cell into two parts.

BINNARY FISSION In binnary fission, the fully grow parents all splits into two halves to produce two daughter cells. In amoeba, that lives in a panels and

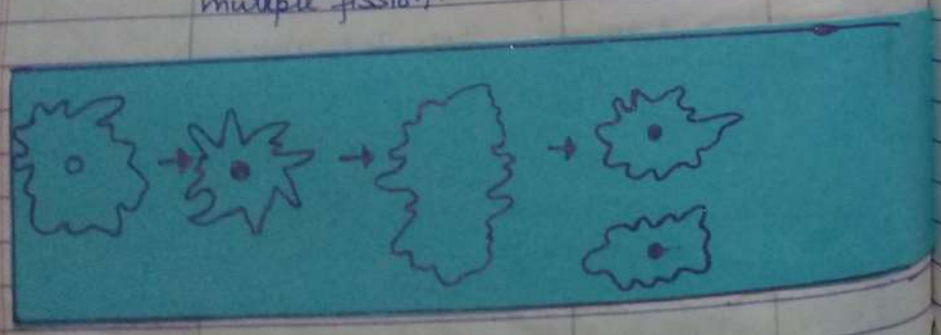
FUSSI IN TWO BINA MULT

TEACHING POINT	PUPIL'S TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD

and puddles, first the nuclear divided into two equal nucleolous and then cytoplasm divides.

Amoeba splits many times with the cyst to form many small amoeba.

This is called multiple fission.



RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. What is reproduction?	* The process of by which a species is continues is called reproduction.
Q.2. Define a sexual reproduction?	* This type of reproduction involves the production of a new organism by a single parent.
Q.3. Name the types of fission?	* There are two types of fission. 1) Binary fission 2) Multiple fission.
Q.4. Name the unicellular organisms in which asexual reproduction occurs?	* Amoeba.

HOME-WORK:

Very short answer type question:-

Q.1. Define asexual reproduction?
Q.2. Name the two kinds of fission?

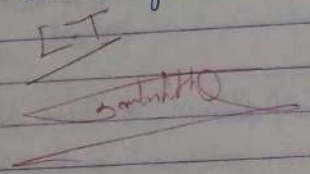
Short answer type question :-

Q.1. Write a short notes on fission ?

Q.2. Differentiate binary and multiple fission.

Long answer type question :

Q.1. What is sexual reproduction. Describe fission process in unicellular organism with suitable example and diagram.



Lesson No : 10

Date .....

Pupil Teacher's Name Nilima Kumari

Duration of the period 15 MIN

Class X

Pupil Teacher's Roll No 26

Subject LIFE SCIENCE

Average Age of the pupils 14+

Topic TRANSPORT OF WATER & MIN -ERALS

INSTRUCTIONAL OBJECTIVES :

The learners are expected to.....

KNOWLEDGE :

* Recognise the path of transport of water.
* Name the various transport substance in plants.

UNDERSTANDING :

* Explain the method of transport of water.
* Identify the parts involved in transport of water.
* Differentiate xylem and phloem.

APPLICATION :

* Give reasons how water moves from the root to the leaves

SKILL :

* Draw a diagram showing the transport of water in plants.

INSTRUCTIONAL MATERIAL USED :

General Aids :-

Chalk board, chalk, duster, pointer.

Specific Aids :-

A chart showing the transport of water in plants.

PREVIOUS KNOWLEDGE TESTING:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. From where do you get food?	* we get food from plants.
Q.2. What does plant required for making food?	* CO_2, water etc.
Q.3. from where plants get water?	* From Soil.
Q.4. How does transport of water occurs in plants?	* No response.

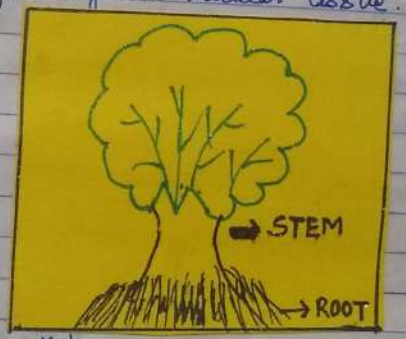
ANNOUNCEMENT OF THE TOPIC:

well student! Today we will study about "Transport of water in plants."

PRESENTATION:

Teaching Point	Pupil Teachers Activity + B.B. Work	Pupil's Activity	Chalk Board.
TRANSPORT OF WATER	Plants absorb water and minerals by the roots. The roots have root hair. The roots hairs increase the surface area of the root	Pupil's Listen carefully.	

Teaching Points	Pupil Teachers Activity + B.B work.	Pupil's Activity	Chalk Board.
	for the absorption of water and minerals nutrients dissolved in water. The root hair is in contact with the water present between the soil particles plants have pipe like vessels to transport water and nutrients from the soil. The vessels are made of special cells forming the vascular tissue.		TRANS -PORT OF WATER



Xylem and phloem are transport substances in plants.

Pupil's note down in their note-book.

A tissue is a group of cells that perform specialised function is an organism. The vascular tissue for that trans-port of water and nutrient in the plants is called xylem.

Teaching Point	Pupil Teacher's Activity + B.B. work.	Pupil's Activity	Chalk. Board.
	The xylem forms a continous network of channels that connect roots to the leaves through the stem and branches. The food has to be transported to all parts of the plant. This is done by the vascular tissue called the phloem.		

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1. Which substance are transport in plants?	* water and minerals are transported in plants.
Q.2. By which ~~substance~~ structures water and minerals are transports?	* Through xylem and phloem.
Q.3. Define xylem?	* Nutrients are transported with water to the entire plant

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	tissue called xylem.
Q.4. Define phloem?	* The vascular tissue for the transport of food to the various parts of the plant is phloem.

HOME-WORK:

Very short answer type questions:-

Q.1) Define xylem.

Q.2) Which substances are transport in plants?

Short answer type question:-

Q.1. Describe the path of transport of water?
Q.2. Write a short note on vascular tissue?

Long answer type question:-

Q.1. Describe the path of transport of water with suitable diagram.

L.T

Lesson No :...11.....

Date.....

Pupil Teacher's Name Nilima kumari

Duration of the period 15 MIN

Class IX

Pupil Teacher's Roll No. 26

Subject LIFE SCIENCE

Average Age of the pupils 14+

Topic COMPONENTS OF BLOOD

INSTRUCTIONAL OBJECTIVES:

The learners are expected to.....

KNOWLEDGE:

* Recall the term "blood".
* Name the components of blood.

UNDERSTANDING:

* Classify the various components of blood.
* Explain the components of blood.
* Differentiate Red Blood cells and white blood cells.

APPLICATIONS:

* Give reasons why is the colour of Blood Red.

SKILL:

* Draw the diagram of three types of cells of blood.

INSTRUCTIONAL MATERIAL USED:

General Aids:

Black board, chalk, Duster, Pointer.

Specific Aids:

A Chart showing components of blood.

PREVIOUS KNOWLEDGE TESTING:

PUPIL'S TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What happened when you get injured ?	* Blood flows.
* It flows continously or not.	* Not continiously how it stops after sometime.
* What is the colour of blood ?	* Red
* Name the components of blood?	* No Response.

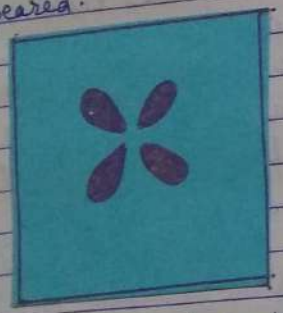
ANNOUNCEMENT OF THE TOPIC:

Well students ! today we will study about the "components of the blood."

PRESENTATION:

Teaching Point	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
BLOOD	Blood is the main transporting tissue in our body. It carries food, air, water product, hormones etc. our body contains 3 to 5 litre of blood.		BLOOD

TEACHING POINT	PUPIL - TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
COMPONENT OF BLOOD	Blood consist of plasma (The fluid part) and food cells.		COMPONENT OF BLOOD
	Blood consist of plasma (the fluid part) and blood cells.	Pupil listen carefully.	
PLASMA	A yellowish coloured fluid medium and contains, water, inorganic and organic substances are mainly proteins. Plasma also carries dissolved excretory products, hormons, enzymes, digested food and even carbon-dioxide.	Pupil note down in their note-book.	
BLOOD CELLS	Blood contains three types of blood cells. 1. RBC or Red blood cells. 2. WBC or white blood cells. 3. Platelets.	Pupil's note-down in their note-book.	
R.B.C. (Erythrocyte)	One type of cells are the red blood cells which contain a red pigment called haemo-globin. Haemoglobin find with oxygen and transports		BLOOD CE 1. R.B.C 2. W.B.C 3. PLATE

TEACHING POINT	PUPIL- TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD.
	it in all parts of the body and ultimately to all the cells. It will be ~~differ~~ difficult to provided oxygen efficiently to all the cells of the body without haemoglobin makes blood appeared. 		
W.B.C.	The blood also has white blood cells which fight against germs that may enter our body. The numbers of WBC in blood is ~~w~~ than the number of R.B.C. They are comparitively bigger in size than RBC of blood. These help in blood clotting at the injury and blood flow.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	 Hence, they prevent bless less.	Pupil's listen & noted down in their note - book.	

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Define blood ?	* Blood is the fluid which flows in blood vessels.
* What is components of blood ?	* Blood consist plasma and blood cells.
* Differentiate RBC and WBC.	* RBC are responsible for transporting oxygen to different part of the body. WBC - These cells fight against germs that may enter our body.

HOME WORK :

very short answer type question:

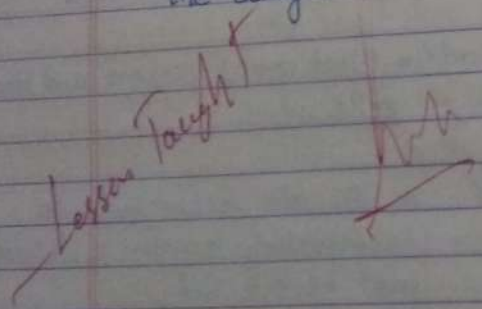
Q.1. Define blood ?
Q.2. What is the function of platelets ?

Short answer type question:

Q.1. Write a short note on blood.
Q.2. Differentiate RBCs and WBCs.

Long answer type question:

Q.1. Define blood and decribe its components with the diagram.



Lesson No : 12

Date.....

Pupil Teacher's Name: Nilima Kumari
Duration of the period: 15 MIN
Class: IX th
Pupil Teacher's Roll No: 26
Subject: LIFE SCIENCE
Average Age of the pupils: 14+
Topic: VIRUS

INSTRUCTIONAL OBJECTIVES:

The Learners are expeted to.....

KNOWLEDGE:

* Recall the term virus.
* Recognise the structure of virus.

UNDERSTANDING:

* Explain the structure of a virus.
* Differentiate physical and chemical properties of virus.

APPLICATION:

* Reason out why anti-bodies have no effect on virus.

SKILL:

* Draw a well-labelled diagram of structure of virus.

INSTRUCTIONAL MATERIAL USED:

GENERAL AIDS:

Chalk, duster, chalk board, pointer.

SPECIFC AIDS:

A chart showing the structure of a virus.

PREVIOUS KNOWLEDGE TESTING:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What are the living organi-sm?	* Plants, animals and micro-organisms.
* What are micro-organism?	* very small organism which we cannot see are called micro-organism.
* Name some micro-organism?	* Bacteria, fungi, virus, protozoa.
* Can you tell me something about the structure of a virus?	* No response.

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about virus.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
VIRUS	virus are smaller than bacteria. Their presence	Pupil's listen carefully.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD.
	can be determined by observing the effect they have on their host or by viewing them. Under an electron microscope. They replicate only under a living cells. It is impo-ssible to culture virus outside the specific host cell. This extreme practisism is associated with relative structure of virus.		
	In a virus, a small amount of genetic material in the from of DNA and RNA is enclosed in a protective protein coat unlike other micro-organism viruses do not have a cellular structure a virus out-side the host cell remain like a non-living particle.	Pupil's write down in their note-book.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHART BOARD.
	The viruses possess certain physical and che-mical properties which are as follows:- Virus are transmissi-ble and parasitic in nature including their host specificily. Antibiotics have no effect on virus as they do not have a metabolism of their own. Virus cause various disease like rabbies, pollico, Chickenpox, common-oid, influenza, and masaic of tobbaco and pauta.		

RECAPITULATION:

PUPIL'S TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1> How the presence of viruses can be detached?	* Presence of virus can be detached by observing the effect. They have on their host.
Q.2> What is the genetic material of a virus?	* DNA and RNA are the genetic material of virus.
Q.3> Where can we find a virus?	* Viruses are found every where in air, water, soil and body of living things.
Q.4> What are the disease causes of viruses?	* Rabbies, Polio, Chicken pox, common cold etc.

HOME WORK:

very short answer type questions :-

Q.1> How the presence of virus can be detached?
Q.2> It is possible to culture virus outside the host?

Short answer type questions :-

Q.1> Where we find a virus?
Q.2> What are the discuss caused by virus?

Long answer type questions?

Q.1> Explain the structure of a virus along?

* Well & good performance
* Teaching aids used
* Values

Lesson No : 13

Date.....

Pupil Teacher's Name. Nilima Kumari | Duration of the period. 15 MIN

Class. 8th | Pupil Teacher's Roll No. 26

Subject. LIFE SCIENCE | Average Age of the pupils. 14+

Topic. STRUCTURE OF A CELL

INSTRUCTIONAL OBJECTIVES:

The learners are expected to ....

KNOWLEDGE:

* Recall the term all.
* Recognise the various parts of a cell.

UNDERSTANDING:

* Explain the structure of a cell.
* Classify the various parts of a cell.
* Differentiate plasma membrane and nuclear membrane.

APPLICATION:

* Give reasons why cells are necessary for our body.

SKILL:

* Draw a diagram of structure of a cell.

INSTRUCTIONAL MATERIAL USED:

GENERAL AIDS:

Pointer, chalk-board, chalk, duster.

SPECIFIC AIDS:

A chart showing the structure of a cell.

PREVIOUS KNOWLEDGE TESTING:

PUPIL'S TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* How does the building made?	* Building are made up of bricks.
* How does the our body made?	* Bone, Blood.
* Does every organism has blood?	* Ant
* Name the organism which has no blood?	* Ant
* How does Ant performs functions?	* Problematic question.

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about "Structure of cell."

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B. B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
CELL	The body of living organism are made of tiny units called cells. Cells can be seen only under the microscope. Some organism are made of only one cell.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B. B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
PARTS OF CELL	Each cell has a definite structure or further smaller parts. These parts are called cell organelles. Some of these organelles are common to all cells	Pupil listen carefully.	PARTS OF CELL
	The is enclosed by a thin outer boundary called cell membrane. It is also called plasma membrane. It enclosed a liquid substance known as protoplasm.		
	Most cells have a distinct centrally located spherical structure called the nucleus.	Pupil note down in their note-book.	
	Nucleus lies mostly in the centre. The liquid protoplasm in the nucleus is called nucleoplasm.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
NUCLEAR MEMBRANCE	Nucleo plasm bond by a membranece called nuclear membrane		
CHROMASOME	Nucleus contain a network of fibrous material called chromatin. The condensed chromatin is in form of fiber like structure called chromosomes.		
MITOCHON-DRIA:	Red shaped or spherical organells called mitochondria.		

RECAPITUTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Define cell?	* The bodies of living organism are made of tiny units called cell.
* Define mitochondria?	* Red-shaped or spherical organells are called mitochondria.
* Differentiate Plasma membrane and nuclear membrane.	* Plasma membrance:- The cell is enclosed by a thin outer boundary called cell membrance or plasma membrance. -Nuclear membrance:- Nucleoplasm bound by a membrance called nuclear membrance.

HOME - WORK :

very short answer type question:

Q.1.) Define the term cells ?
Q.2) Name the parts of a cells ?

Short Answer type question:

Q.1) write a short note of 'structure of a cell'.
Q.2) Differentiate cell membrane and nuclear membrane.

Long Answer type question:

Q.1.) Draw a structure of a cell and define important organells.

Previous Knowledge Checked

Confidence Level Found

Lesson No : 14

Date .....

Duration of the period 15 MIN

Pupil Teacher's Name Nitika kumari

Pupil Teacher's Roll No. 26

Class IX th

Average Age of the pupils 14+

Subject LIFE SCIENCE

Topic MECHANISM OF BREATHING

INSTRUCTIONAL OBJECTIVES :-

The learners are expected to.....

KNOWLEDGE :

* Recall the term breathing.
* Recognise the various steps of breathing.

UNDERSTANDING :

* Classify the various steps of breathing.
* Differentiate Inspiration and expiration.

APPLICATIONS :

* Give reasons why rate of breathing increase during vigrous activity or physical exercise.

SKILL :

* Draw a diagram of the mechanism of breathing.

INSTRUCTIONAL MATERIAL USED :

GENERAL AIDS :

chalk, chalk-board, Duster, pointer.

SPECIFIC AIDS :

A Chart showing, "The mechanism of breathing"

PREVIOUS KNOWLEDGE TESTING:

PUPIL- TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1) what are the uses of nose.	* It is used for some us. intake of gases.
Q.2) Which gas is intake by humans?	* O_2 gas
Q.3) What is respiration?	* Intake of O_2 gas and exhale of CO_2
Q.4) What is the breathing?	* No response.

ANNOUNCEMENT OF TOPIC:

Well student! Today we will Study about the "mechanism of breathing."

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
BREATHING	The process of breathing is added by the rhythmic rebaration and contraction of thoracic cavity. It is the Intercostal mucles between	Pupil's note down in their note-book	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	thorabic and diaphagm that makes this possible.		
STEPS OF BREATHING	Breathing involves two steps: 1) Inspiration or Inhalation 2) Expiration or Exhalation	Pupil's note-down in their note-book.	
INSPIRATION	Breathing in or the entry of air from the atmosphere to the lungs is called Inspiration. During inspiration, intercostal muscles contoast and push the ribs upward and outward making the cone-shaped diaphragm flat. This causes on increase in the volume of the chest cavity and decrease in the air pressure inside the alveoli. The atmospheric air which is at higher pressure rusher in through the respiratory tract to equalize the pressure.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
EXPIRATION	The process of breathing outer expelling CO_2 and water from the lung through the respiratory tract is called expiration. During expiration, intercellular muscles release the ribs moves inward and the diaphragm becomes comb shaped diagram becomes again. The volume of the chest cavity decrease and air pressure inside the alveoli increase. Thus, air is pressure through the respiratory tract.		

RECAPITULATION:

PUPIL-TEACHER'S ACTIVITIES	PUPIL'S ACTIVITIES
Q.1) Define Breathing?	* Breathing is a part of the process of respiration during which an organism takes in the oxygen rich air and gives out rich in CO_2.
Q.2) What is Inspiration?	* Breathing in or the entry of air from the atmosphere to the lungs is called Inspiratin
Q.3) What is Expiration?	* The process of breathing out or expelling CO_2 and water from the lungs through the respiratory tract is called expiration.

HOME-WORK:

Very short answer type questions:

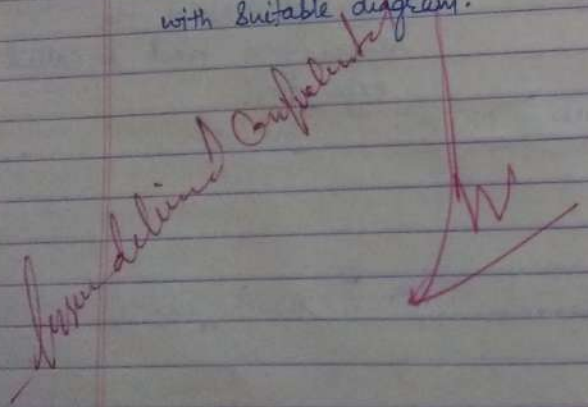
Q.1.) What is breathing?
Q.2) Name the steps of process of breathing.

Short answer type questions:

Q.1) Differentiate Inspiration and expiration.
Q.2) How does exchange of gases occur in lungs.

Long answer type question:

Q.1) Explain the mechanism of Breathing in human with suitable diagram.



Lesson No :...15.....

Date.....

Pupil Teacher's Name..Nilima kumari..... Duration of the period..15 MIN.....

Class..IXth..... Pupil Teacher's Roll No..26.....

Subject..LIFE SCIENCE..... Average Age of the pupils..14+.....

Topic..TYPE OF ROOT SYSTEM.....

INSTRUCTIONAL OBJECTIVES:

The learners are expected to....

KNOWLEDGE:

* Recall the term root system.
* Recognise various types of root system.

UNDERSTANDING:

* Explain Root system.
* classify various types of root system.
* Differentiate tap root and adventitious root system.

APPLICATION:

* Give reason why taproot has unlimited growth.

SKILL:

* Draw a diagram of tap root system.

INSTRUCTIONAL MATERIAL USED:

General Aids:-

Chalk, chalk-board, pointer, duster.

Specific Aids:-

A specimen shows different types of root system.

PREVIOUS KNOWLEDGE TESTING:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1) Name the part of the plant.	*Stem, leaf, root, branches.
Q.2) Name the underground part of a plant.	* Root is the underground part of a plant.
Q.3) Define root.	* The root is the underground and non-green part of the vascular plants.
Q.4) Name the type of Root System.	* No response (Problematic question).

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about "Types of Root system."

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
ROOT SYSTEM	The root system and its branches from root system.	Pupil's will listen carefully	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD.
TYPES OF ROOT	These are two types of root system. a) Tap root system. b) Adventitious root system.	Students note down in their note-book.	ROOT SYSTEM
TAP ROOT	Tap root system where in the main root develops from there radicle of the embryo. The primary root either may remain unbranched or may branched repeated to produce the root system. It comprises the primary root developing from the radicle and its branches. The branches born directly on the primary root are known as secondary root.	Students will listen care-fully.	TAP ROOT
ADVENTITIOUS ROOT	Adventitious root system is commonly found in monocot plant, e.g. Maize, sugarcane and wheat. However, some dicots may also bear adven-titious roots in addition to their normal taproot system e.g.	Students will carefully and note-down in their note-book.	ADVENTITIOUS ROOT

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	Prop root which develop from aerial stems in banyan and the leaf roots into notches of leaf margin in bryophyllum. This system is consitituions by the additional roots originating from parts of the plant other than the radicle e.g. from stem nodes or from leaves.		

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1.) Define Root System?	* The root and its branches form root system.
Q.2) Name the types of Root System.	* There are two types of root system:- a) Tap root system b) Adventitious root system.
Q.3) Name the plants which posses tap root system.	* Deep-rooted plants. e.g. Mango, Oat, apple etc.
Q.4) In banyan tree, which type of system is found?	* Adventitious root system.

HOME - WORK :

Very short answer types questions :-

Q.1) Define root system.
Q.2) Name the two type of root system.

Short answer types questions :-

Q.1) Write a short note on root system.
Q.2) Differentiate tap root and adventitious root system.

Long answer type questions :-

Q.1) Describe root system and its types with suitable diagram and examples.

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Lesson No : 16

Date .....

Pupil Teacher's Name : Nilima kumari — Duration of the period : 15 MIN

Class : IX th. — Pupil Teacher's Roll No. : 26

Subject : LIFE SCIENCE — Average Age of the pupils : 14+

Topic : WATER - CYCLE

INSTRUCTIONAL OBJECTIVES :

The learners are expected to .....

KNOWLEDGE :

* Recall the term Water cycle.
* Recognise the different sources of water.
* Define renewable and non - renewable source of water.

UNDERSTANDING :

* Explain the importance of water in our lives.
* Classify the resources of water.
* Give examples of renewable sources.

APPLICATION :

* Reason out why we should use maximum renewable sources.

SKILL :

* Draw a well-labelled diagram of water-cycle.

INSTRUCTIONAL MATERIAL USED :

General Aids :-

Chalk-board, Chalk, Duster, Pointer.

Specific Aids :-

A Chart showing water cycle.

PREVIOUS KNOWLEDGE TESTING:

PUPIL'S TEACHERS ACTIVITY	PUPIL'S ACTIVITY
Q.1) What is most important without which life is not possible?	* Water is most important.
Q.2) Which part of earth covered by water?	* About two third of the earth surface.
Q.3) Does all the water is drunkable?	* No most of water is not pure.
Q.4) Can water be recycled?	* No responses.

ANNOUNCEMENT OF THE TOPIC:

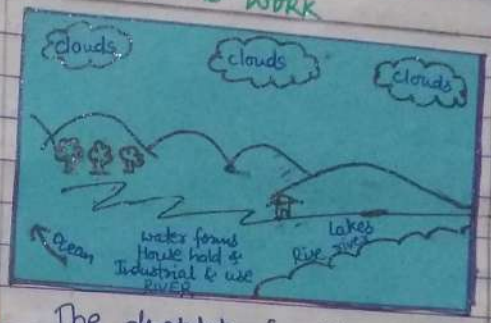
Well student! Today we shall study about the water the life giving liquid.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD.
WATER A NATURAL RESOURCES	Water, air, soil, forests, minerals and wild life are all natural resources. Today, minerals and fossil fuels like coal and oil are present in large amount on earth. However.	Pupil's listen carefully down the definition.	WATER

TEACHING POINT	PUPIL-TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD.
	it means continous to use them very fredy the reply of these things will eventually end. They can be renewed again by nature in a short time such sources are called non-renewab-le sources. Resources like water which go through cycles and can be replenished are called renewable sources seen to be in exhaustable ex-sun light or solar energy. Even through, therefore, of the earth is water. 97.2% of it is found in the sea. Sea water contain dissolved salts and cannot be used directly by us.		NATURAL RESOURCES
WATER CYCLE	We need water for various purpose. water is used for drinking, cooking, bathing, wash-ing and gardening water acts as a solvent. It is used for electricity.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD.
	Water circulates among the land. circulation of water is called water-cycles. It may also be defined as continous exchange of water between air, land and the ocean.		
	It consists of three process evaporation and condensation precipitation. Return of the ocean.	Student are writing in their note-book.	
EVAPORATION AND CONDENSATION:	Water evaporates from the oceans, lakes, rivers ponds, as well as plants and from animals.		
	It is cold enough for the water enough to condense into droplets around dust particles to form clouds.	Students listen carefully.	

TEACHING POINT	PUPIL- TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
			
PRECIPITATION	The droplets in the clouds form rain.	Students will listen carefully.	
RETURN TO OCEAN	To rain fell on the earth and return back to the ocean.		

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Which is the most aboundant compound on earth?	* Water.
* What are the use of water?	* a) In drinking. b) Bathing and cooking.
* How renewable sources are different from non-renewable.	* solar energy, tidal energy and forest water, wild life etc.

HOME - WORK:

Very short Answer type questions :-

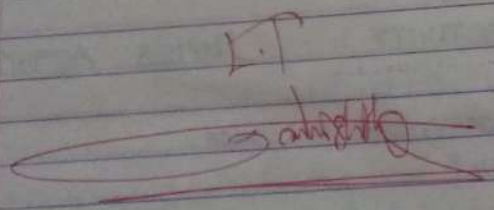
Q.1) Which is the most abundant compound on earth?
Q.2) What are the uses of water?

Short answer types questions :-

Q.1) Give examples of exhaustable and non-exhaustable source of water?
Q.2) Give the classification of resources with examples?

Long Answer type questions :-

Q.1) Discuss water cycle in brief.



Lesson No : 17

Date .....

Pupil Teacher's Name Nilima Kumari — Duration of the period 15 MIN

Class 12th — Pupil Teacher's Roll No 26

Subject LIFE SCIENCE — Average Age of the pupils 14+

Topic POLLINATION

INSTRUCTIONAL OBJECTIVE:

The learners are expected to.....

KNOWLEDGE:

* Define pollination.
* Recall the types of pollination.
* Recognise the various types of pollination.

UNDERSTANDING:

* Classify the types of pollination.
* Explain the different types of pollination.
* Differentiate self-pollination and cross-pollination.

APPLICATION:

* Give reason why cross-pollination needs agencies.

SKILL:

* Draw the diagram of self-pollination and cross-pollination.

INSTRUCTIONAL MATERIAL USED:

General Aids :-

Chalk board, chalk, duster, pointer.

Specific Aids :-

A chart showing the types of pollination.

PREVIOUS KNOWLEDGE TESTING:

PUPIL- TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* Tell the name of parts of plants.	* Root, stem, leaves, fruit and flowers.
* Which part of most beautiful?	* Flower.
* Can you tell the part of flower?	* Petals, sepals etc.
* What is pollination?	* No response.

ANNOUNCEMENT OF THE TOPIC:

Well Student! Today we will study about the pollination.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
POLLINATION	Transfer of poller from anther to stigma is called Pollination. Pollination take place through wind, water and insects.	Pupil listen carefully.	

TEACHING POINT	PUPIL- TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
TYPES OF POLLINATION	There are two types of pollination. 1> Self- pollination 2> Cross- pollination	Pupil's note- down in their note- book.	
SELF- POLLINATION	When the pollengrains are transferred with in the same flower or between the flowers of same plants are called Self- pollination. It has further two types. 1> Autogamy 2> Geitonogamy.		
AUTOGAMY	Transference of pollen grains from another of a flower to the same flower. e.g. Pea, wheat, rice etc.	Pupil's listen.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	Transference of a pollen-grain from another of a flower to the stigma of anther flower born on the same plant.	Pupil's note-down in their note-book.	
	When the pollen grains are transferred between the flower of different plants of the same species. It is also called allogamy cross-pollination needs a medium or an external agency to perform pollination.	Students note-down their note-book.	

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1) Define pollination ?	* Transfer pollen from anther to stigma is called pollination.
Q.2) Name the types of pollination	* These are two types of pollination. 1.) Self-pollination 2) Cross-pollination.
Q.3) Differentiate self-pollination and cross-pollination.	* Self-pollination: when the pollen-grains are transferred with in the same flower or between the flowers of the same plant. Cross-pollination: when the pollen-grains are transferred between the flowers are the same plant.

HOME-WORK:

Very short answer types questions:

Q.1) Define pollination.
Q.2) Name the two types of pollination.

Short answer types questions:

Q.1) Differentiate self-pollination and cross-pollination.
Q.2) Write a short note on self-pollination.

Long answer types questions:

Q.1) Define pollination and differentiate self-pollination and cross-pollination with the diagrams.

A+ A+ work fair
Teaching aids used

Lesson No : 18

Date.....

Pupil Teacher's Name: Nilima kumari
Duration of the period: 15 MIN

Class: 12th
Pupil Teacher's Roll No: 26

Subject: LIFE SCIENCE
Average Age of the pupils: 14+

Topic: STRUCTURE OF LIFE

INSTRUCTIONAL OBJECTIVES:

The learners are expected to.....

KNOWLEDGE:

* Recall the term leaf.
* Recognise various parts of leaf.

UNDERSTANDING:

* Explain the structure of a leaf.
* Differentiate reticulate venation and parallel venation.
* Example of leaves having different types of venation.

APPLICATION:

* Justify that leaves play an important role in photosynthesis.

SKILL:

* Draw a diagram at structure of leaf.

INSTRUCTIONAL MATERIAL USED:

General Aids:-

Chalk, duster, chalk board, pointer.

Specific Aids:

Real leaf of different plants.

PREVIOUS KNOWLEDGE TESTING

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1) What we can see aroud us?	* Building, Animals, Plants.
Q.2) Among these which are living?	* Plants, Animals.
Q.3) Name the parts of a plant?	* stem, Leaf, flower.
Q.4) What are the parts of leaf?	* Petiole, mid rib.
Q.5) Can you tell other parts of a leaf?	* No response (Problematic question).

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about the structure of a leaf.

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY +B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
LEAF	Leaf is an important part of a plant. It is green in colour.	Student will listen carefully.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY +B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
	It aries from the node of a stem or its branches. It contain chlorophyll. This pigment important green colour to the leaves with the help of chlorophyll plant perform. Photosynthesis and prepare, their food, that's why it is an important part because in the absense of leaf plants and do not make their food and hence their growth stops leaf has different parts.		
LEAF PARTS	Leaf has the following parts: 1) Petiole 2) Lamina 3) Mid-rib 4) veins		
PETIOLE:	The part of leaf by which it is attached to the stem by means a short stalk is called petiole.	Student will listen carefully	
LAMINA	The green and flat part of leaf is called Lamina.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD
VEINS :	Sometimes are present on leaves. These times forming a network through the leaf. These lines are called veins.		
MID-RIB	The thick vein presents in the middle of leaf from which other veins are originating is called midrib.		
VENATION	The arrangement of veins of the design made of by veins in a leaf is called leaf venation. There are two types of venation. a) Reticular venation b) Parallel venation.		

TEACHING POINT	PUPIL TEACHER'S ACTIVITY + B.B. WORK	PUPIL'S ACTIVITY	CHALK BOARD

RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1) Name the different parts of leaf.	* Petiole, lamina, veins, mid-rib etc.
Q.2) What is venation?	* Arrangement of veins or design made by veins in a leaf is called venation.
Q.3) Give two function of leaf.	* a) Photosynthesis. b) Transpiration.
Q.4) What is Lamina ?	* The broad green and flat part of leaf is called lamina

HOME-WORK:

Very short answer type question:

Q.1) Name the different parts of a leaf.
Q.2) Define venation.

Short answer type questions:

Q.1) Give the functions of leaf.
Q.2) Differentiate parallel and reticulate venation?

Long answer type questions:

Q.1) Define leaf and describe its structure with the help of diagram.

Lesson No : 19

Date ..... Duration of the period 15 MIN

Pupil Teacher's Name Nilima Kinnaul Pupil Teacher's Roll No. 26

Class IX th Average Age of the pupils 14+

Subject LIFE SCIENCE Topic DIGESTION OF AMOEBA

INSTRUCTIONAL OBJECTIVES:

The learners are expected to.....

KNOWLEDGE:

* Recall the term digestion.
* Name the parts of digestive System of Amoeba.

UNDERSTANDING:

* Classify the parts of digestive System of Amoeba.
* Explain the digestive System of Amoeba.
* Differentiate ingestion and egestion process of Amoeba.

APPLICATION:

* Infer the advantage of pseudopodia in digestion of Amoeba

SKILL:

* Draw a diagram of digestive System of Amoeba.

INSTRUCTIONAL MATERIAL USED:

General Aids :-

Chalk board, Chalk, Duster, pointer etc.

Specific Aids :-

A chart showing digestive System of Amoeba

PREVIOUS KNOWLEDGE TESTING:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1> What things are neccessary to live?	* Food, water, air etc.
Q.2> When do we eat food?	* When we feel hungry.
Q.3> What happens to the food inside the body?	* It get digested.
Q.4> Do all organisms digest the food?	* Yes
Q.5.> What is the mode of digestion in Amoeba?	* No response.

ANNOUNCEMENT OF THE TOPIC:

Well student! Today we will study about the "digestive system of Amoeba."

PRESENTATION:

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
AMOEBA	Amoeba is a microscopic single celled organism		AMOEBA

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	found in pond water. Amoeba has a cell membrance a rounded dense nuclears and many small bubbles like vacuoles in its cytoplam. It changes it shapes and position.		
DIGESTION	Breakdown of complete component of food into simples substances is called digestion.	Pupil note down in their note-book.	DIGESTION
DIFFERENT PARTS OF DIGESTION SYSTEM	Five step are involved in breakdown of food in Amoeba.	Pupil Listen carefully.	PARTS OF DIGES-TION SYST
<a> INGESTION	Amoeba engulf tiny particles of food by pseudopodia them join together to form a small cavity, a food vacuole.		
<b> DIGESTION	Food digested inside the food vacuole and digestive enzymes.	Pupil note-down notebook.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY	CHALK BOARD
	are secreted all itself.		
⟨C⟩ ABSORPTION	The absorption occurs in cytoplasm. Absorbed substances are used for growth main-tenace and multiplication.		
⟨D⟩ ASSIMILATION	In Amoeba, assimilation of food occurs through streaming movement of protoplasm inside the body.		
⟨E⟩ EGESTION	The process of removing on digested food parts from the body in the form of focus is called egestion. When sufficient amount of digested food collects inside. The body cavity its all membrance can rapture of any place to throw out the undigested food.	Pupil note-down in their note-book.	

INGESTION
DIGESTION
ABSORPTION
ASSIMILATION
EGESTION

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RECAPITULATION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
Q.1> Define the term digestion.	* Breakdown of complete component of food into simpler substances is called digestion.
Q.2> What is the role of pseudopodia in Amoeba?	* Pseudopodia has the finger like projection pseudopodia also known as false feet. It is used for movement and capture of food.
Q.3> Define Ingestion process in Amoeba.	* It is the actual taking in of the food from the environment. Amoeba enough tiny particles of food by surroundings it with false feet.

HOME WORK :

Very short answer type question :

Q.1> Define ingestion.
Q.2> What is the meaning of pseudopodia ?

Short answer type question :

Q.1> Differentiate ingestion and egestion.
Q.2> Write a short note on;
(a) Assimilation
(b) Egestion.

Long answer type question :

Q.1. Briefly describe the process of digestion in Amoeba with suitable diagram.

DISCUSSION
LESSON - II

Lesson No : 1

Date.....

Pupil Teacher's Name: Nilima Kumari

Duration of the period..... 30

Class..... VI th

Pupil Teacher's Roll No.. 26

Subject.. LIFE SCIENCE

Average Age of the pupils.. 11+

Topic.. LEAF MORPHOLOGY

CONTENT ANALYSIS :-

Leaf base, Petiole, lamina, mid-rib veins, apex, margin, venation, phyllotaxy, types of leaf - simple and compound.

GENERAL OBJECTIVES :-

* To develop scientific attitude among the Students.
* To create interest in life science.
* To give the knowledge of biological facts, concepts, pheno- -menon and process.
* To develop creative and innovative thinking among the Student
* To develop reasoning power among the students.
* To provide training in scientific matters.

INSTRUCTIONAL OBJECTIVE :

KNOWLEDGE :

* Pupil recall the parts of the leaf.
* Pupil recall and recognise the presence and function of chlorophyll.
* Pupil recall the arrangement of leaf.
* Pupil recall and recognise the concept of lamina and apex.
* The pupil recall and recognise the type of venation in leaf.
* The pupil recognise and recall the simple and compound type of leaf.

UNDERSTANDING :

* The pupil compare leaf on the basis of venation.
* The pupil explain various parts of leaf.
* The pupil compares leaf on the basis of margin and apex.

* Pupil explain the type of leaf (Simple and compound).
* The pupil explain the leaf on the basis of phyllotaxy.

APPLICATION:

* The pupil will be able to give examples of various types of leaf.
* The pupil will be able to form hypothesis about the parts of plant leaf.
* The pupil will be able to give example of the arrangement of leaf.
* The pupil will be able to form hypothesis about the venation of leaf.

SKILL:

* The pupil draw the diagram of leaf and label it.
* The pupil collect the different types of leaf.
* The pupil differentiate between type of venation, phyllotaxy, margin, and apex of leaf.

TEACHING AIDS:

* Different types of leaf (e.g. neem, peepal).
* Chart showing different type of leaf.

PREVIOUS KNOWLEDGE:

The student are familiar with the different part of the plant e.g. leaf, stem, root and various shape of the leaf the colour of these plant parts.

INTRODUCTION:

PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
* What are the various part of the plant?	* Stem, Leaf, root and flowers are the main part of plant.
* Name the green part of the plant.	* Leaf and stem are the green part of the plant.
* Why leaf is green?	* Due to presence of chlorophyll.
* What are the different size and form of leaf?	* Some leaf are small, some rounded, narrow, head, broad, elong

ANNOUNCEMENT OF THE TOPIC:

Well Student! Today we will study about the various part of leaf, i.e; Morphology of leaf.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL ACTIVITY
LEAF BASE	(Distribute the leaf of pepal to the pupil). (Pointing towards the level of lower part of leaf).	
	* How the lower part of the leaf looking like?	* The lower part of the leaf is swollen
	P.T.S:- This swollen part is called the leaf base.	
	* Why this part is called as the leaf base?	* It provide support to leaf.
	P.T.S:- It provide the base to leaf.	
PETIOLE:	(Pointing towards the petiole).	
	* What is the colour of this part of leaf?	* This part is of green colour.
	* How does the green part look like?	* Long slender shape.
	* What do you call this long cylinder shape part?	* It is called as Stalk.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- The stalk is called as petiole.	
LAMINA:	* What lies after the petiole?	* Broader leaf is present after petiole
	P.T.S:- This broader leaf is called as lamina.	
MARGIN:	* How the ends of lamina look like? (of peepal leaf). (Giving the student a leaf of neem)	* The ends of leaf are smooth.
	* How does the end of this are looking?	* The ends of the leaf are zig-zag.
	P.T.S:- The way/shape structure of the end of lamina is called as margin. It may be smooth and wavy.	
	*Give some example of leaves having smoth margin?	* Tulsi, neem, seesam etc., are example of it.
APEX:	(Pointing towards the termial end of lamina). * What is this structure called as?	* This is the end point of the leaf.

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- This end point of the leaf is called as leaf apex.	
	* How does it look like in a peepal leaf?	* It is pointed in the leaf of peepal.
	P.T.S:- The apex may be of various forms e.g. pointed, blunt, round broad etc.	
	* Give example where it is round?	* Tulsi
VEINATION : MIDRIB	(Pointing to the lamina) * What do you observe on lamina?	* Fine thread like structure are spread on the lamina.
	* What is the difference you find in outer region and middle region of lamina.	* Outer region have fine thread like structure and middle is thick.
	P.T.S:- The middle thick part is called as mid-rib and outer part are called vein.	
	* Why this is called as mid-rib?	* It passes from the middle of the leaf.
	* What do you call the spread -ing of veins and mid-rib on leaf lamina?	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
	P.T.S:- The arrangement of vein and mid-rib on leaf lamina is known as veination.	
	* How difference you observe in the leaf lamina on the basis of veination present?	
	P.T.S:- Irregular arrangement of veins on the lamina is called as reticulate veination and straight /parallel arrangement of vein is known as parallel veination.	
SIMPLE LEAF	* What are the part of leaf?	* Leaf, base, petiole, lamina etc.
	* What do you call the leaf when the leaf is attached at the axis?	* Simple leaf.
	P.T.S:- A leaf is said to be simple when it consists of a simple/single blade end.	

TEACHING POINT	PUPIL TEACHER'S ACTIVITY	PUPIL'S ACTIVITY
COMPOUND LEAF	* What type of leaf you observe in a kikar tree?	* Small leafs are arrange in two side by rays.
	P.T.S:- When a leaf lamina is divided into the many parts (leaf -let) is called compound leaf.	
PHYLLOTOXY	(After distributing the leaf to the student present in clusture).	
	* What type of arrangement of leaf you observe in each leaf structure/cluster.	* 90°, 180°. & not any specific arrangement or at angle.
	Arrangement of leaf on axis is known as phyllotoxy.	

EVALUATION:

* What are the main part of the leaf?
* What is mid-rib?
* What type of veination is present in peepal?
* What is compound leaf?

HOME-WORK:

* Fill in the blanks:

a) When the veins present in irregular fashion this veination is _____.

b) Two types of leaves are _____ and _____.

c) Arrangement of leaf is called as _____.

* Draw neat and well-labelled diagram of leaf.
* List the names of various types of leaf on the basis of veination.

REFERENCE BOOK:

NCERT Book of class VIth.

OBSERVATION LESSONS