

## MODEL LESSON PLAN FOR ALL TYPES OF HIGH SCHOOLS

**CLASS : 9**

**SUBJECT: Biological Science**

**Name of the Teacher :**

**Name of the School:**

Name of the Lesson/Unit	Topic	No. of Periods Required	Time line for teaching		Any specific Information
			From	To	
Animal Tissues	Epithelial Tissue	3			
	Connective Tissue	2			
	Story Of Blood	1			Conducting blood grouping camp in school.
	Muscle Tissue	2			
	Nerve Tissue	1			

**Prior Concept/ Skills:** (Essential concepts and skills to be checked/bridged before teaching the current concept.)

Tissue definition, differences between plant and animal cell, cell organelles, different parts of our body and functions, blood donation, HCl, making slide for observations,

**Learning Outcomes:** ( Select from SCERT Academic Calendar and Textbook)

1. Differentiates the connective tissue and epithelial tissue, muscular tissue and nervous tissue, tendon and ligament.
2. Classifies the persons based on blood groups, epithelial tissue based on size and shape, and blood cells into different types.
3. Plans and conducts investigations to find the blood group, and observing different tissue from chicken.
4. Relates the functions of tissue and their structure.
5. Explains function of different tissues.
6. Draws labelled diagrams of nerve cell and concept map of animal tissue.
7. Applies scientific concepts of blood grouping in daily life for donating and receiving blood from suitable group.
8. Describes scientific discoveries of blood grouping.
9. Designs models of nerve cell and blood cells using eco-friendly resources.
10. Draws conclusion on classification of animal tissue in to four groups.

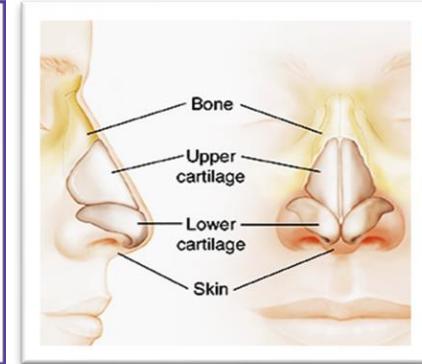
**No. of Periods:**  
**9**

**TEACHING LEARNING  
PROCESS**

**Induction/Introduction** (*Generating interest, informing students about the outcomes and expectations for the lesson*)

**By conducting small activity, I will introduce the topic.**

- Touch the membrane of your nose between nostrils.
- Touch the tip of the nose and move it with fingers.
- Touch and hold the upper part of the nose and then try to move it with fingers. Is it possible to move?
- What differences do you find among the three places?
- Are you feeling the same touch and hardness?
- What is the reason for variations hardness?
- Are the three parts are made up of same time of cells?
- No. because the three parts are made up of different tissue?
- Now let's find the different tissue present in our body?



**Experience and Reflection** (*Task/question that helps students explore the concept and connect with their life*)

- The smooth bone that at tip of the nose is called cartilage.
- Try to find the organs that made of cartilage.
- Name the organs made of bones.
- Which organs are made of muscles?
- How brain is made of?

<b>Explicit Teaching/Teacher Modelling</b> ( <i>I Do</i> )	<b>Group Work</b> ( <i>We Do</i> )	<b>Independent Work</b> ( <i>You Do</i> )
<ol style="list-style-type: none"> <li>1. Identification of tissue in collected sample. (Procedure 1,2, and 3)</li> <li>2. Discussion on epithelial tissue.</li> <li>3. Discussion on Connective tissue.</li> <li>4. Discussion on story of blood.</li> <li>5. Discussion on Muscle Tissue.</li> <li>6. Discussion on nerve cell structure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Activity-1: Observing cheek cells.</li> <li>2. Activity-2: Observing cuboidal epithelium</li> <li>3. Activity-3: Observing columnar epithelium</li> <li>4. Activity-4. blood structure and its functions.</li> <li>5. Lab Activity: Find your blood relations:</li> <li>6. Activity-6: Observing nerve cells.</li> </ol>	<ol style="list-style-type: none"> <li>1. Activity-5 Write your findings in the following table of types of muscle.</li> <li>2. Draw the diagram of Nervous cell.</li> <li>3. Collect the information about blood groups.</li> <li>4. Make a flow chart to test the blood group.</li> </ol>

### Check For Understanding Questions

#### 1. Factual:

1. What are the types of animal tissue?
2. What is the fat storing tissue?
3. What is tendon and ligament?
4. What is the life time of RBC?
5. Which group is called universal donor and universal recipient?
6. Who discovered the blood groups?

#### 2. Open Ended / Critical Thinking:

1. What happens if a person with blood group A donate to person with blood group B?
2. What happens if nerve cells are damaged in our body?
3. If the platelets are not present in the blood what happens?

#### Student Practice Questions & Activities (Exercises from workbook / textbooks/ blackboard)

1. What do you understand by the term tissue?
2. The blood is also a fluid connective tissue but in the fluid form. Justify the statement
3. Ramu felt weak. Ramu's father took him to hospital. The doctor advised a blood test. The report says that he does not have the required levels of haemoglobin. What are its ill effects?
4. Name the following.
  - a) Tissue that forms the inner lining of our mouth.
  - b) Tissue that connects muscle to bone in humans.
  - c) Tissue that transports food in animals.
  - d) Tissue that stores fat in our body.

#### TLMs (Digital + Print)

#### TLMs (Digital + Print)

Use the given Do ID to get the digital content related to this chapter on Diksha :  
[https://diksha.gov.in/play/content/do\\_31317016582867353612804](https://diksha.gov.in/play/content/do_31317016582867353612804)  
[https://diksha.gov.in/play/content/do\\_31316999425844838411885](https://diksha.gov.in/play/content/do_31316999425844838411885)  
[https://diksha.gov.in/play/content/do\\_31317016590413004812747](https://diksha.gov.in/play/content/do_31317016590413004812747)  
[https://diksha.gov.in/play/content/do\\_31317016597145190412748](https://diksha.gov.in/play/content/do_31317016597145190412748)

Use the language lab pen drive resource. Charts showing different animal tissues. Slides showing different animal tissues, microscope, chicken leg piece, HCl, slides, stains, cover slips. Intermediate text books.

#### Assessment (Think of what children SAY, DO and MAKE while learning that can form the evidence of learning to be used for assessment).

1. Write the differences between the connective tissue and epithelial tissue.
2. Classify the muscles present in your body into voluntary and involuntary muscles?
3. Write the procedure to investigate the blood group.
4. What is the relation between the functions of tissue and their structure?
5. Explain the function of connective tissues.
6. Draw the labelled diagrams of nerve cell.
7. If your blood group is "O", which group may donate blood to you in emergency?
8. How Land Steiner discovered the blood grouping system.
9. Design a model of nerve cell and blood cells using eco-friendly resources.
10. Blood group of Koushik is O+ve and Pranavi is B+ve. Whom can they donate blood and why?

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEAD MASTER

VISITING OFFICER WITH REMARKS