B.ED. - BACHELOR OF EDUCATION

PEDAGOGY OF BIOLOGICAL SCIENCE - LESSON PLAN

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ATTENDANCE CHART

School _____

Class : _____ Subject : _____

Name & Roll																			

Name of the School _____

Class : _____

TIME-TABLE

DAY	I	II	III	IV	V	VI	VII	VIII
MON								
TUE								
WED								
THU								
FRI								
SAT								

Signature

Name of the School _____

Class : _____

TIME-TABLE

DAY	I	II	III	IV	V	VI	VII	VIII
MON								
TUE								
WED								
THU								
FRI								
SAT								

Signatur

INDEX

Sr. No.	Date	Lesson No.	Topic	Pages	Sign. of the Supervisor
1.			1) Micro Teaching Lessons		
			(i) Respiration and its Types		
			(ii) Components of food		
			(iii) Movements in plants		
			(iv) Micro-organisms		
			(v) Photosynthesis		
2.			2) Mega Lesson		
			(i) Kingdom		
			(ii) Photosynthesis		
			(iii) Food and its Constituents		
			(iv) Blood clotting		
			(v) Blood group and Transfusion		
3.			3) Discussion Lesson - 1		
			(i) Human Digestive System		
4.			4) School Teaching Practice Lessons		
			(i) Blood Pressure		
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			(v) Sexual Reproduction		
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			(vii) Reproduction in plants		
			(viii) Cholera and tuberculosis		
			(ix) Nutrition in plants		
			(x) Plants movements		

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Sr. No.	Date	Lesson No.	Topic	Pages	Sign. of the Supervisor
			(xi) Organic Evolution.		
			(xii) Co-ordination in Animals.		

LESSON No. 1

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class ..... Average Age of the pupils .....

Subject Life Science ..... Topic Respiration and Its Types

Skill of Explanation

Students today we will learn about respiration Tell me why do we respire? All organisms are made up of small microscopic units called cells. A cell is the smallest structural and functional units of an organism. perform various function like nutrition, transport, excretion and reproduction.

To perform these functions the cell need energy but where does this energy come from. This energy comes from which is realised during respiration. We breath in air which is transported to all parts of the body and ultimately to each cell. In the cell, Oxygen in the air helps in the breakdown of food. The processes of breakdown of food in the cell with the release of energy is called Cellular respiration.

Types of Cellular Respiration

1) Aerobic Respirations ⇒

In the cell, the food is broken down into CO_2 and water where break down of glucose occurs with the use of oxygen.

It is called aerobic respiration.

Glucose $\xrightarrow{\text{with the use of oxygen}}$ $CO_2 + H_2O$ + Energy

2) Anaerobic respiration :⇒ Where breakdown of food occurs without the use of Oxygen is called Anaerobic respiration.

Pupil teachers activity	Students activity
1) What is respiration?	The process of breakdown of food in cell with the release of energy is called respiration.
2) What are the two types of respiration.	(i) Aerobic (ii) Anaerobic.

Observation Schedule

Components	Rating Scale
1) Using appropriate beginning statements	0 1 2 3 4 5 6
2) Using Concluding Statement	0 1 2 3 4 5 6
3) Using explaining links	0 1 2 3 4 5 6
4) Considering essential points	0 1 2 3 4 5 6
5) Testing Understanding	0 1 2 3 4 5 6

LESSON No. 2

Date | Duration of the period

Pupil Teacher's Name | Pupil Teacher's Roll No

Class | Average Age of the pupils

Subject Life Science | Topic Components of food

Skill of Introducing the lesson

Pupil Teacher's Activity	Student's Activities
1) Student tell me what are the basic needs of life	Food, clothes, House
2) What does all living organisms required to perform various functions	Energy.
3) What does all living organisms required to get energy?	Food.
4) What are the different sources of food.	Plants, Animals.
5) Give examples of some food items?	Rice, chapati, milk, pulses.
6) What does different food items contains?	Different components of food.
7) What are the different	Students here find

	Pupil teacher's activity	Students Activity
	Components of food.	themselves in a problematic situation.
8.)	Children today we are going to learn about the different Components of food.	Students listen and attend to the facts narrated by the teachers.

Observation Schedule

Sr. No.	Components desirable behaviour	
1.)	Using previous experience of the pupils.	0 1 2 3 4 5 6
2.)	Proper use of technique.	0 1 2 3 4 5 6
3.)	Over all impressions about introducing a lesson.	0 1 2 3 4 5 6
	Components (Undesirable behaviour)	

1.	lack in Continuity.	0 1 2 3 4 5 6
2.	Irrelevant or non-verbal behaviour.	0 1 2 3 4 5 6

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LESSON No. 3.....

Date..... Duration of the period.....

Pupil Teacher's Name..... Pupil Teacher's Roll No.....

Class X^th Average Age of the pupils.....

Subject Life Science Topic Movements in plants

Skill of Probing Questions

Sr. No.	Pupil teacher activities	Student Activities
	Students, Today I am going to tell you about movements in plants.	
1)	What is movement. Can you define it?	The act of moving an object or animals can move from one place to another. this type of movement is called locomotions.
2)	like animals, plants have any movement or not?	Yes
3)	What kind of movement is possible in plants?	They can move or bend their body parts.
4)	How plants can move or bend their body parts What is the reason behind it?	Students listen carefully. Plants can move

or bend their parts in response to light, water, gravity and touch etc.

These movements are called tropic movements in plants.

→ Phototropism.

1) What do you mean by word photo? The reason of a part of the plant to light is called phototropism.

heights.

2) Why always roots grow towards earth? The growth response of a part of plant to gravity is called geotropism.

Due to gravitational force.

So, Students we have learned about different movements in plants.

Observation Schedule - Cum Rating Scale.

Sr. No.	Components	Rating Scale
1)	Prompting	0 1 2 3 (4) 5 6
2)	Seeking further Information	0 1 2 3 4 (5) 6
3)	Refocussing	0 1 2 3 (4) 5 6
4)	Reducining	0 1 2 3 4 (5) 6
5)	Increasing Critical awareness.	0 1 2 3 (4) 5 6

LESSON No. 4.....

Date ..... Duration of the period .....

~~Pupil Teacher's Name~~ ~~Pupil Teacher's Roll No~~

Class VII th ~~Average Age of the pupils~~

~~Subject~~ Life Science Topic Micro-organisms

Skill of Illustrating with example

Pupil Teacher Activities	Students Activities
1) Students yesterday, you have learnt about micro-organisms will you give me names of some of these micro-organism.	Bacteria, fungi, Algae, virus, protozoa are all example of micro-organism.
2) very good, you also know about various type of bacteria. Now give me some examples of bacteria available around us?	These are 1.) Cocci 2.) Bacillus 3.) Spirillum and/sha bacteria.
3.) Give me some examples of five rules played by bacteria.	Curdling of milk and formation of other milk products such as milk cheese.
4.) Give me some more examples of 2 rules played by bacteria.	
5.) Some more examples of five rule played by	Students don't respond.

Pupil Teacher Activities	Students Activities
bacteria are the following 4) Preparations of medicine. ex- (i) Help in providing nutrients nitrates to leguminous plants like carrot.	
6) Can you give me some more examples of leguminous plants?	Radish, potato, turnip are some examples of leguminous plants
7) Bacteria play a negative role also in our life. For example various diseases in the human beings are caused by bacteria. can you give me the example of diseases caused by bacteria.	T.B. is caused by bacteria.
8) student; the cholera, typhoid, pneumonia, tetanus are other example of the diseases caused by one of the three bacteria.	Students listen and write down the various example of diseases caused by bacteria in their notebook

Observation Schedule - Cum Rating

Sr. No	Components	Rating Scale
1.	Relevancy of example	0 1 2 3 4 5 6
2.	Simplicity of example.	0 1 2 3 4 5 6
3.	Interesting aspects of example.	0 1 2 3 4 5 6
4.	Appropriateness of the media.	0 1 2 3 4 5 6
5.	Appropriateness of the approach.	0 1 2 3 4 5 6

LESSON No. 5.....

Date..... Duration of the period.....

Pupil Teacher's Name..... Pupil Teacher's Roll No.....

Class VII th Average Age of the pupils.....

Subject Life Scienc Topic Photosynthesis

Skill of Stimulus Variations

Pupil Teachers Activities	Student Activities
1) Students, Today I am going to tell you about photosynthesis.	
2) What is essential to you for being alive on the earth?	we need Oxygen, water and food essential for being alive.
3) From where do we get food.	we get food from plants.
4) By which process plants prepare their food.	Photosynthesis.
5) What is photosynthesis?	Unsatisfactory response.
6) Photosynthesis :→ It is the process of preparing food by the plant in the presence of water, light and carbon dioxide.	Students note down in their notebook.

Pupil Teacher Activities	Students Activities
7.) The following reaction shows processes of photosynthesis. $CO_2 + H_2O \xrightarrow{\text{Sunlight}} C_6H_{12}O_6 + O_2$.	Students write down in notebook.
8.) What are the factors which affect photosynthesis in plants.	Sunlight, CO_2 and water.
9.) Chlorophyll play also a role during process of photosynthesis.	

Observation Schedule Cum Rating Scale

Sr. No.	Components	Rating Scale
1.	Movements	0 1 2 3 (4) 5 6
2.	Gesture	0 1 2 3 (4) 5 6
3.	Change in voice	0 1 2 3 4 (5) 6
4.	Focussing	0 1 2 3 (4) 5 6
5.	change in Inter relation Style	0 1 2 3 4 (5) 6
6.	Pressing	0 1 2 3 4 5 (6)
7.	Audio-visual switching	0 1 2 3 4 (5) 6
8.	Physical Involvement of the pupils.	0 1 2 3 4 5 (6)

L.T.

SIMULATED TEACHING LESSONS

LESSON No. 1.....

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No .....

Class IXth Average Age of the pupils .....

Subject Life Science Topic Kingdom

Instructional objectives :-

(i) Students will be able to define the term Kingdom.

(ii) Students will be able to classify the Kingdom.

(iii) Students will be able to explain the class of Kingdom.

Instructional aids :-

(i) General aids :- chalk-board, chalk, duster, etc.

(ii) Specific aids :- chart showing class of Kingdom.

Previous Knowledge Assumed :-

Pupil teacher assumes that students are familiar with living organism.

Previous Knowledge Testing :-

Pupil Teacher Activities	Students Activities
Give example of living organism?	Human being, plants, animals.
Which type of cell is present in animals - Eukaryotic or prokaryotic cell?	Eukaryotic cell.
What are the division of a kingdom.	Students gave unsatisfactory response

Announcement of the topic

After getting unsatisfactory response from students. pupil teacher announce that students today we are going to learn about Kingdom.

Presentation of the topic ⇒

Pupil teacher present her topic by teaching active participation of student with the help of lecture-cum method and chalk-board.

Content	Pupil Teacher Activities	Students activities	Chalk activities
Kingdom	Biologist such as Ernst Haeckel (1866), Robert Whittaker (1959) and Carl Woese (1977) have tried to classify all living organism into broad categories called Kingdom. These groups are formed on the basis of their Cell structure, mode of nutrition, and body organization.	Students listen carefully and	(i) Monera (ii) Protista (iii) Fungi (iv) Plantae (v) Animalia
Division	Kingdoms are classified into five classes.	Students	
Monera	These organism don't have a different nucleus or organelles.	Note down in their Notebook.	
Protista	In the group, many kinds of Cellular eukaryotic organisms some of this organisms use appendages such as hair like Cilia or flagella. Cilia		

Content	Pupil Teacher Activities	Students Activities	Chalk activities
	help in motion. The mode of nutrition can be autotrophic or heterotrophic.	Students	
Fungi	These are heterotropic eukaryotic organisms. They use dead-decay matter as food. They have cell wall made up of a high complex sugar called chitin.	listen carefully.	
Plantae	These are multicellular eukaryotic. cell wall is present.		

⇒ Recapitulation Task

(i) What are the classes of kingdom

(ii) Name the biologist who tried to classify all living organism in a broad category called Kingdom.

Home work.

(i) Write a short note on Kingdom.

(ii) Write down the divisions of Kingdom.

→ Need more emphasis on Introduction.
→ Need more Interaction with students.
→ Class Management is not good.

LESSON No. 2.....

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No .....

Class VII^th Average Age of the pupils .....

Subject Life Science Topic Photosynthesis.

Instructional objectives ⇒

(i) Students will be able to define the term photosynthesis.

(ii) Students will be able to make at least of requirement for plants for preparing their food.

(iii) Students will be able to explain the term photosynthesis.

Instructional Aids ⇒

General Aids ⇒ Chalk, chalk-board, duster.

Specific Aids ⇒ Chart showing chemical reaction of photosynthesis.

Previous Knowledge Assumed

Pupil teacher assumed that students are familiar with photosynthesis.

Pupil Teacher Activity	Students Activity
1) What is essential for you to live on earth.	Water, air and food.
2) What is the source of food?	Plants
3) From where animals take food?	Some take from plants Some take from animals
4) How plants make their food?	Students gave unsatisfied response.

Announcements of the Topic

After getting unsatisfactory response from student, pupil teacher announce that Students, today we are going to study about photosynthesis.

Presentation of the topic is

Pupil teacher will present her topic by taking active participation of students with the help of lecture cum method and

chalk board.

Content	Pupil Teacher Activities	Student Activity	Chalk Board
Photosynthesis	The processes by which the plants prepare their food by taking water and carbon dioxide in the presence of sunlight and chlorophyll is called photosynthesis.		
Chemical reaction	$CO_2 + H_2O \xrightarrow{\text{Sunlight}} C_6H_{12}O_6 + O_2$		$CO_2 + H_2O \xrightarrow{\text{Sunlight}} C_6H_{12}O_6 + O_2$
	It is the pigment in leaves and it is necessary for making food in plants.		
	Can photosynthesis takes place at night in plants?	No, photosynthesis does not takes place at night in plants.	
Autotropic	It is a type of nutrient in which the organisms can synthesize its own food.		

Content	Pupil Teacher Activities	Students activities	Chalk board
Chlorophyll	They can trap total energy and convert it into chemical energy in form of food.		
Requirement	Following are the requirements for plants for making their food.		

Recapitulation Task :⇒

1) What is Chlorophyll?
2) What is Photosynthesis?

Home-Work

(i) What is autotropic nutrition?

(ii) What is photoautotropic nutrition.

1) Introduction was fair.
2) Teaching aids were used.
3) Feedback was given to students.

LESSON No. 3.....

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class VII th Average Age of the pupils .....

Subject Life Science Topic Food and its Constituents

Instructional objectives ⇒

(i) Students will be able to define the term food.

(ii) Students will be able to classify the constituents of food.

(iii) Students will be able to define the constituents of food.

Instructional Aids ⇒

General aids :- chalk, chalk board.

Specific aids :- Chart showing constituents of food.

Previous Knowledge Assumed ⇒

Pupil teacher assumes that students know about food.

Previous Knowledge Testing

Pupil Teacher Activities	Student Activities
1. What is essential for you to live on earth	Water, food and air are essential to live on earth.

Pupil teacher activities	Students activities
2. What are the Sources of food.	Plants and animals are the Sources of food.
3. What we get from the food?	Energy.
4. What are the Constituents of food?	Students give Unsatisfactory response.

Announcement of the topic :-

After getting unsatisfactory response from Students, the pupil teacher announces that Students today we are going to Study about food and its Constituents.

Presentation of Topic :-

Pupil teacher will present her topic by taking active participation of students with the help of chart, chalk board

Contents	Pupil teacher activities	student activities	chalk board
Definition	Food provide us energy. It is essential for the growth of body.		

Content	Pupil Teacher Activities	Student Activities	Chalk Activities
Source	Give example of food products you get from plants.	Vegetables, grain, Cereals and fruit.	
	Give example of food products you get from animals.	Students listen Carefully.	
Constituents	Carbohydrates, fats, vitamins proteins and minerals	Cereals and fruit.	
	It is Compised of Carbon, hydrogen and Oxygen Ex- glucose, Sucrose, Starch and Cellulose. Fructose and Starch are main Source of energy in our body. Energy provided is measured in terms of joule. and It is denoted by J. One Carbohydrate provides 16.8 KCal.	Meat, fish, egg and milk. Students listen Carefully and note down in their notebooks.	
	Rice, wheat, Maize, Potato, Sugar, Banana, and mango are Some Sources of Carbohydrates	It is Composed of Carbon, hydrogen, Oxygen, glucose and Starch.	

Contents	Pupil Teacher Activities	Student Activities	chalk activities
①	What are Carbohydrates	glucose and Starch	
②	What are the examples of Carbohydrates.		

Recapitulation Task :-

① What are the Constituents of food?

② What are Carbohydrates.

③ What are the source of Carbohydrates

Home Work :-

① From Where do we get the energy?

② Write a short note on Carbohydrates?

Lesson Taught.

LESSON No. 4.....

Date: Duration of the period

Pupil teacher's name: Pupil Teacher's Roll No

Class: X^th Average Age of the pupils

Subject: Life Science Topic: Blood clotting

Instructional objectives:

(1) Students will be able to define blood clotting.

(2) Students will be able to explain the processes of blood clotting.

(3) Students will be able to recognise blood clotting.

Instructional Aids:

(1) General Aids: chalk, chalk-board, duster.

(2) Specific Aids: Chart showing process of blood clotting.

Previous Knowledge Assumed

Pupil teacher assumes that students know about blood.

Previous Knowledge Testing:

Sr. No.	Pupil Teacher Activities	Students Activities
1.	who supply oxygen to the heart and other parts of the body.	Blood.
2.	What are the Constituents of blood?	Red blood Corpuscle, white blood Corpuscle and platelets.
3.	Which pigment is present in Red blood Corpuscles	Haemoglobin.
4.	What is the major function of white blood Corpuscles.	To protect the body from Infections.
5.	What is the function of blood	unsatisfactory response.

Announcement of Topic :-

Pupil teacher present her topic by taking active participation of students with the help of chart and chalk board.

Content	Pupil Teacher Activities	Student Activities	chalk Activities
Definition	To prevent the bleeding from Injured Site. Body has its own response system and make a clot. After clot formation bleeding stops from Injured site. It is also known as Coagulation.		
Steps	The process of blood clotting has following main steps :-		
	Blood clotting is also known as Coagulation.	Flow of blood from Injured site.	
Step I:	When blood flow from Injured site, Components of blood such as platelets secrete the substance like Thromboplastin. These thromboplastin in the presence of Ca ions Convert prothrombin to thrombin		

Content	Pupil Teacher activities	Student activities	Chalk activities
	What is secreted by platelets	Prothromboplastin	
	The thrombin Converts fibrinogen to fibrin.	Students note down in notebook	
	There are insoluble fibre. these insoluble fibre make a clot in which blood as platelets are entangled and then clot is formed.		

Recapitulation Task :-

1) Blood clotting is also known as ____.
2) Which substance is secreted by platelets?
3) Fill up

Thrombin Converts ____ into ____

Home work

1) What is the blood clotting?

2) Fill-up

(a) Thromboplastin is secreted by ____.

(b) ____ can convert prothrombin into thrombin.

LESSON No. ..5.....

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class VII th Average Age of the pupils .....

Subject Life Science Topic Blood Group and Transfusion

Instructional objectives :-

1. Students will be able to define blood group.
2. Students will be able to classify blood group.
3. Students will be able to identify the blood group.
4. Students will be able to recognise the blood group.

Instructional Aids :-

1. General Aids :- chalk, chalk board, duster.
2. Specific aids :- Chart showing blood group.

Previous knowledge Assumed

Pupil teacher assumes that students know about blood.

Pupil Teacher Activities	Students Activities
1) What are the Components of blood?	Red Blood Corpuscles, white blood Corpuscles and platelets.

Pupil Teachers Activities	Student Activities
2) What is the function of platelets?	They help in blood clotting.
3) Blood clatting is also known as a	Coagulation.
4) What is Coagulation?	To prevent excessive bleeding from injured tissue. Body develop to own System and makes clot.
5) What is blood transfusion.	Unsatisfactory response.

Announcement of Topic :-

Students today we will study about blood group and transfusion.

Presentation of Topic :-

Pupil teacher present the topic by taking active participation of students with the help of chart and chalk board.

	Pupil Teachers Activities	Student Activities	Chalk board
Definition	The transmission of blood from healthy person to the patients is known as blood transfusion. due to accident excessive bleeding occur and body demand the blood.	Students listen carefully.	
Donor	The person who donate the blood is known as donor.	and	
Receiver	The person who receive the blood is known as receiver.	note in their note-book.	
Antigen	Lands Steiner discover antigen and said that it is due to the reaction of antigen which is present in corpuscles of donor.		
Types of Antigen	There are two types of antigen A & B.		

	Pupil Teacher Activities	Student Activities	chalk board
Blood Group	On the basis of antigen and antibody human blood is divided into four groups - A, B, AB and O.		

Recapitulation Task :-

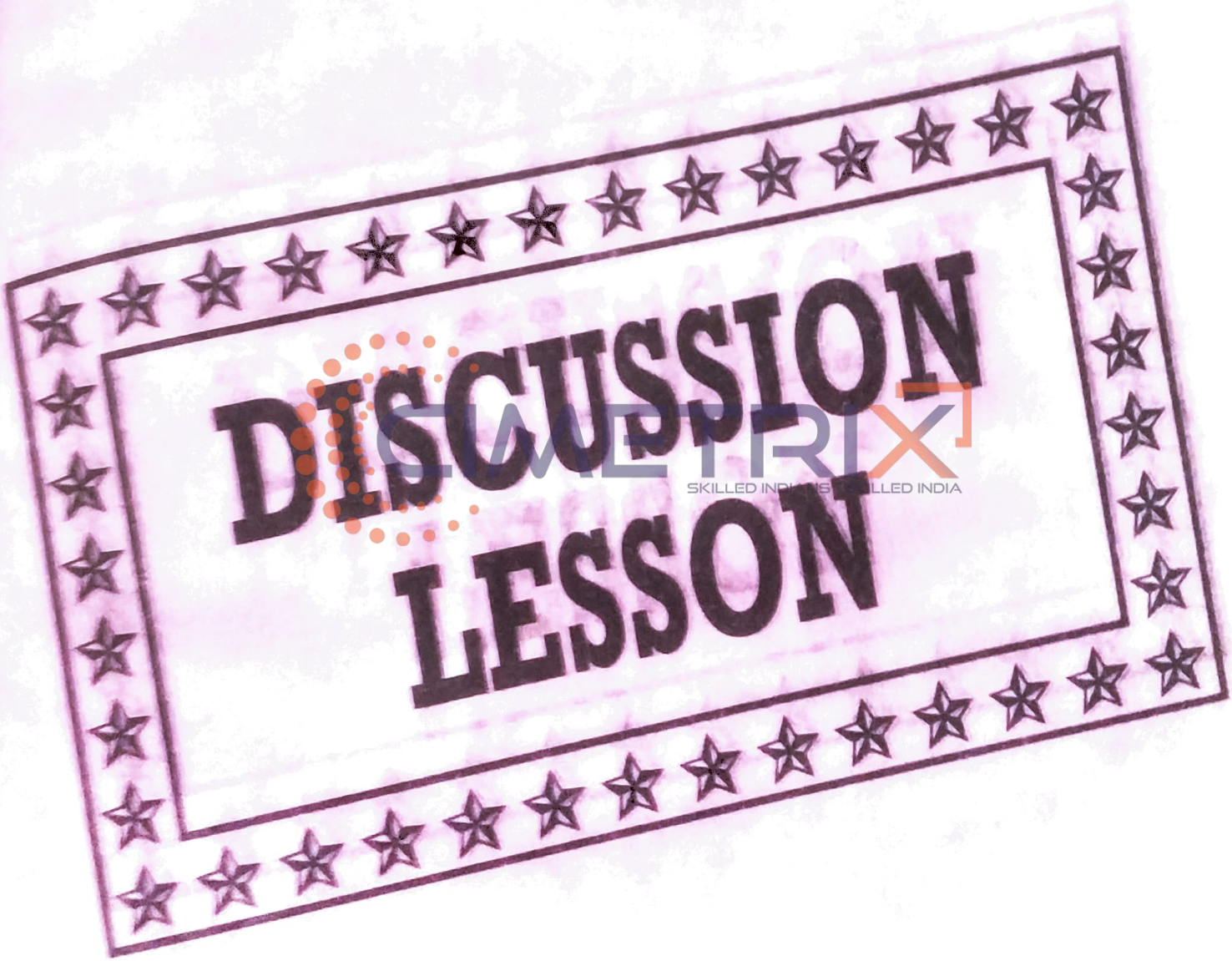
1. Define blood transfusion
2. Which pigment is present in red blood corpuscles?

Home work

1) What are the types of antigens?
2) Write down the types of antibody?

☆ Introduction was poor.
☆ Teaching aids were not used.
☆ Feedback was not given to students.

Signature



LESSON No. 1.....

Date..... Duration of the period.....

Pupil Teacher's Name..... Pupil Teacher's Roll No. .....

Class X^th Average Age of the pupils.....

Subject Life Science Topic Human Digestive System

Instruction objectives

1) Students will be able to define blood pressure.

2) Students will be able to classify the blood pressure.

3) Students will be able to measure the various organs of the human digestive system.

4) Students will be able to explain human digestive system.

5) Students will be able to explain the digestion of Carbohydrates, fats and proteins.

Instructional Aids

(1) General Aids :- Black board, chalk, duster.

(2) Specific Aids :- Transparency.

Previous Knowledge Testing / Assumed :-

Pupil teacher assumes that students know the functions of Human Digestive System.

Previous Knowledge testing

Pupil Teacher Activities	Student Activities
(1) What does all living organism require to perform various life processes?	They require energy to perform various life processes.
(2) Which substance provide us energy?	Food.
(3) What happens to the food when it enters in the body	When we take food digestion of food occurs in the body.
(4) What is the digestive system	Unsatisfatory response.

Announcement of Topic :-

After getting unsatisfatory response from the students, the pupil teacher assumes that students today we are going to learn about human digestive system.

Content	Pupil Teacher Activities	student activities	chalk board
Digestive System	The human digestive system consist of alimentary canal		

Content	Pupil Teacher Activities	Student Activities	chalk board.
	and associative glands.		
Various Organ of Human digestive system.	Mouth, Oesophagus, Stomach, Duodenum, Ileum, Colon and Rectum, Salivary gland, Liver, Pancreas.	Students	
Associated gland	In human being, the digestion of food being the mouth itself. The mouth cavity contains teeth, tongue and salivary gland.	listen carefully	
Digestion of Starch	Digestion of food (Starch) starts in mouth. Since the food remains in mouth for a short time. So, digestion of food remains incomplete in mouth. Mouth opens into a small funnel shaped area called pharynx which leads to a long tube called Oesophagus. Tube is highly muscular.	and note down in their notebook.	Salivary gland -1, Liver and Pancreas.
Peristaltic Movement	When slightly digested food enters the food pipe		

Content	Pupil Teacher's Activity	Student activities	chalk-board
	Food pipe start Contraction and expansion movement This type of movement is called peristaltic movement. The food enters into Oesophagus. No digestion of food takes place in Oesophagus.	Students note - down	
Stomach.	The stomach is a J Shaped organ present on the left side of the abdomen. The food is further digested in the stomach. During this time, food break down into still smaller piece. The glands present in the wall of stomach secretes gastric juice.	in their	
Composition of gastric juice.	The gastic juice contains three substances. ① Hydrochloric acid ② Enzyme pepsin ③ Mucous.	notebooks.	
Digestion of protein	The digestion of protein being in the stomach.		

Content	Pupil Teacher Activities	Student Activities	chalk board.
	Pepsin can digest the proteins properly.		
Digestion of fat	The gastric lipase break down the food fat partially the gastric juice is also known secreted by the wall of the stomach.	Students listen	
Intestine	⇒ The partially digested food then goes from stomach into small intestine is called duodenum. It is about 25 centimeters long The remaining part of small intestine is called ileum. Duodenum receives from secretions of two glands lies and pancreas through a common duct. The bile secreted by stomach is normally stored in gledge.	Carefully.	(i) Hydrochloric acid (ii) Enzyme, (iii) Pepsin (iv) Mucous.

Content	Pupil Teacher Activities	Student Activities	chalk-board
	The partially digested food contains Carbohydrates, proteins and fats, enter the ileum and then the food is completely break down in the parts.		

Recapitulation

1) Name the enzyme present in human Salina.
2) What is the another name of food pipe?
3) Which one of two is large Small Intestine or large Intestine

Home-Work

1) Name the main organs of the human digestive system.
2) What parts of the body secrete bile?
3) Where is bile stored?

SCHOOL TEACHING PRACTICE LESSONS

LESSON No. 1

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class. XI th Average Age of the pupils .....

Subject. Life Science Topic. Blood Pressure

Instructional Objectives :-

(1) Students will be able to define blood pressure.

(2) Students will be able to classify the blood pressure.

(3) Students will be able to measure the Systolic and diastolic blood pressure.

Instructional Aids :-

1. General Aids :- Chalk, chalk board.

2. Specific Aids :- chart showing movement of blood pressure.

Previous Knowledge Assumed :-

Pupil teacher assume that students know about blood.

Previous Knowledge Testing :-

Pupil Teacher Activities	Student Activities
1) What is blood?	It is a connective tissue and body fluid in humans and other animals.
2) What protein is present in blood.	Haemoglobin
3) What is plasma?	It is mainly water consist up to 75% water.
4) Blood supply the Oxygen to heart and other parts of body in which blood flow.	vessel.
5) What is blood pressure.	Students gave unsatisfactory response.

Announcement of Topic :-

Students gave unsatisfactory response getting it, pupil teacher announces that students today we are going to study about blood pressure.

Presentation of Topic :-

Pupil teacher present the topic being taking active participation of Students with the help of chart and chalk board.

Content	Pupil Teacher Activities	Student Activities	chalk-board
Blood Pressure	The force that blood enters against the walls of vessels is called blood pressure		
Types	A is pressure which is greater in arteries than in vein. 1) Systolic, 2) Diastolic 3) Hypertension, 4) Hypotension	Students listen Carefully.	
Systolic blood Pressure	The pressure of blood inside the artery during ventricular systole or Contraction is called systolic blood pressure. The normal systolic pressure is about 120 mmHg.		
Diastolic blood pressure	The pressure of blood inside the artery during ventricular diastolic pressure. The normal clear (blood) blood pressure is 80 mmHg.	Students listen Carefully.	
Hyper Tension	It is caused by Contraction of arteries which result	students note down in their note books.	

Content	Expd. Teacher Activities	Student Activities	Chalk-board
	increased resistance to blood flow.		
Hypotension	When the systolic blood pressure is below 90mm of Hg clearly blood pressure below 8mm of Hg then it is called hypotension.		

Recapitulation / Feedback

What is the blood pressure?

What are the types of blood pressure?

Home work :-

What is diastolic blood pressure?

What is systolic blood pressure?

Introduction was poor.
Teaching aids were not used.
Explanation was satisfactory.

LESSON No. 2

Date..... Duration of the period.....

Pupil Teacher s Name ..... Pupil Teacher's Roll No. .....

Class.... VII th ..... Average Age of the pupils.....

Subject.... Life Science ..... Topic..... Cell .....

Instructional objectives :-

1. Students will be able to define cell.
2. Students will be able to identify the cell.
3. Students will be able to compare the unicellular and multicellular organism.

Instructional Aids :-

General Aids :- chalk, chalk board, duster.

Specific Aids :- chart showing cell have different shapes.

Previous knowledge Assumed :-

Pupil teacher assumes that students are familiar about cells.

Previous Knowledge Testing :-

Pupil Teacher Activities	Student Activities
1:- What are the parts of body in plants.	Leaf, stem and roots.

2. What are the parts of body in animals?	Head, Eyes, Lips and Wings.
3. Each organism is made up of a?	Cell.
4. What is Cell?	Unsatisfactory response.

Announcement of Topic :-

After getting unsatisfactory response, pupil teacher announces that students today we are going to study about Cell.

Presentation of Topic :-

Pupil teacher present her topic by taking active participation of students with the help of lecture-cum method and chalk board.

Content	Pupil Teacher Activity	Student Activity	chalkboard
Definition	Cell is the basic structural and functional unit of all organisms. Cell is found in the living organism. very in number shapes.	Students listen carefully.	

Content	Pupil Teacher Activity	Student Activity	chalk board.
Types of Organism	1) Unicellular Organisms 2) Multicellular organisms.		
Unicellular Organism	Single called organism are called Unicellular organism. Ex- Animals, Paramaecium, bacteria		
Multicellular Organism.	Organism which have large number of cells are termed as multicellular organism. Give example of multicellular.	Students listen carefully.	
	Cells is multicellular plant and animals have variety of shapes as an special in shape.		
	There can be cuboidal or columnar some of animal cells are branded as in nerulles. Most cells are very small in size and not visible to naked eye. Smallest cell to naked size of nicon absud in bacteria. my Gpale Ostrich egg is represented the largest cells.	Students listen carefully and note down in their notebook.	

Recapitulation Task:

1) What is Cell?

Fill up

1) The smallest cell is found in ______.

2) The cell is found in ______.

Home-work

1) Name the cell having branched structure.

2) What is the difference between unicellular and multicellular organism?

1) T. aids are not used
2) Class interaction is poor
3) Explanation is satisfactory
4) Feedback is not given to students

[signature]

LESSON No. 3.....

Date..... Duration of the period.....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class..... Average Age of the pupils. .....

Subject... Life Science..... Topic... Structure of Cell.....

Instructional Objectives :-

1) Students will be able to define cells.
2) Students will be able to classify the parts of cells.
3) Students will be able to identify the Cell organelles.

Instructional Aids :-

General Aids :- Chalk, Chalk board.

Specific Aids :- chart showing to students the structure of cell.

Previous Knowledge Assumed :-

Pupil teacher assumes that students are familiar with Cell.

Previous Knowledge Testing :-

Pupil Teacher Activities	Student Activities
1. What is Cell?	Cells are basic structure unit of living organism.

Pupil Teacher Activities	Student Activities
2) What is unicellular organism?	Single Cell organism are called as Unicellular organism.
3) What are the examples of Unicellular organism.	Amoeba and Bacteria.
4) What is the Structure of Cell.	Unsatisfactory response.

Announcement of the Topic :-

After getting unsatisfactory response the pupil teacher announce that students today we are going to study about structure of a cell.

Presentation of Topic :-

Pupil teacher present her topic by taking active participation of student with the help of lecture-cum method and chalk board.

Content	Pupil Teacher Activities	Student activities	Chalkboard
Cell :- Organelles	Cell has definite structure or further smaller parts. These parts		

Content	Pupil Teacher Activities	Student Activities	Chalk board
	are called cell organelles.		
Plasma membrane	All cells are bounded by a membrane called plasma membrane. It encloses a liquid substance known as protoplasm. It regulate the flow of substance both into cell & out of it.		
Nucleus	In the middle of a cell base, a dense round region called nucleus.		
Nuclear membrane	Nucleus contain a network of fibre material called chromatin.		
Chromatin	Nuclear membrane is bounded by a membrane called nuclear membrane.		
Cytoplasm	The protoplasm between the nucleus and the plasma membrane is known as Cytoplasm. The other organelles present into cytoplasm appears in particular.		

LESSON No. 14

Date: Duration of the period:

Pupil Teacher's Name: Pupil Teacher's Roll No:

Class: IX th Average Age of the pupils:

Subject: Life Science Topic: Tissue

Instructional objective :-

1) Students will be able to identify tissue.
2) Students will be able to define tissue.
3) Students will be able to classify tissue.
4) Students will be able to explain tissue.
5) Students will be able to compare tissue.

Instructional Aids :-

General Aids :- chart, chalk board

Specific Aids :- Chart showing tissue.

Previous Knowledge Assumed :-

Pupil teacher assumes that students are familiar with tissue.

Previous Knowledge Testing :-

Pupil - Teacher Activities	Student Activities
1. What is the smallest unit of body	Cell is the smallest unit of body.
2. Give examples of unicellular organism?	Amoeba is a unicellular organism.
3. What is tissue?	Unsatisfactory response.

Announcement of Topic :-

After getting unsatisfactory response, pupil teacher announces that students today we are going to study about tissue.

Presentation of Topic :-

Pupil teacher present that topic by taking active participation to student with the help of lecture-cum method and chalk-board.

Contents	Pupil teacher activities	Student activities	Chalkboard
Tissue	A group of cell known function together for a similar tissue on the basis of functions.	Students listen carefully.	

Contents	Pupil Teacher activities	Student activity	chalk-board.
Epithelial tissue.	The covering or protective tissue in the animals body are tissue epithelium caused most organs comedities within the body alveoli and kindly tubular are made up of epithelium tissue.		
Connective tissue	The cell of connective tissue are lovely spounds embedded in an intercellular material. ex blood and grease are connective tissue.		
Muscular tissue	Muscular tissue consists of elongated cell above are called muscular fibres. These are three types of muscular fibres.	Students listen carefully and	
Nervous tissue	The cell of harmonal tissue are highly specialized for being to their transmitting the stimulated very rapidly from one place to another place within the body.	Note down in their notebooks.	

Recapitulation Task:-

1. Name the tissue which is known as protective tissue in the animals body?
2. Where nervous tissue are present in animals body?

Home-Work

1. Name the region in the body where epithelial tissue is present.
2. What is Connective tissue. give example?
3. Write down difference between Connective tissue and musadar tissue?

Lesson Taught.

LESSON No. ...5.....

Date .....
Duration of the period .....
Pupil Teacher's Name .....
Pupil Teacher's Roll No .....
Class XI^th .....
Average Age of the pupils .....
Subject life Science .....
Topic Sexual Reproduction

Instructional objectives :⇒

1. Students will be able to define sexual reproduction.
2. Students will be able to explain fertilization.
3. Students will be able to explain sexual reproduction in animals.

Instructional Aids :⇒

General Aids :⇒ chalk, chalk-board.

Specific Aids :⇒ chart showing sexual reproduction.

Previous Knowledge Assumed :⇒

Pupil teacher assumes that students are familiar with sexual reproduction.

Previous Knowledge Testing :⇒

Pupil teacher activities	Student activities
1. Give examples of some living organisms.	Human, lion, Rat, Cat, Birds.

2.	How population of animals Increase.	By reproduction.
3.	What is sexual reproduction?	Unsatisfactory response

Announcement of Topic ⇒

After getting unsatisfactory response from students pupil teacher announces that students today we are going to study about Sexual reproduction.

Presentation of Topic ⇒

Pupil teacher present her topic by taking active participation of students with the help of lecture-cum-method and chalkboard.

Content	Pupil teacher activities	Student activities	chalkboard.
Sexual reproduction	The production of new organism from two parents making use of their sex organs is called sexual reproduction.		
	Give example of some animals which reproduce through sexual reproduction.	Fish, frogs, cats, dogs, Human being etc.	

In animals, it takes place in the following steps.

The male parent produces male gamete called sperm.

The female gametes are produced by female parents called ova.

The sperm enters in the egg to form and fussy with it to form a new cell called zygote.

The zygote then divides a large number of cells and unlimited zygote develops to become a new body.

Recapitulation Task :3

1) What is the sexual reproduction?

2) The male gametes are known as _____.

3.) The female gametes are known as _____.

Home-Work ⇒

Give example of some animals which reproduce thrugh sexual reproduction.

LESSON No. 6

Date

Duration of the period

Pupil Teacher's Name

Pupil Teacher's Roll No.

Class XII th

Average Age of the pupils

Subject Life Science.

Topic Common Disease

Instructional objectives :⇒

1) Students will be able to define the term disease.
2) Students will be able to explain the term diseases.
3) Students will be able to differentiate between Communicable diseases and non-communicable diseases.
4) Students will be able to illustrate with example - Communicable, non communicable, with example.

Instructional Aids.

General Aids ⇒ Chalk, chalk board

Specific Aids ⇒ chart showing modes of transmission.

Previous knowledge Assumed

Pupil teacher assumes that students are following with diseases.

Previous knowledge Testing ⇒

Pupil teacher activities	Students activities
1) What are the basic needs of man?	Food, clothes, House.
2) As you have following food.	
3) Houses, clothes are the basis which of these you give priority?	Food is primary need of a man.
4) What will happen when we don't get food for some day.	we feel weakness in our body and fell ill.
5) When we get ill, at this state which Scientific term is used as Illness.	Scientific term diseases is used.
6) What do you mean by diseases	Student gave unsatisfactory response.

Announcement of Topic :-

Students today we will learn about some Common disease.

Presentation of Topic :-

Content	Pupil Teacher activities	Student activities	chalk board
Introduction	Health is a state of well-being and is essential for a purpose full existence, good Sickness and diseases.	Students listen Carefully.	
Definition	Any deviations in the human functioning of the body is termed as diseases.		
Factor affecting Health	Some factors affects our body and cause some diseases These factors may be Inside the body.		
Intensive body.	The Intensive factor are max. functioning of an organs or part humeans of the body.	Students listen Carefully. and	
Experience factor.	The experience factor Inside the lack of Proper did Influence on effect of diseases.	note-down in their notebook.	

Contents	Pupil teacher activities	Student activities	chalk board
Causal Organisms	Name the different causal organisms which spread disease. give example of some other causal organism These infectious diseases are caused by virus, bacteria, fungi	Students listen carefully	
Bacteria disease	Disease like cholera, fibriculosis and typhoid are caused by bacteria.		
Protozoa disease	Diarrhoea and gastrointestinal disorders are caused by protozoa.		
Mode of Transmission	On the basis of mode of transmission, diseases can be categorized into two parts.		
Communicable diseases	The diseases which spread from one person to another person are called Communicable diseases	Students listen carefully and note down in their notebooks	
Non-Communicable diseases	The diseases which do not spread from one		

Contents	Pupil teacher activities	student activities	chalk-board.
	person to another person are called non-communicable diseases.		

Recapitulation Task :⇒

(1) Name some causal organism of disease.

(2) Name the disease which spread through bacteria.

(3) Give name of two viral diseases.

Home Work :⇒

(1) What do you understand by term disease.

(2) Write down the factors affecting health.

(3) Write down the difference between communicable and non-communicable diseases.

LESSON No. ...7.....

Date ..... Duration of the period .....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class VIII th Average Age of the pupils .....

Subject Life Science Topic Reproduction in Plants

Instructional objectives :⇒

1.) Student will be able to define the term reproduction.
2.) Student will be able to explain the term
3.) Students will be able to differentiate between sexual and asexual reproduction in plants.

Instruction Aids :⇒

General Aids :⇒ Black board, chalk

Specific Aids :⇒ Chart showing asexual reproduction.

Previous knowledge Assumed :⇒

Pupil teacher assumes that students are familiar with reproduction.

Previous Knowledge Testing :⇒

Pupil Teacher's Activity	Student Activity
→ Give example of living organism.	Animals, Human beings and plants
→ Give a person get died.	Due to accidents, diseases or ageing

3. How the number of individual of a population can be resolved.	The number of individual of a population can be resolved by reproduction.
4. What is reproduction?	The production of new individual from their parents is called reproduction.
5. Like animals, plants also reproduces what type of reproduction.	unsatisfactory response.

Announcement & Topic ⇒

Students today we will study about reproduction in plants.

Content	Pupil Teacher Activities	Student Activities	Chalk board
Define Reproduction	The production of new individual from their parents is called reproduction.	Students listen carefully.	
Types of Reproduction	There are two types of reproduction.		
Sexual Reproduction	In sexual reproduction, some plants are obtained from seeds. Give example of some plants which reproduced thrugh	Apple, Mango.	

Sexual

Asexual Reproduction

In asexual reproduction, plants can give rise to new plants without seeds, give example of plants which reproduced through asexual reproduction.

Types of asexual reproduction

In asexual reproduction, new plants are obtained without production of seeds.

Vegetative propagation

It is a type of asexual reproduction. The reproduction throughout vegetative part of the plants is known as vegetative propagation.

Budding

Budding is seen in yeast cell. The small bud like projection coming out from the yeast cell is called bud. The bud gradually grows and becomes/get bud.

(i) Sexual Reproduction
(ii) Asexual Reproduction

Students listen carefully and note down in their notebooks

Recapitulation

1. What are the different types of asexual reproduction
2. What is the difference between Sexual and Asexual reproduction
3. Give an example of plants which reproduce through vegetative propagation.

Home Work

1. What is reproduction. Write down its types.
2. Write a Short note on fragmentation.
3. Explain budding with the help of diagrams.

C. B.W is satisfactory
Explanation is good
T. aids are not used.

Hpm

LESSON No. 8.....

Date..... Duration of the period.....

Pupil Teacher's Name..... Pupil Teacher's Roll No.....

Class VII th Average Age of the pupils.....

Subject Life Science..... Topic Cholera and Tuberculosis

Instructional Objectives :⇒

(1) Students will be able to recognise the cholera and tuberculosis diseases.

(2) Students will be able to explain the causes of disease cholera and tuberculosis disease

(3) Students will be able to explain the prevention of disease cholera and tuberculosis disease

(4) Students will be able to differentiate between cholera and tuberculosis diseases.

Instructional Aids ⇒

General Aids ⇒ Blackboard, chalk, duster

Specific Aids ⇒ chart showing cholera and tuberculosis.

Previous Knowledge Assumed :⇒

Pupil teacher assumes that students know about diseases.

Previous Knowledge Testing :⇒

Pupil teachers activities	Students activities
① How you are got any diseases.	Yes.
② As you have studied earlier causal organisms. What are the different causal organism of diseases.	Bacteria, virus diseases, fungi and worms
③ Name the diseases caused by bacteria.	Cholera, tuberculosis.
④ Name the bacteria which causes cholera and tuberculosis.	Unsatisfactory response.

Announcement of Topic :-

Students today we will study about diseases - cholera and tuberculosis.

Content	Pupil teacher activities	Student activities	Chalk-board
Introduction of cholera	Cholera is a highly Infectious disease. It affect gastro-intestinal tract. It affects the people of all age group. cholera is caused by vibrio cholera bacteria. Once a person consumes food or water		

Cause: Contaminated by the cholera causing bacterium to bring to multiply inside the belly.

Symptoms: Symptoms of cholera include

Prevention: How cholera disease spread from person to person

What prevention measures that should be taken to prevent our body from cholera.

Tell me some other preventions

1) There should be proper system for the disposal of human waste.
2) Protection of the source of water from contamination/contamination.
3) The number of people in contact with cholera patients should be restricted.

Tuberculosis: Tuberculosis generally denoted by letter TB. It is an infectious disease. What is the mode of transmission of TB.

Symptoms: The symptoms to tuberculosis appears gradually in patients.

Students listen carefully. Note down in their notebook.

Through contaminated food and water

Air

Students listen carefully and note down in their notebook.

LESSON No. ...9.....

Date: Duration of the period:

Pupil Teacher's Name: Pupil Teacher's Roll No.:

Class: XI th Average Age of the pupils:

Subject: Life Science Topic: Nutrition in Plants

Instructional objectives :⇒

(1) Students will be able to explain nutrients in plants

(2) Students will be able to define photosynthesis.

(3) Students will be able to list to new material for photosynthesis.

Instructional Aids :⇒

General Aids : Black board, chalk, duster, etc.

Specific Aids : Chart showing photosynthesis in plants.

Previous Knowledge Assumed :⇒

Pupil teacher assume that students are familiar with nutrients.

Previous Knowledge Testing

Pupil Teachers Activities	Student Activities
1. What does all living organism require for their survival?	Food, water, Air

2. All living organisms get their food from?	They get their food from plants
3. From where does plants get their food?	Sunlight, water
4. What is the mode of nutritions in plants.	Unsatisfactory response

Announcement of the topic

After getting unsatisfactory response from students, pupil teacher announces that students today, we discuss about nutrition in plants.

Presentation of Topic

Content	Pupil teachers activity	Student activity	Chalkboard
	Just like other organisms plants also require food which can supply energy for their various metabolic activities. Photo means light and synthesis means to build. Thus photosynthesis means building up by light.	Students listen carefully and note down in their notebook	
Definition	The process by which green plants make their own food		

from carbon dioxide and water by using sunlight energy in the presence of chlorophyll is called photosynthesis. Oxygen gas is released during photosynthesis. The process of the green leaves of a plant. In other words, food is made in the green leaves of a plant.

The CO_2 gas required for making required food is taken by the plant leaves from the air. Then CO_2 enters the leaves through tiny pores in them called stomata. Water required for making food is taken from the soil. Water is transported to the leaves from the soil through roots and stem.

Question The conditions necessary for photosynthesis to take place :-

1) Sunlight
2) Chlorophyll
3) Carbon dioxide
4) Water

Students note down in their notebo

(i) Sunlight
(ii) Chlorophyll
(iii) Carbon dioxide
(iv) Water.

Factors affecting rate of Photosynthesis	The factor which affect the rate of photosynthesis are:-		
Effect of light	It is the light Intensity is slowing increased the rate of photosynthesis increased up a point. After with it becomes constant		
Effect of Carbon dioxide	It is the amount of Carbon dioxide which increase the rate of photosynthesis increase up to a point and then becomes constant.		

Recapitulation Task:-

1. Which part of the plant take Carbon dioxide during photosynthesis.
2. What is the effect of light on the rate of photosynthesis.

Home-Work

1. What is Photosynthesis?

→ T. aids were not used.
→ feedback was not given to student. Rars

(2) What are the Conditions necessary for photosynthesis.

(3) How does CO_2 effect the rate of photosynthesis.

LESSON No. 10.....

Date..... Duration of the period.....

Pupil Teacher's Name ..... Pupil Teacher's Roll No. .....

Class XI th Average Age of the pupils.....

Subject.... Life Science Topic.. Plant Movement

Instructional objective :⇒

1. Students will be able to define tropism.
2. Students will be able to explain different types of movement in plants.
3. Students will be able to differentiate between geotropism, phototropism and chemotropism.

Instructional Aids ⇒

General Aids ⇒ Black board, chalk, duster, etc.

Specific Aids ⇒ chart showing phototropism, geotropism.

Previous Knowledge Assumed :⇒

Pupil teacher assumes that students know about movements.

Previous Knowledge Testing

Pupil Teacher Act	Student Act
1) What is movement.	The act of moving an object or animals

	from one place to another is called movement
2) like animals, plants have any movement or not?	Yes
3) What kind of movement is possible in plants?	They can move or bend their body part.
4) What are different types of plant movements	Students gave unsatisfactory response.

Announcement of Topic :⇒

Students today we will study about plant movement.

Presentation of the Topic :⇒

Content	Pupil teachers activity	Student activity	Chalk-board
Tropism	Plants can move or bend their parts in response to light, gravity, water and chemical etc. This response are due to plant hormones. These hormones control the activity of the paint. These present near the tip of the leaf.	Student listen carefully and note down in their notebooks.	

The movement of a part of a plant in response to an external stimulus is called tropism.

Types of Tropism
1) Phototropism
2) Geotropism
3) Chemotropism
4) Water

1) Phototropism
2) Geotropism
3) Chemotropism
4) Water

The factors which affect the rate of photosynthesis are:-

Factors affecting the rate of Photosynthesis

If the light intensity is slowly increased, the rate of photosynthesis increased up to a point after which it becomes constant.

Students write down in their notebook

Effect of CO_2

If the amount of CO_2 is increased it increase up to a point and then becomes constant.

Students listen carefully.

Recapitulation Task :-

1) Which part of the plant take carbon dioxide during photosynthesis

(2) What is the effect of light on rate of photosynthesis.

Home-work

(1) What is Photosynthesis?

(2) What are the conditions necessary for photosynthesis.

(3) How does carbon dioxide affect the rate of photosynthesis.

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LESSON No. 11

Date

Pupil Teacher's Name

Class XI th

Subject Life Science

Duration of the period

Pupil Teacher's Roll No.

Average Age of the pupils

Topic Organic Evolution.

Instructional Objective :⇒

1. Students will be able to define the term Organic Evolution.
2. Students will be able to explain the term Organic evolution.
3. Students will be able to list the evidences of Organic Compounds.
4. Students will be able to differentiate the homologous and analogous Organs.

Instructional Aids :⇒

General Aids :⇒ Black board, chalk.

Specific Aids :⇒ Chart showing evidence of life forms.

Previous Knowledge Assumed :⇒

Pupil Teacher assumes that students are familiar with organic evolution.

Previous knowledge Testing :⇒

Pupil Teacher Activities	Student Activities
(1) On which planet life is possible	Earth
(2) As you have studied earlier about vertebrates, in which group human beings are placed?	Mammals.
(3) Which animal considered as our ancestor	Monkey.
(4) What is evolution?	Unsatisfactory response.

Announcement of Topic :-

After getting unsatisfactory response, pupil teacher announce that students today we are going to learn about organism and its evidence.

Presentation of Topic :-

Content	Pupil teacher activities	student activities	chalk-board
	The word evolution has been derived from latin word evolvere which means "to unfold".		

Evolution is a kind of gradual formation of new organism from pre existing organisms through slow and steady changes. Since this is evolution of living organism so, it is called Organic evolution.

Students listen carefully and note down in their notebooks

1. Homalogous
2. Analogous

Evidence of Evolution — All living organism have common ancestors. The given evidences prove it.

Homologous Organ — These organs which is the same basic structure but different function are called homologous organs. for example: fore limbs of a frog, a bird and a man have the same basic design of bones but performs different functions.

Analogous organs — These organs which have the different basic structure but performs the same function is called analogous organs. Example - wings of animals and birds have different structure but they perform same function.

Students listen carefully.

	What is the function of wings of insects and birds?	Help in flying.
vestigial organs	Vestigial means 'useless'. These organs in an organism which are functionless and useless are called vestigial organs. Ex - worms from appendix of large intestine nictating membrane of human beings.	
	Appendix is found to be functional among ruminant mammals like Cow. Nictating membrane still functioning in birds.	Students listen carefully.

Recapitulation Task :-

(1) What is organic evolution?

(2) What are the different evidence of organic evolution.

(3) From which least is used evolution has been defined.

(4) Give example of some vestigial organs.

Home-Work

① What is meant by vestigial organs.

② Write down the difference between homologous and analogous organs.

③ How homologous organs provide evidence for organic evolution.

* Lesson taught with the help of chart.

* students are taking interest in their class

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LESSON No. 12

Date

Duration of the period

Pupil Teacher's Name

Pupil Teacher's Roll No.

Class X[th]

Average Age of the pupils

Subject Life Science

Topic Co-ordination in Animals

Instructional objectives :-

1. Students will be able to define the term Coordin-ation.
2. Students will be able to explain the nervous system of hydra.
3. students will be able to explain the nervous system of grasshoppers

Instructional Aids :-

General Aids :- Black-board, chart

Specific Aids :- chart showing nervous system of grasshoppers

Previous Knowledge Assumed :-

Pupil teacher assumes that Students are familiar with nervous system

Previous Knowledge Testing :-

Pupil-Teacher activities	Student activities
1. What is Stimuli?	When an organism respond

	according to change in environment.
(2) Give example of some stimuli?	light, Heat, Touch, Pressure, Water, etc.
(3) After getting stimulus how does organisms respond?	By movement of their body.
(4) What is Co-ordinations.	When various organs of an organism work together so as to produce a proper reaction to the stimulus.
(5) What is the Co-ordination in animals.	Students gave unsatisfactory response.

ANNOUNCEMENT OF TOPIC :-

After getting unsatisfactory response from the students, the pupil teacher announces that students, today we are going to learn about Co-ordination in animals.

Presentation of Topic

Content	Pupil Teachers Act	Student Act	chalk-board
	The multicellular animals have	Student listen	

unsatisfactory cells called nervous cells to respond to stimuli.

carefully.

Nervous System A system made up of a nerve cell is called nervous system. The coordinations in most of the animals takes place through the nervous system.

Nervous System of Hydra The nervous system of hydra consist of a network of nerve cells joined to one another and spread throughout its body. When an essential stimulus acts on the body of hydra, then impulse spread out in all directions in all body of hydra through the network of nervous cells.

Students listen carefully and draw the diagram in their notebook

Nervous System of Grasshopper The ganglia and nerve cord form the nervous system is in higher vertebrate like grasshopper, the nervous system of an insect like grasshopper consist of a brain, a long nerve,

	nerve ganglia and nerves.	
Receptors	Animals receives a vertically of external information through specialised structure called receptors.	Students note down in their notebook.
Kinds of Receptors	There are different kind of receptors. Some of them are given.	Students note-down in their notebooks.
Photo-receptor	What do you mean by term photo.	Photo means lights.
Thermo-receptor.	What do you mean by thermo receptor.	Thermo means heat.

RECAPITULATION TASK :-

1. What is nerve cell?
2. What is nervous system.
3. Name the different parts of nervous system of a grasshopper.

Home - Work

1) What is meant by receptors?
2) Draw a well labelled diagram of nervous system of hydra.
3) Explain the nervous system of grasshopper with the help of diagram.