



SENTHIL COLLEGE OF EDUCATION

Accredited with NAAC "B" Grade

Affiliated to Tamil Nadu Teachers Education University, Chennai

PeriyavadaVadi, Vridhachalam-606104.

Cuddalore District, Tamil Nadu, India

MODEL LESSON PLAN - BOTANY

Name of the School:

Name of the Student Teacher:

Standard: IX

Name of the Guide Teacher:

Subject: Biology

Date:

Topic: The structure of a cell

Time: 45 Minutes

Instructional Objectives: The Students

- Define the basic unit of all the living organisms.
- Identify the outer cell wall of the plant cell.
- Explain the cell wall is made up of cellulose.
- Describe the matter inside the cell wall is protoplasm.
- Identify protoplasm which is divided into cytoplasm and nucleus.
- Explain cytoplasm is a viscous fluid.
- Discuss the reasons for the presence of cell membrane in animal cell.
- List out the cell organelles.
- Differentiate between plant and animal cell.

Instructional resources required:

1. Slides of cells of different plants and slide projector.
2. Charts of plant cell and animal cell.
3. Slide of animal cell

Previous Knowledge of learners:

- ❖ The teacher ask questions regarding cell, plants and animals and bring out the previous knowledge of the student about the cell.

Pupils answer the following questions:

- What is a living organism?
- What is a non-living organism?
- What is the difference between living and non-living organism?
- What are the organs found in man?
- What constitute the organs?
- What constitute the tissues?

Content	Specification of behavioural outcomes	Learning Experiences	Evaluation
Cell	define	<p>The teacher defines the basic unit of all the living organisms as cell.</p> <p>The student understands that the cell is the fundamental unit of living organisms</p>	<p>What is the fundamental unit of life?</p> <p>Define a cell?</p>
Cell wall	identify	<p>The teacher ask the student to identify that the plant cell is surrounded by the outer cell wall.</p> <p>The student identifies the outer cell wall of the plant cell from the slide.</p>	<p>What is the boundary of the plant cell?</p>
Cellulose	explain	<p>The teacher explains that the cell wall is made up of cellulose in plant.</p> <p>The student identifies the cellulose from the chart.</p>	<p>What does the cell wall made up of?</p>
Protoplasm is found within the cell wall	describe	<p>The teacher describes that the matter inside the cell wall is protoplasm.</p> <p>The students understand that the protoplasm is found within the cell wall.</p>	<p>What is a cell wall?</p> <p>What is the name for the matter inside the cell wall?</p>
Cytoplasm and the nucleus	identify	<p>The teacher describes that protoplasm is divided into cytoplasm and nucleus.</p> <p>The student identifies from the chart that protoplasm consists of two parts, the cytoplasm and the nucleus</p>	<p>What parts do you find with in the cell wall?</p>
Cytoplasm	explain	<p>The teacher explains that cytoplasm is a viscous fluid that fills the major part of cell. The nucleus is a spherical body found embedded in the cytoplasm. It is deeper than the cytoplasm</p> <p>The student explains cytoplasm among themselves and identifies nucleus and cytoplasm from the chart.</p>	<p>What is the viscous fluid called?</p> <p>What is the central spherical body called?</p> <p>Is the spherical body denser than the fluid?</p>
Cell membrane.	discuss	<p>The teacher discusses the reasons for</p>	<p>What is a cell</p>

		<p>the presence of cell membrane in animal cell.</p> <p>The student discusses among themselves that the animal cell does not possess a cell wall but possess only cell membrane.</p>	<p>membrane?</p>
Cell organelles	list	<p>The teacher lists out the cell organelles and small vacuoles in the cytoplasm.</p> <p>The student lists out the cell organelles and identifies Centrosome, Golgi bodies, Mitochondria, endoplasmic reticulum in the cytoplasm from the chart. Many small vacuoles are also seen.</p>	<p>Where is centrosome?</p> <p>List out the cell organelles.</p>
Plant cell and animal cell	differentiate	<p>The teacher explains the differences between plant and animal cell.</p> <p>The student differentiates that the plant cell possesses cell wall, chloroplast and many large vacuoles. Animal cell membrane, small and a few vacuoles but no chloroplast.</p>	<p>Which cell possesses chloroplast?</p> <p>Where do you find large vacuoles?</p> <p>Where do you find cell membrane?</p>
Important points of the topic	Summarize draw	<p>The teacher summarizes the important points of the topic and the student practices to draw the plant and animal cell structure.</p>	<p>Draw the diagram of animal and plant cell?</p> <p>Label the parts.</p> <p>What is its importance?</p>

Follow up activities:

1. Draw and label diagram of a plant cell?
2. Describe the structure of an animal cell with neat labeled diagram.

Name of the Guide Teacher

Name of the Student Teacher

(This model Lesson plan is an example for 20 minutes and this can be continued & written for 45 minutes.)