# CHAPTER: TISSUE

Grade: **9**
Board: **CBSE**
Book: **NCERT**

# 1. CHAPTER SUMMARY AND PLACEMENT

*<Read through the following to understand how this chapter is connected with the previous and next grades and also the important concepts covered in it.>*

1. The basic components of cell and its components has already been done in grade 8. In this chapter, students will know in detail about tissues. Different type of plant and animal tissues have been discussed. This chapter lays the foundation for the anatomical and histological morphology of the plant and animal given in grade 11. In further grades, it evolves into anatomy of flowering plant and Structural organization in Animals.
2. The chapter starts with classification of plant tissue into simple and complex tissue. The second part of the chapter deals with animal tissue and its classification into different types. The chapter mainly focusses on the structure and function of different type of plant and animal tissues.

# 2. LEARNING OUTCOMES

*<On completion of the chapter, students will be able to:>*

1. Define tissue and state its function
2. Classify tissues into plant and animal tissue
3. Identify different type of plant tissues
4. Classify plant tissues into meristematic and permanent tissue
5. Categorize meristematic tissue into it types
6. Identify different type of permanent tissue
7. Distinguish between simple and complex permanent tissue
8. Explain different type of simple permanent tissues
9. Explain different type of complex permanent tissues
10. Identify and explain special permanent tissue

11. Identify different type of animal tissue
12. Classify them into different type based on their structure and function
13. Explain epithelial tissue based on their structure and function
14. Identify different type of epithelial tissue with examples
15. Explain connective tissue based on their structure and function
16. Identify different type of connective tissue with examples
17. Explain muscular tissue based on their structure and function, also give examples
18. Identify different type of muscular tissue with examples
19. Explain nervous tissue based on their structure and function, also give examples
20. Identify different type of nervous  tissue with examples

# 3. KEYWORDS

*Definitions of some terms used in the chapter:*

**Permeable: if both solute and solvent can pass through membrane**

# 3. TEACHING PLAN

*Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently*

# Subtopic and Learning Objective #1

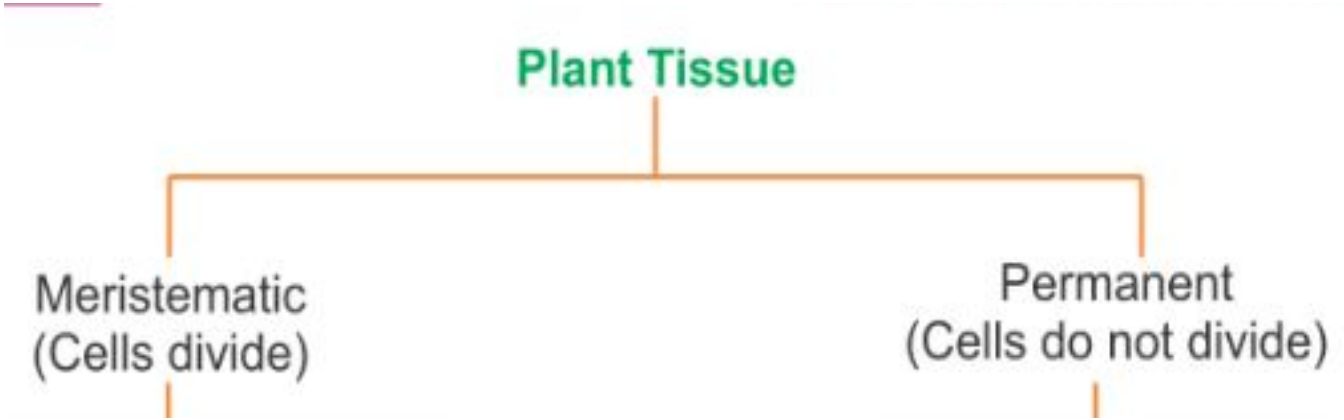
**Tissues**

1. Define tissue and state its function
2. Classify tissues into plant and animal tissue
3. Identify different type of plant tissues
4. Classify plant tissues into meristematic and permanent tissue

# Teacher Activity

1. Ask students to share their previous knowledge about cellular organization of living organism.
2. Show them the pictures of cellular organization of living organisms and discuss that the complexity and size increases as we move from atom to organisms.
3. Inform students to guess the meaning of tissue. Define the term tissue by saying that they are the group of similar cell, which do same function.
4. Share information cards with students.
5. Information cards – containing difference between plant and animal tissue.
6. Draw two column on board and name them as A & B.
7. Show students the information card one by one and ask them to classify them under column A and B.
8. With student responses, write the information under two column.
9. Add any missing or mismatch point and tell that Column A is plant tissue and column B is Animal tissue.
10. Ask students to share the part of the plant which grow throughout their life and in which part growth is restricted.
11. Confirm by saying that shoot and root tip, and the width of the plant/tree increases throughout while growth in other part is restricted.

11. Tell students that these regions have meristematic tissues whereas other regions have permanent tissues. Discuss in detail both these type of tissue.



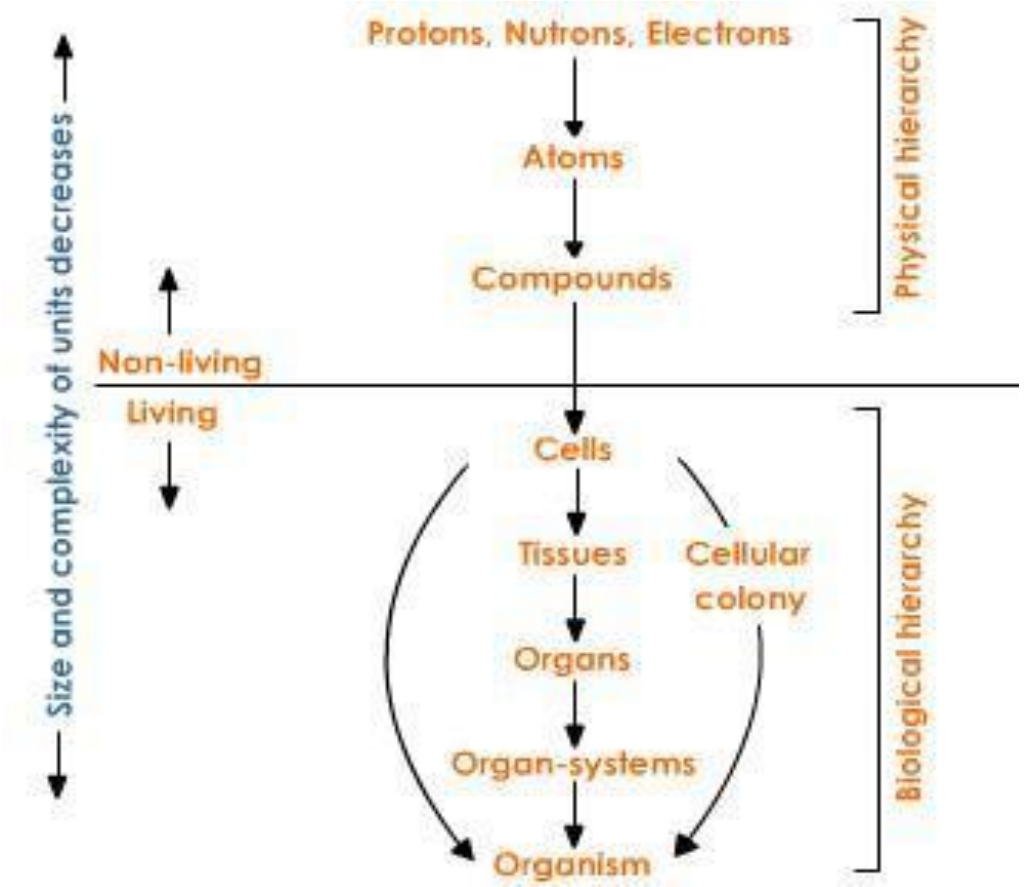

***Check your Understanding***

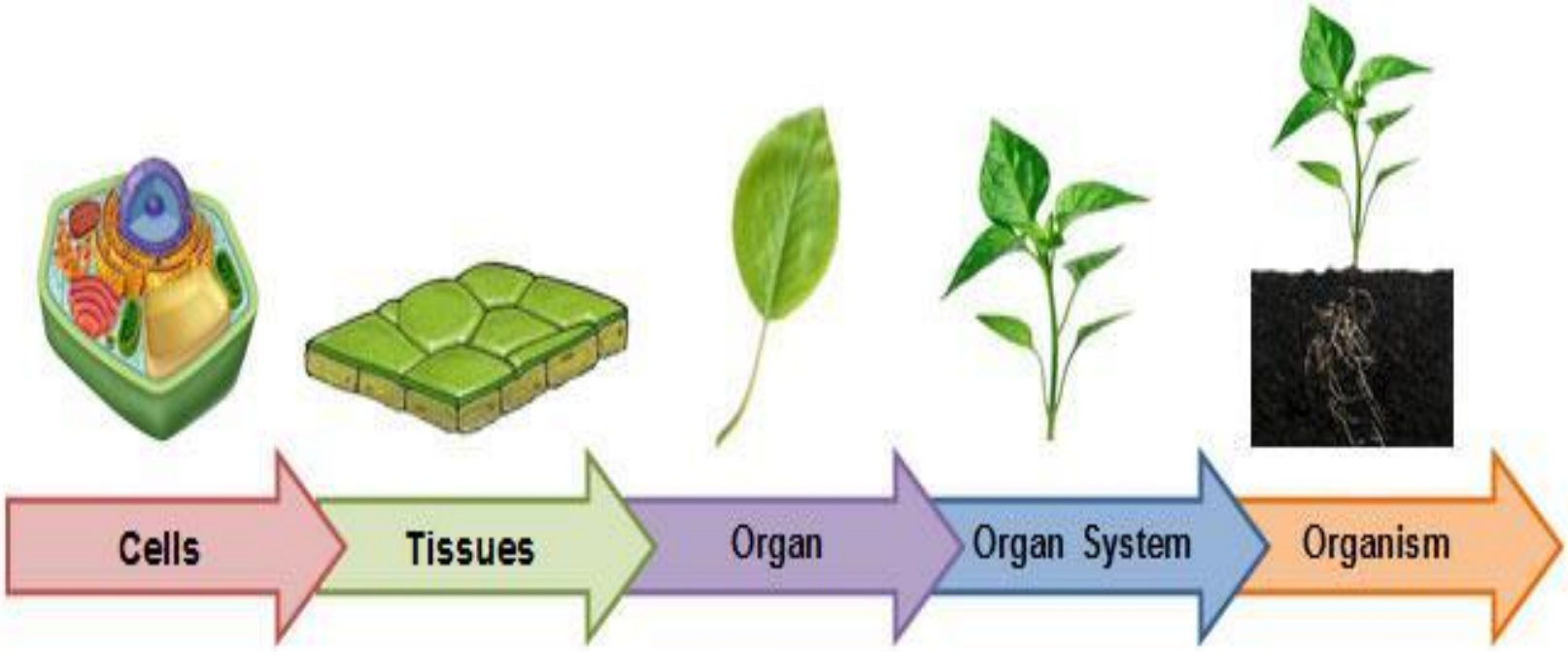
a. What are the two main types of plant tissue?
b. Sequence the cellular organisation with help of a flow chart.

# Resources Suggested

Resource 1(cellular organization), Information card (plant & animal tissue characteristics),

# Resource 1:


Protons, Nutrons, Electrons
Atoms
Compounds
Physical hierarchy
Size and complexity of units decreases
Non-living
Living
Cells
Tissues
Cellular colony
Organs
Organ-systems
Organism
Biological hierarchy


Cells
Tissues
Organ
Organ System
Organism

**Information Card 1**
**Note: Prepare a separate information card for each point.**

**Plant tissue**

1. Are supportive and provide mechanical strength.
2. Need less energy and maintenance.
3. Most tissue are dead.
4. Growth is limited to certain region.
5. Tissue organization is simple.
6. Clear demarcation between dividing and non- dividing tissue.

**Animal tissue**

1. Carry out different function.
2. Need more energy.
3. Most tissue are living.
4. Growth is uniform in all cells.
5. Tissue organization is complex.
6. No clear demarcation.

# Subtopic and Learning Objective #2

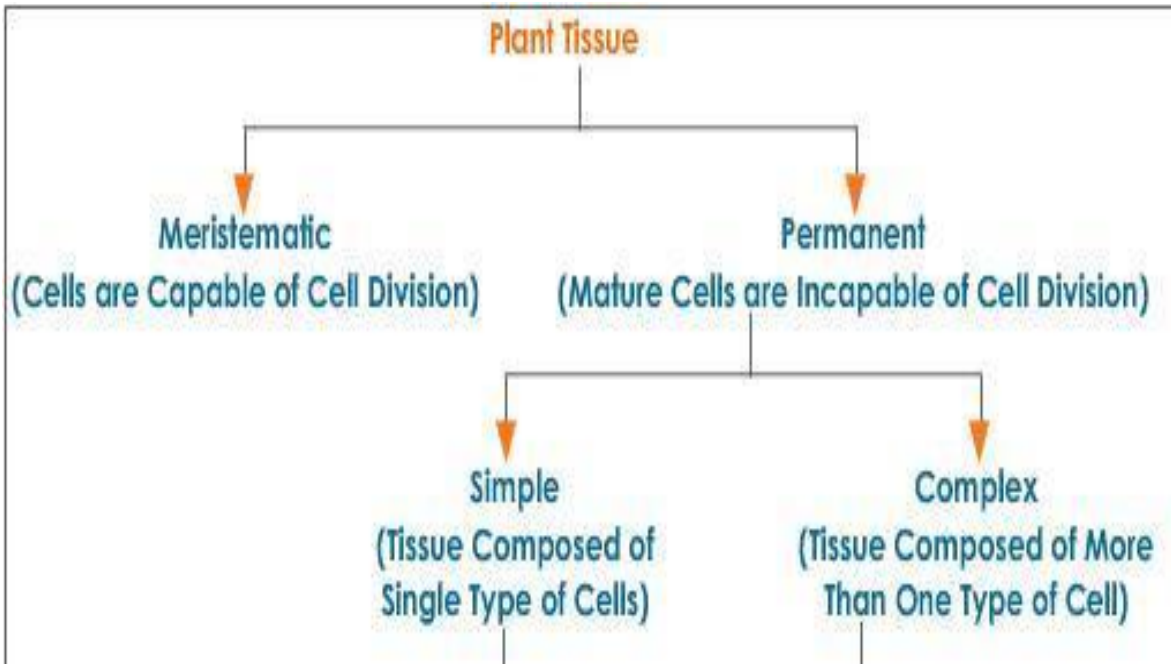
**Plant Tissues**

1. Categories meristematic tissue into it types
2. Identify different type of permanent tissue
3. Distinguish between simple and complex permanent tissue

# Teacher Activity

Note: perform Activity 1 (4 -5) days before the class to discuss the result in the class.

1. Ask students to share the meaning of meristematic tissue based on their previous learning.
2. Introduce to student different type of meristematic tissue based on their position in the plant. They are of three type:
   Apical meristem- situated at growing tip of stem & root.
   Lateral meristem – in the lateral side, it increase the girth of the plant.
   Intercalary meristem – it increase length of an organ.
3. Show them the picture of different type of meristematic tissue.
4. Perform activity 1, and discuss the observation in the class. You will observe that there is no increase in root length in bulb B after 6th and 7th days. This shows that apical meristem is essential for growth.
5. Ask students to recall the meaning of permanent tissue.
6. Conclude by saying that these tissue have lost the capacity to divide. They have attain definite shape and form. They are of two types – Simple permanent tissue and complex permanent tissue.
7. Draw the flow chart on the board as given below.




9. Simple tissue are supportive and protective whereas complex tissue are both living and non –living which work together as a unit

***Check your Understanding***

a. Distinguish between simple and complex tissue.

# Resources Suggested

Resource 2 (meristematic tissue)

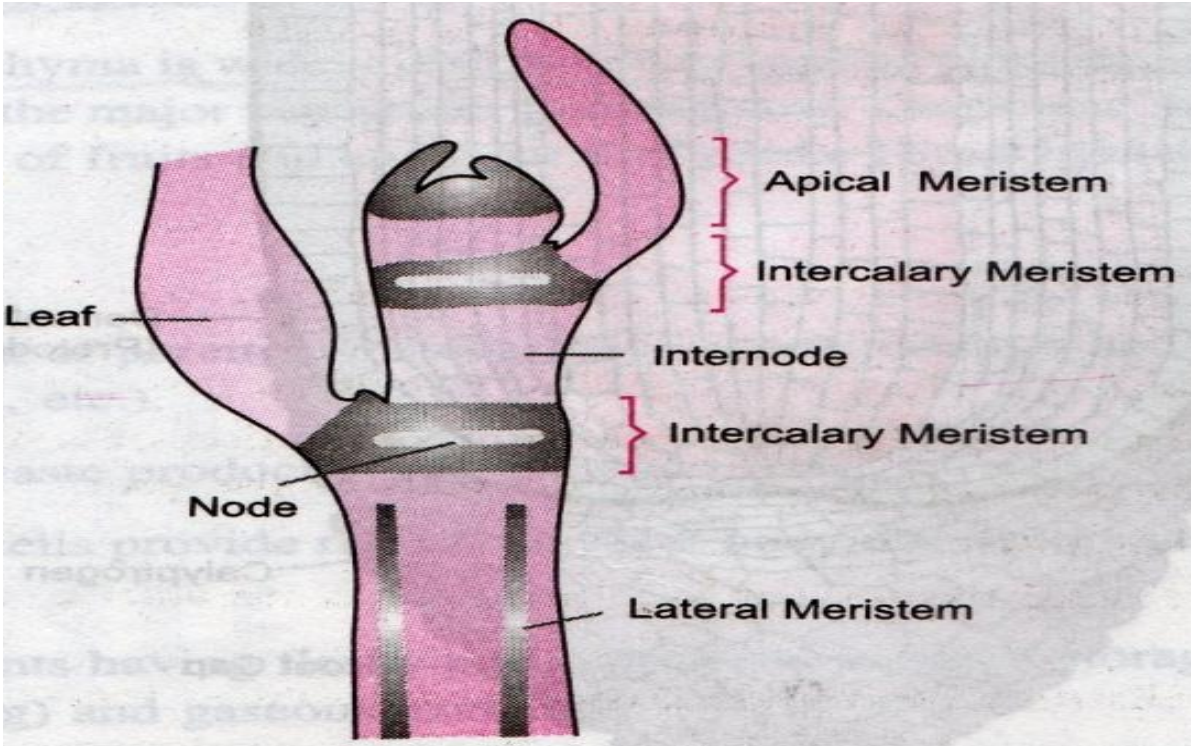
# Activity 1

**Name of the activity –** let it grow
**Type of activity –** Class activity
**Use it for –** growth of apical meristem
**Materials –** onions with roots, beakers, scissor

**Procedure –**

1. Fill both the beaker with water.
2. Place one onion bulb on mouth of each beaker such that the base of the bulb dips in water.
3. Observe it daily for 2-3 days.
4. Measure the length of the root.
5. On 4th day cut 1cm long tip of root from bulb B and place it again in water.
6. Measure the length of the root on 6th and 7th day.

# Resource 2:


Apical Meristem
Intercalary Meristem
Leaf
Internode
Intercalary Meristem
Node
Lateral Meristem

# Subtopic and Learning Objective #3

**Simple Permanent  Tissues**

1. Explain different type of simple permanent tissues

# Teacher Activity

1. Show the picture of different simple permanent tissue.
2. Tell students that simple permanent tissue are of two type supportive and protective. Supportive tissues include – parenchyma, collenchyma, and sclerenchyma whereas the protective tissue includes epidermis and cork.
3. Discuss the structure and function of simple supportive permanent tissues.
4. Inform students that protective tissue are also a type of simple permanent tissue. These are of two types – epidermis and cork. Discuss both these tissue in detail also inform students that epidermis has stomata in them, which helps in exchange of gases. Show the picture of stomata.
5. Perform activity 2 to see the stomata.
6. Observe the stomata.

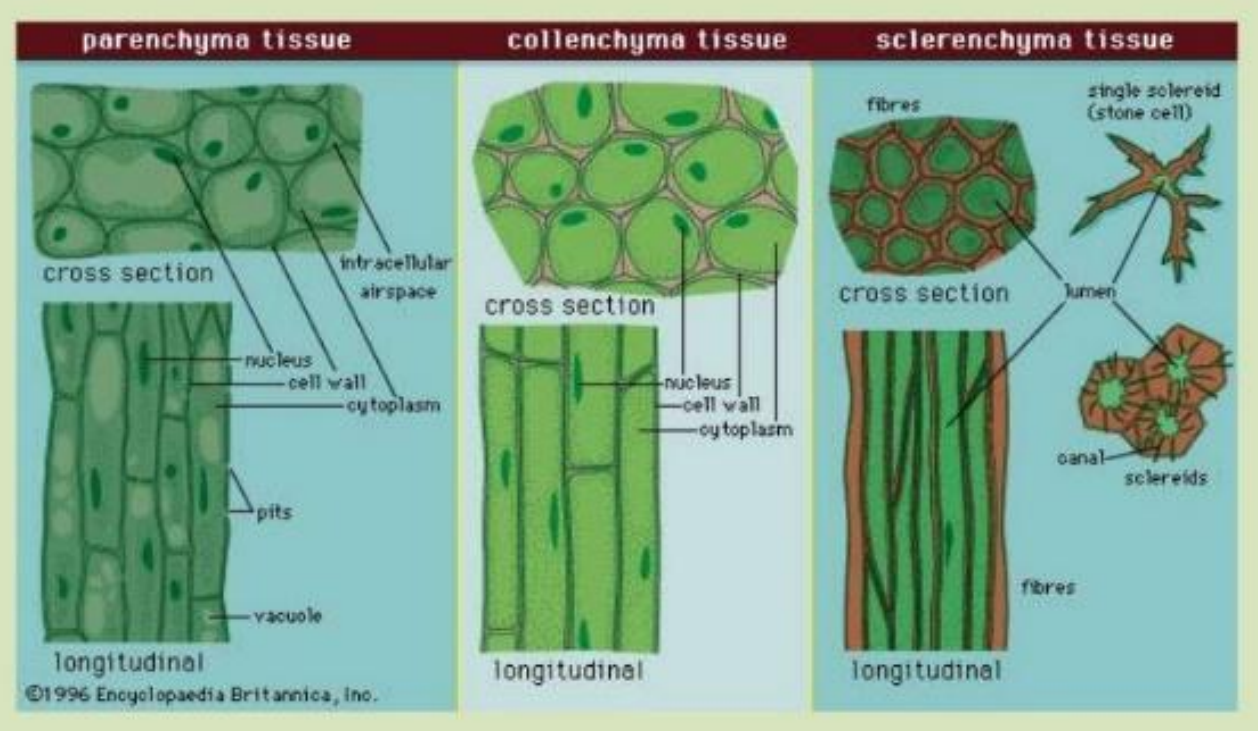
***Check your Understanding***

a. Distinguish between simple and complex tissue.

# Resources Suggested

Resource 3 (simple supportive permanent tissue, protective tissue), Resource 4 (stomata), microscope, rheo leaf, safranin, slide, dropper

# Resource 3:


parenchyma tissue
collenchyma tissue
sclerenchyma tissue
cross section
intracellular airspace
nucleus
cell wall
cytoplasm
pits
vacuole
longitudinal
©1996 Encyclopaedia Britannica, Inc.
cross section
nucleus
cell wall
cytoplasm
longitudinal
fibres
single sclereid (stone cell)
cross section
lumen
canal
sclereids
fibres
longitudinal

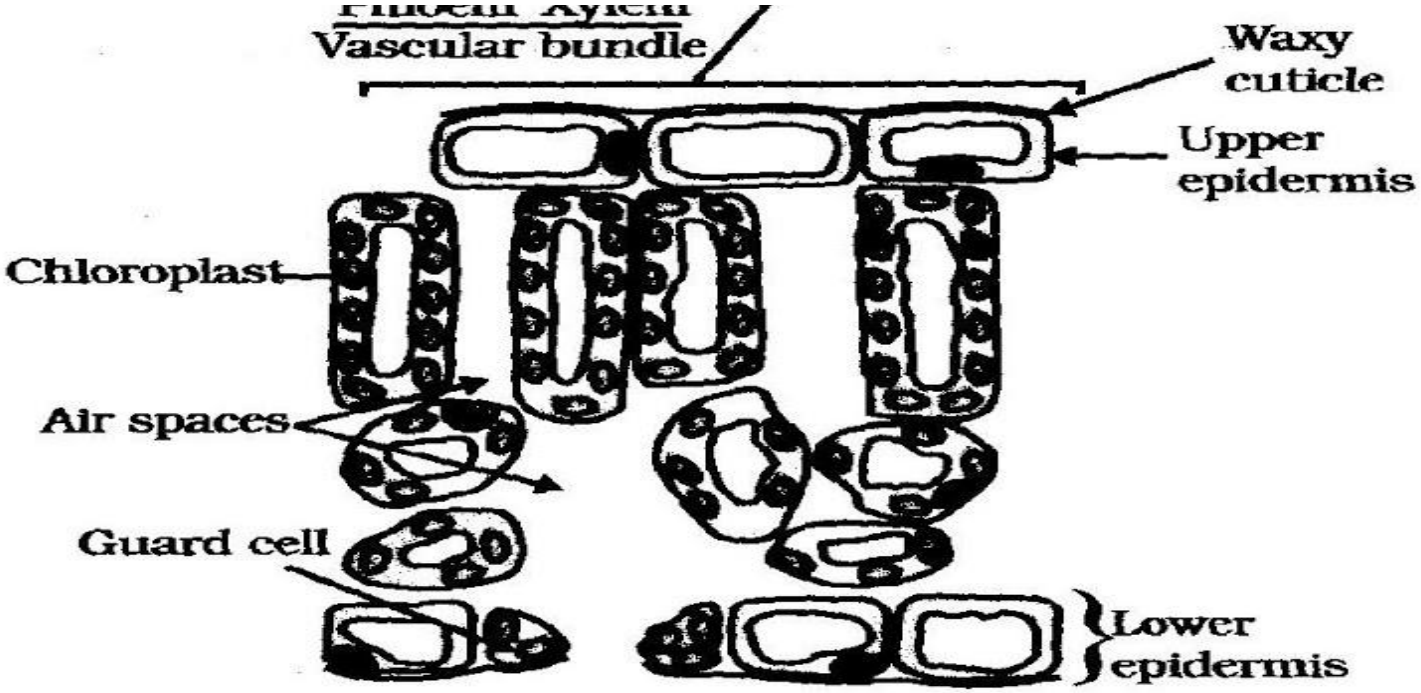
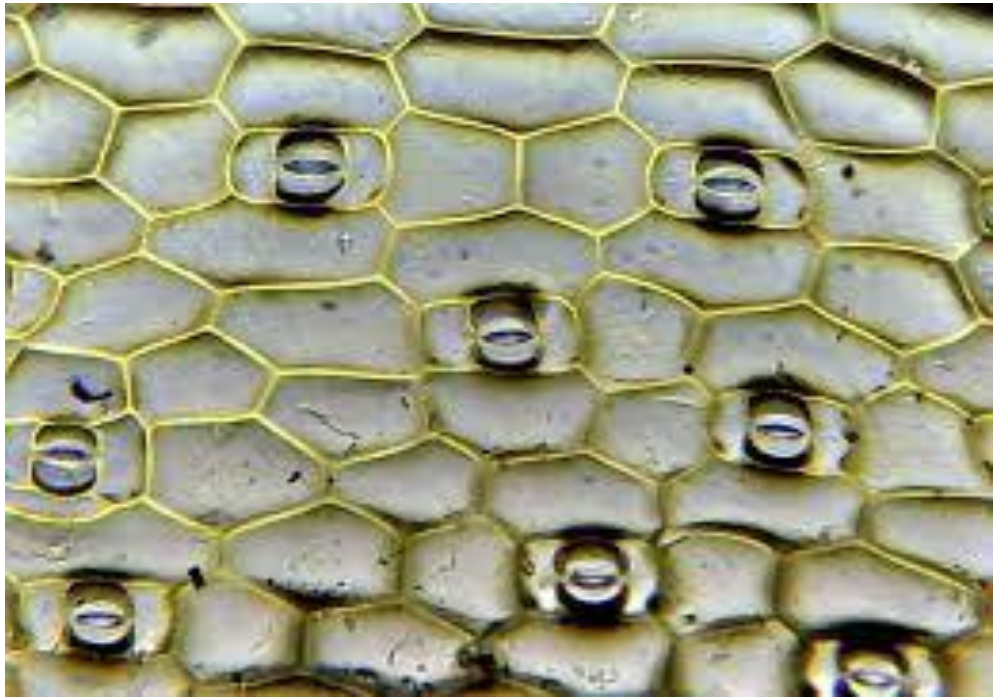



***Figure 6.1***
*Cross-section of a leaf*

# Resource 4:



Stomata under microscope

# Activity 2

**Name of the activity –** stomata
**Type of activity –** Class activity
**Use it for –** see the stomata
**Materials –** microscope, rheo leaf, safranin, slide, dropper

**Procedure –**

1. Take a freshly plucked leaf of Rheo.
2. Stretch and break it by applying pressure.
3. While breaking it, keep it stretched gently so that some peel or skin projects out from the cut.
4. Remove this peel and put it in a petri dish filled with water.
5. Add a few drops of safranin.
6. Wait for a couple of minutes and then transfer it onto a slide. Gently place a cover slip over it.
7. Observe under microscope.

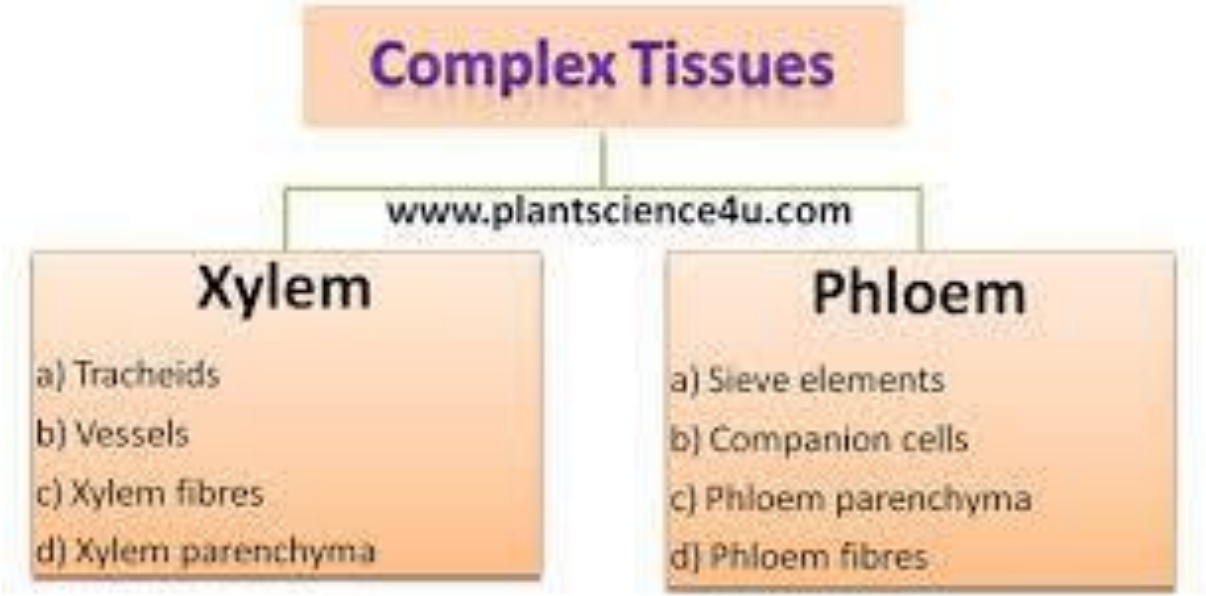
# Subtopic and Learning Objective #4

**Complex Permanent  Tissues**

1. Explain different type of complex permanent tissues
2. Identify and explain special permanent tissue

# Teacher Activity

1. Draw the flowchart as given below.



2. Discuss the structure and function of different complex tissue. Also, discuss the location of these tissues in plants.
3. Show the picture of different complex tissue.
4. Discuss different type of special permanent tissue. These are formed of cells that are associated with either secretion or excretion of materials. These are lacticiferous tissue – these are filled with latex, is secreted by banyan tree, rubber tree. Glandular tissue – these secrete gums, resin, oil and digestive enzyme.

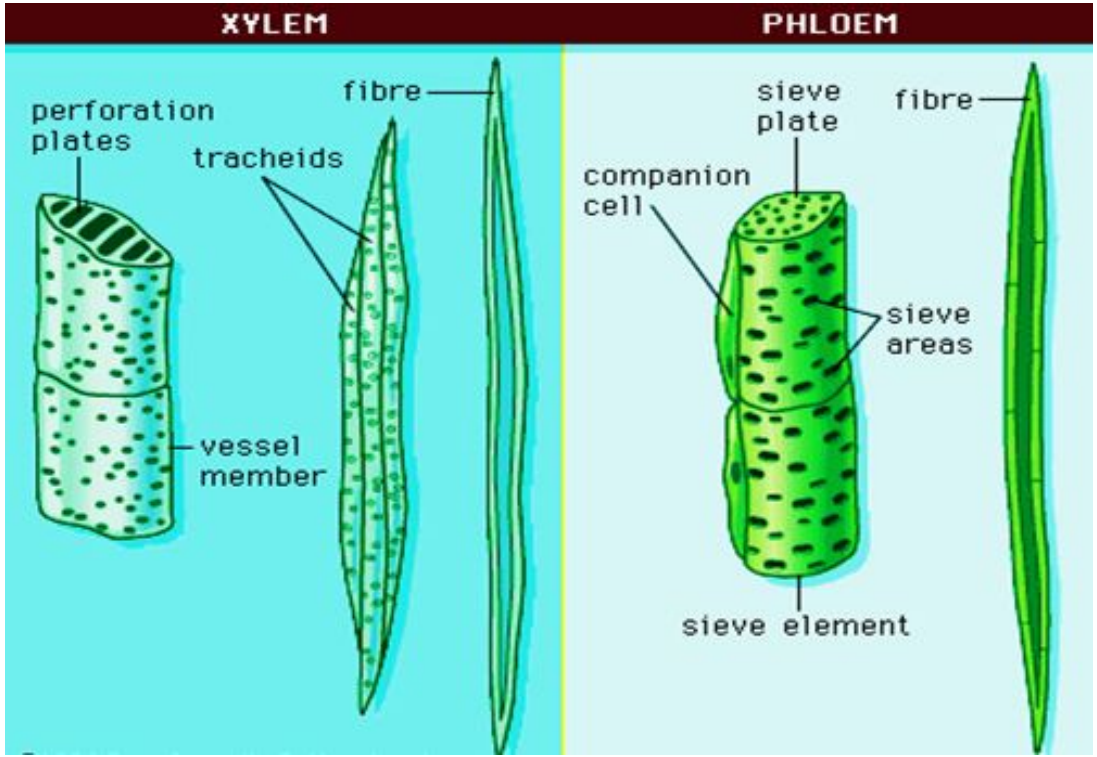
***Check your Understanding***

a. Define complex permanent tissue.
b. Name two special permanent tissue.

# Resources Suggested

Resource 5 (complex permanent tissue)

# Resource 5:


XYLEM
PHLOEM
perforation plates
tracheids
fibre
vessel member
sieve plate
fibre
companion cell
sieve areas
sieve element

# Subtopic and Learning Objective #5

**Animal Tissues**

1. Identify different type of animal tissue
2. Classify them into different type based on their structure and function

# Teacher Activity

1. Ask students to share based on their previous knowledge on animal tissue.
2. Tell students that based on their function animal tissue are of four type. Draw the first row of flow chart on the board. Discuss in brief that:
   Epithelial tissue – protective and covering tissue
   Connective tissue – packing, binding, supportive and transporting tissue
   Muscular tissue – contractile tissue
   Nervous tissue – coordinating tissue
3. Now draw the rest of the flow chart and discuss in brief the different type of animal tissue.
4. Also share that: Epithelial means (epi- 'upon' + thelio –'to grow')
5. Show the picture of different type of animal tissue.
6. Show the picture of human body to demonstrate the location of various animal tissue.

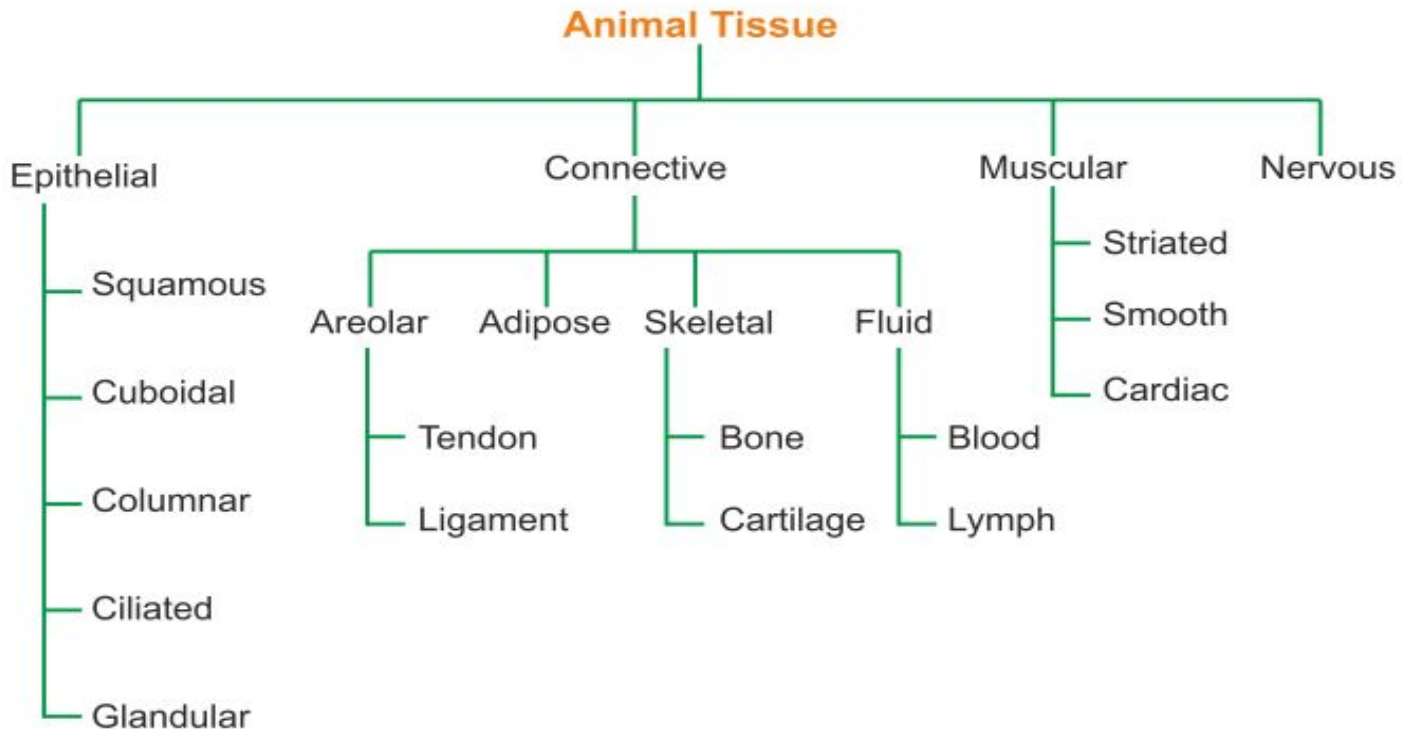
***Check your Understanding***

a. What are the basic function of animal tissue?

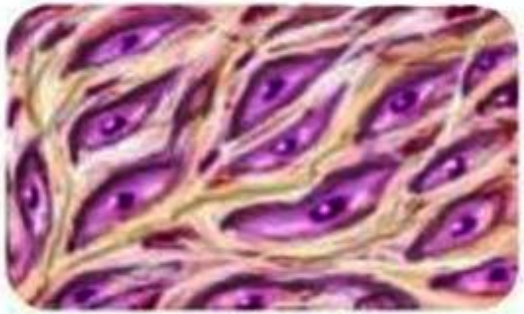
# Resources Suggested

Resource 6 (animal tissues flow chart), Resource 7 (animal tissue), Resource 8 (location of tissue in human body)

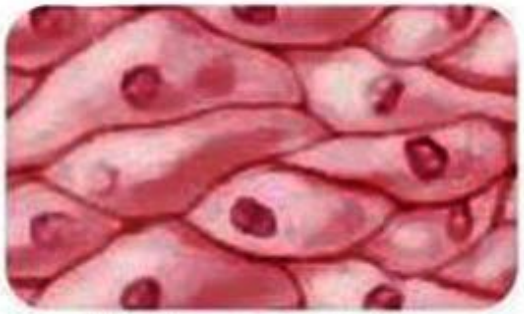
# Resource 6:


Animal Tissue
Epithelial
Squamous
Cuboidal
Columnar
Ciliated
Glandular
Connective
Areolar
Tendon
Ligament
Adipose
Skeletal
Bone
Cartilage
Fluid
Blood
Lymph
Muscular
Striated
Smooth
Cardiac
Nervous

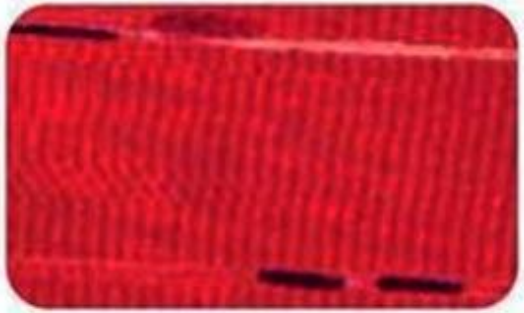
# Resource 7:



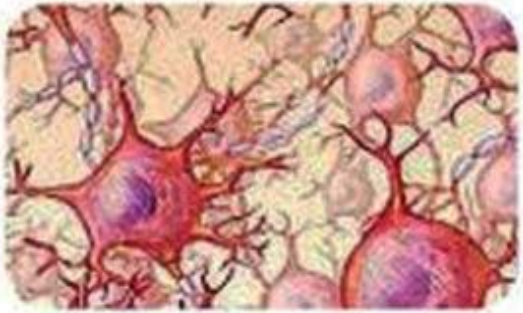
Connective tissue



Epithelial tissue

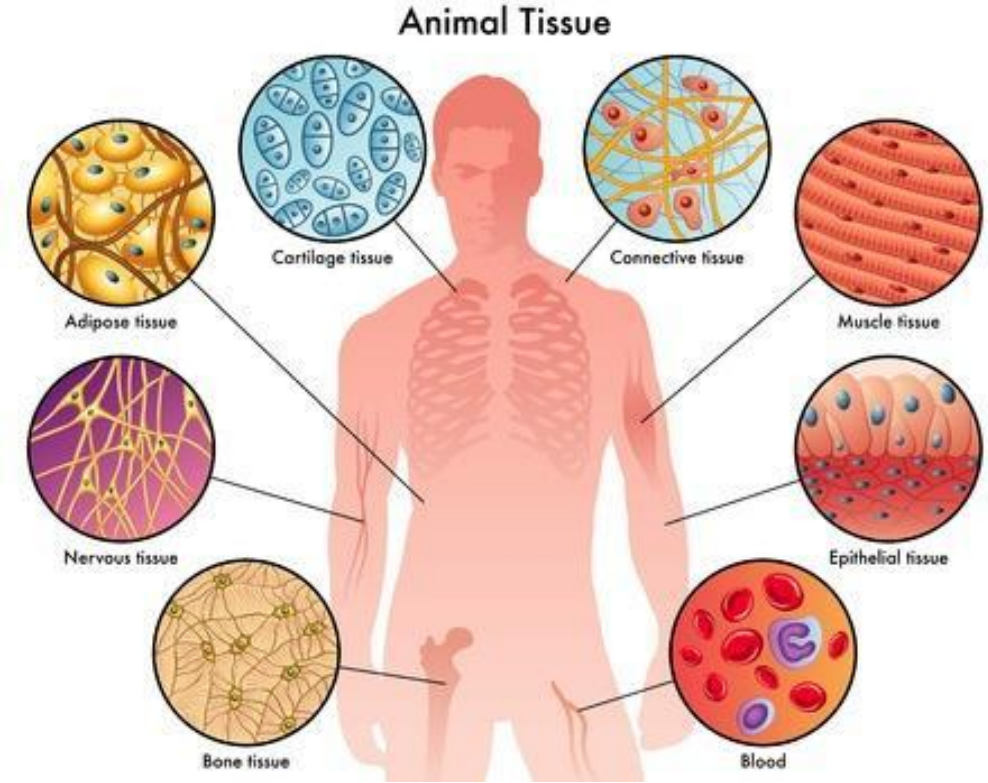


Muscle tissue



Nervous tissue

# Resource 8:


Animal Tissue
Cartilage tissue
Connective tissue
Adipose tissue
Muscle tissue
Nervous tissue
Epithelial tissue
Bone tissue
Blood

# Subtopic and Learning Objective #6

**Epithelial  Tissues**

1. Explain epithelial tissue based on their structure and function
2. Identify different type of epithelial tissue with examples

# Teacher Activity

1. Ask students to share function of epithelial tissue and to guess the location of it in the body.
2. Conclude by saying that is the simplest tissue. The cells of this tissue are tightly packed & are continuous in nature. The epithelial cell lies on a delicate non-cellular basement membrane. It may be single layer or it may be several layers. Function - It helps in absorption of water & nutrients. It helps in protection from injury, climatic effect & drying. It helps in elimination of waste products. It lines the mouth & the alimentary canal. It helps in secretion of saliva, sweat & enzymes.
3. Inform students that epithelial tissue is classified based on number of cell layers and based on cell shapes and functions.
4. Discuss different type of epithelial tissue with the given table and picture.

Note: please note that in NCERT there are only 4 types given. Rest are additional.

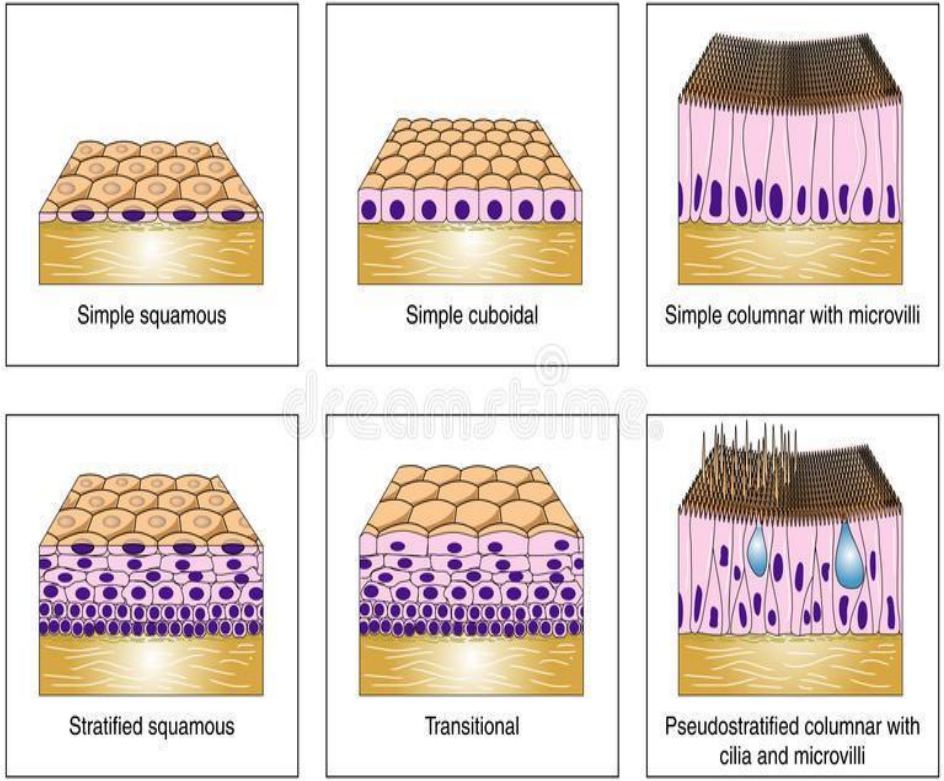
***Check your Understanding***

a. What are the basic function of animal tissue?

# Resources Suggested

Resource 9 (picture), Resource 10 (types of epithelial tissue)

# Resource 9:


Simple squamous
Simple cuboidal
Simple columnar with microvilli
Stratified squamous
Transitional
Pseudostratified columnar with cilia and microvilli

# Resource 10:

| Type | Structure | Location | Function |
|---|---|---|---|
| 1. Squamous Epithelium | Flattened cells with a centrally placed nucleus. Have irregular margins. | Lining of air sacs in the lungs. | For exchange of $O_2$ and $CO_2$. |
| | | Lining of Kidney tubules. | For absorption. |
| | | Lining of blood capillaries. | For exchange of materials. |
| 2. Cubodial Epithelium | Cube like cells with a centrally placed nucleus, Cells appear polygonal. | Lining of salivary and pancreatic ducts. | For absorption. |
| | | In sweat and salivary glands. | For secretion |
| 3. Ciliated Epithelium | Have cilia at free ends. | Lining of kidney tubules. | For flow of nephric filtrate. |
| 4. Columnar epithelium | Long column-like cells, each with nucleus at the basal end | Lining of stomach, instestine | Secretion and absorption |
| 5. Ciliated Columnar Epithelium | Cilia at free ends | Lining of trachea | Flow of fluids in a particular direction |
| 6. Brush bordered Columnar Epithelium | Numerous folds at free ends—folds looking like bristles of a brush. | Lining of intestine | Increasing the surface area for absorption |

# Subtopic and Learning Objective #7

**Connective  Tissues**

1. Explain connective tissue based on their structure and function
2. Identify different type of connective tissue with examples

# Teacher Activity

1. Ask students to share function of connective tissue and to guess the location of it in the body.
2. Inform students that these tissues bind or connect various tissue and organ in the body and provide rigidity, support and protection.
3. Draw the flow chart on board and discuss different type of tissue.
4. Discuss the structure, function and location of these tissues in detail.
5. Discuss the difference between bone & cartilage, Blood & lymph

Note: please note that in NCERT there are only 4 types given. Rest are additional.

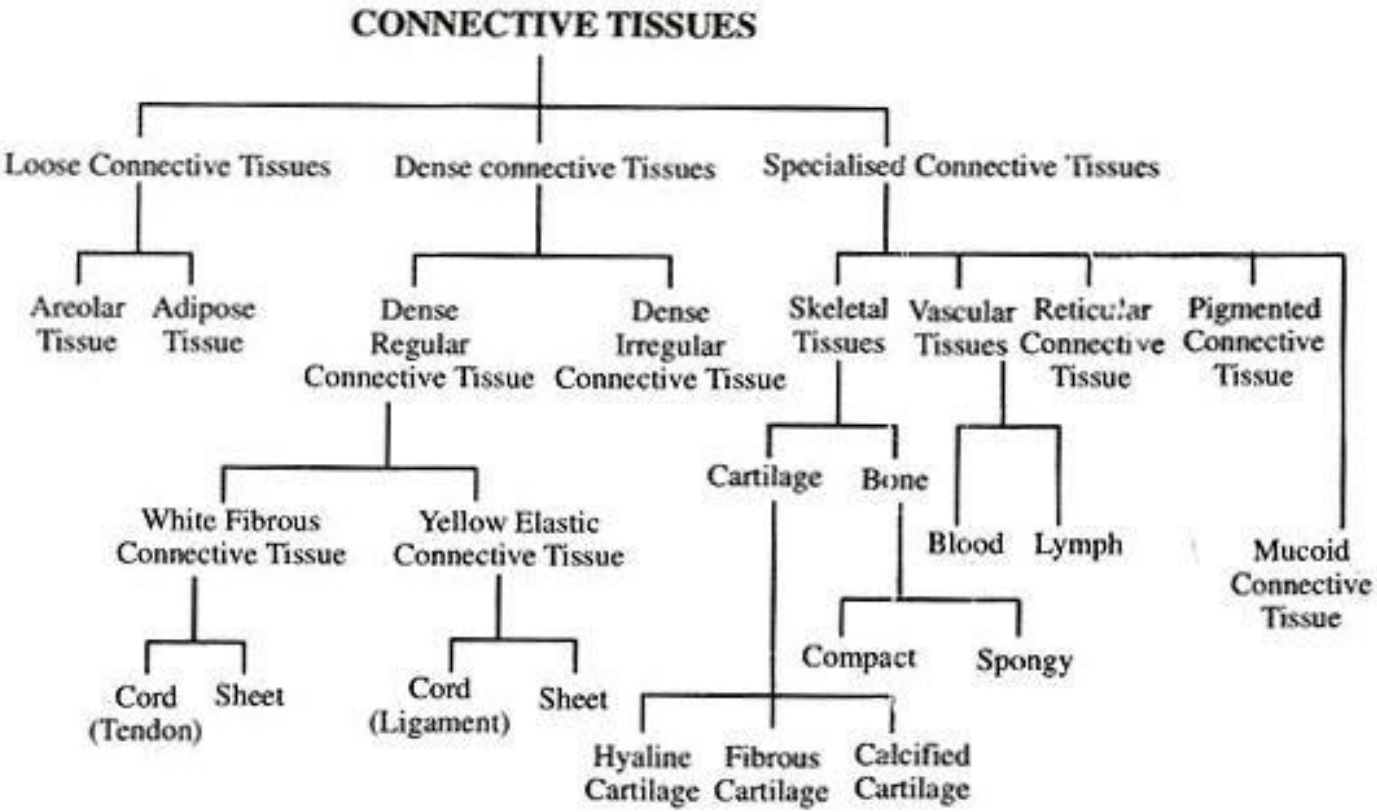
***Check your Understanding***

a. What would have happen if there were no connective tissue?

# Resources Suggested

Resource 11 (flow chart on types of connective tissue), Resource 12 (connective tissue pictures), Resource 13 (Overview of connective tissue), Resource 14 (Difference)

# Resource 11:


CONNECTIVE TISSUES
Loose Connective Tissues
Dense connective Tissues
Specialised Connective Tissues
Areolar Tissue
Adipose Tissue
Dense Regular Connective Tissue
Dense Irregular Connective Tissue
Skeletal Tissues
Vascular Tissues
Reticular Connective Tissue
Pigmented Connective Tissue
White Fibrous Connective Tissue
Yellow Elastic Connective Tissue
Cartilage
Bone
Blood
Lymph
Mucoid Connective Tissue
Cord (Tendon)
Sheet
Cord (Ligament)
Sheet
Compact
Spongy
Hyaline Cartilage
Fibrous Cartilage
Calcified Cartilage

# Resource 12:

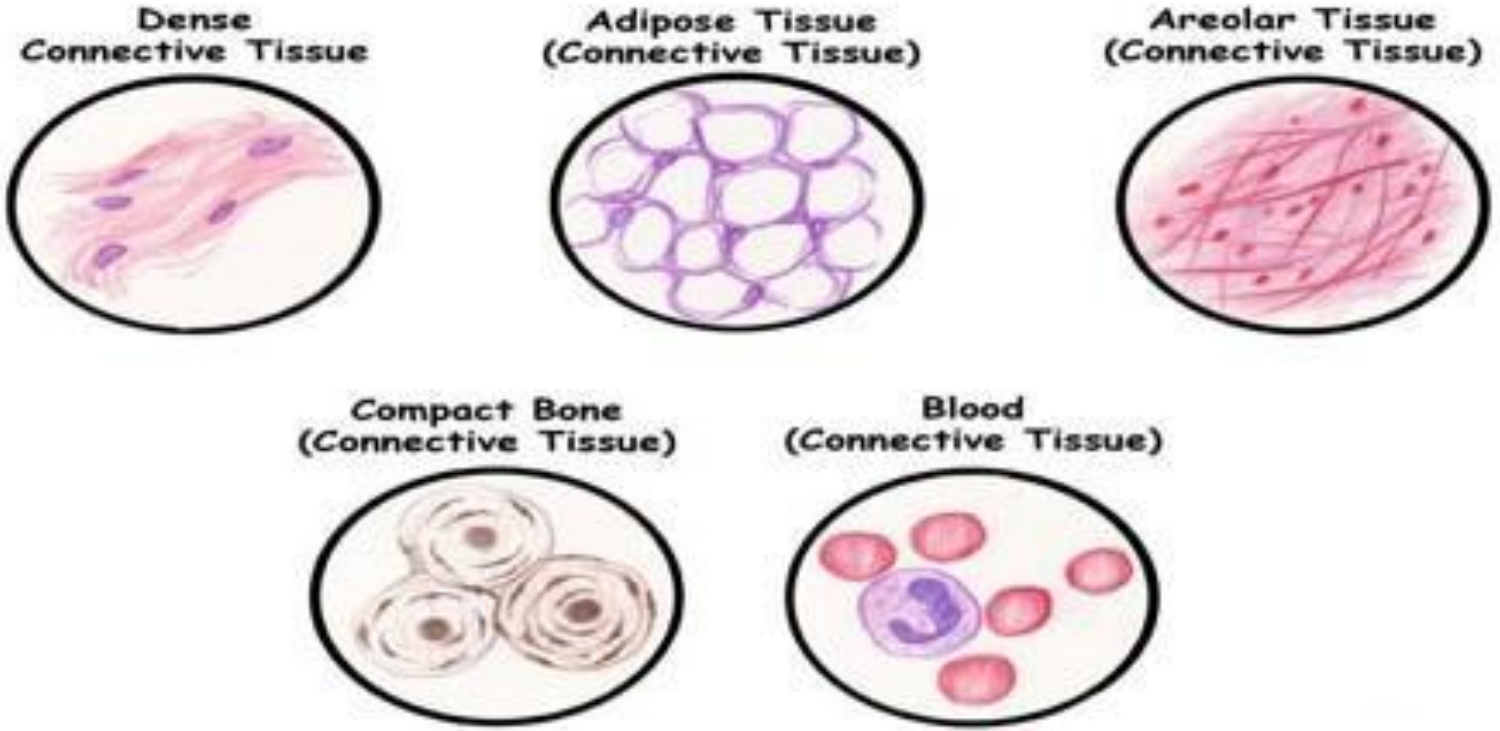
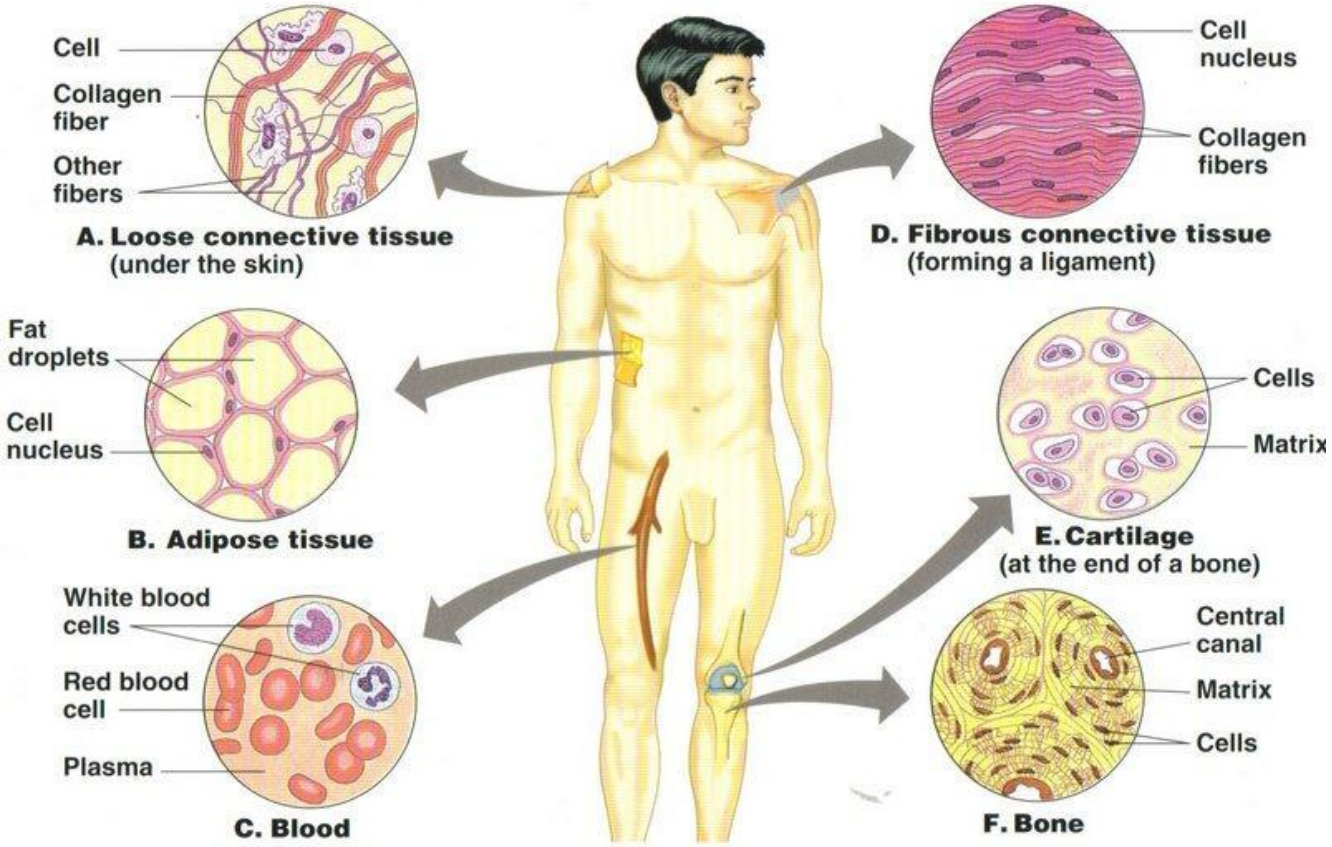

Dense
Connective Tissue
Adipose Tissue
(Connective Tissue)
Areolar Tissue
(Connective Tissue)
Compact Bone
(Connective Tissue)
Blood
(Connective Tissue)

Fig. 20.5 Types of connective tissue




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# Resource 13:

Table 4.2 Classification of Connective Tissue

| Type | Cells and Matrix | Function | Location |
|---|---|---|---|
| Loose (areolar) | Fibroblasts, mast cells; Collagenous fibers, elastin | Binding; protection, nourishment; holds fluids | Deep to skin; around muscles, vessels, organs |
| Dense fibrous | Fibroblasts; Densely packed collagenous fibers | Strong, flexible | Tendon, ligament |
| Elastic | Fibroblasts; Elastin fibers | Flexibility, distensibility | Arteries, larynx, trachea, bronchi |
| Reticular | Phagocytes; Reticular fibers in jellylike matrix | Phagocytic function | Liver, spleen, lymph nodes, bone marrow |
| Adipose | Adipocytes; very little matrix | Stores lipids | Hypodermis, around organs |
| Cartilage<br>Hyaline<br>Fibrocartilage<br>Elastic | Chondrocytes; Collagenous fibers, elastin in elastic cartilage | Support, strength and flexibility | Joints, trachea, nose, outer ear, larynx |
| Bone<br>Spongy bone<br>Compact bone | Osteocytes; Collagenous fibers, calcium carbonate | Strong support | Bones |
| Blood | Erythrocytes; leukocytes, thrombocytes (platelets); Plasma | Conduction of nutrients and wastes | Circulatory system |

# Resource 14:

## Skeleton tissues

| S.No | Bones | Cartilage |
|---|---|---|
| 1. | It is hard & inflexible. | It is soft & flexible. |
| 2. | They have calcium & phosphate. | They are made up of protein. |
| 3. | They are porous. | They are non – porous. |
| 4. | Throughout body | The tissue occurs in pinnae of ears, ends of nose, and walls of respiratory ducts. |
| 5. | They provide framework, support, and movement. | They absorb stress & provide flexibility. |

## Vascular tissue

| S.No | Blood | Lymph |
|---|---|---|
| 1. | They are fluid connective tissue. | Are tissue fluid. |
| 2. | They have WBC, RBC & Platelets. | They have WBC & Protein. |
| 3. | They help in transportation, clot formation & fight against disease. | They fight against diseases. |
| 4. | Reddish in color. | Colorless fluid. |
| 5. | They flow through blood vessels. | They flow through lymph vessels & capillaries. |
| 6. | They maintain body temp & provide immunity. | They help in maintaining body volume & traps microbes. |

# Subtopic and Learning Objective #8

**Muscular Tissues**

1. Explain muscular  tissue based on their structure and function
2. Identify different type of muscular tissue with examples

# Teacher Activity

1. Show students picture of different muscular tissue and ask them to guess the function.
2. Inform students that muscular tissue forms the contracting tissue. They are made of muscles cells, which are elongated. The movement in these tissues is cause due to contraction & relaxation of these muscles. These tissues are arrange parallel to each other to brought effective working of each muscles cell.
3. Share with students the difference between each tissue.
4. Discuss the structure, function and location of these tissue in detail.

Note: please note that in NCERT there are only 4 types given. Rest are additional.

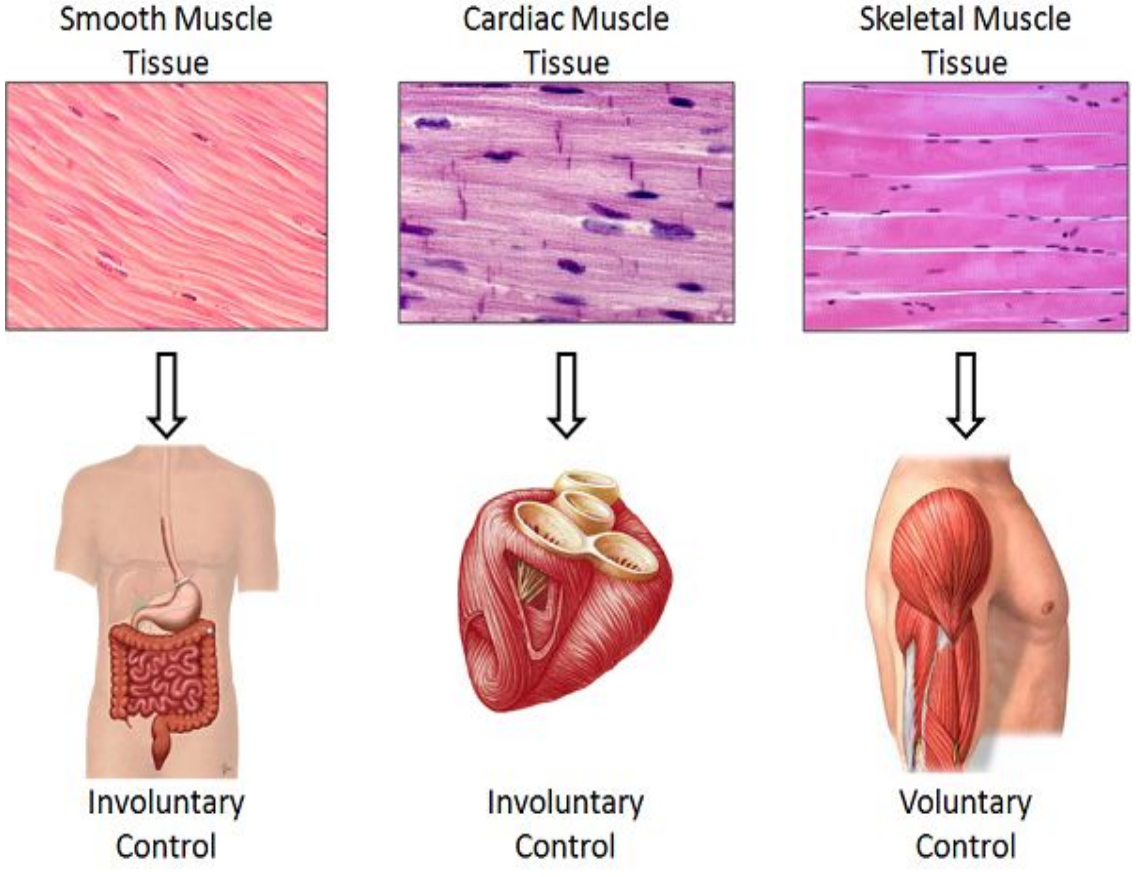
***Check your Understanding***

a. What type of tissue is present in heart and why?

# Resources Suggested

Resource 15 (picture of muscular tissue), Resource 16 (difference between muscular tissue)

# Resource 15:


Smooth Muscle Tissue
Cardiac Muscle Tissue
Skeletal Muscle Tissue
Involuntary Control
Involuntary Control
Voluntary Control

# Resource 16:

| *Striated* | *Non-striated* | *Cardiac* |
|---|---|---|
| 1. They are present in the limbs, body walls, tongue, pharynx and beginning of oesophagus. | 1. They are present in the oesophagus (posterior part only), urino-gential tract, urinary bladder, vessels, iris of eye, dermis of skin, and arrector pili muscles of hair. | 1. They are present in the wall of the heart, pulmonary veins and superior vena cava. |
| 2. Cylindrical. | 2. Spindle shaped. | 2. Cylindrical. |
| 3. Fibres unbranched. | 3. Fibres unbranched. | 3. Fibres branched. |
| 4. Multinucleate. | 4. Uninucleate. | 4. Uninucleate. |
| 5. Bounded by sarcolemma. | 5. Bounded by plasmalemma. | 5. Bounded by sarcolemma. |
| 6. Light and dark bands present. | 6. Light and dark bands absent. | 6. Faint light and dark bands present. |
| 7. No oblique bridges and intercalated discs. | 7. No oblique bridges and intercalated discs. | 7. Oblique bridges and intercalated discs present. |
| 8. Nerve supply from central nervous system. | 8. Nerve supply from autonomic nervous system. | 8. Nerve supply from the brain and autonomic nervous system. |
| 9. Blood supply is abundant. | 9. Blood supply is scanty. | 9. Blood supply is abundant. |
| 10. Very rapid contraction. | 10. Slow contraction. | 10. Rapid contraction. |
| 11. They soon get fatigued. | 11. They donot get fatigued. | 11. They never get fatigued. |
| 12. Voluntary | 12. Involuntary | 12. Involuntary |

# Subtopic and Learning Objective #9

**Nervous Tissues**

1. Explain nervous tissue based on their structure and function
2. Identify different type of nervous tissue with examples

# Teacher Activity

1. Show students picture of different nervous tissue and ask them to guess the function.
2. Inform students that nervous tissue is specialized to transmit message in our body. They are made of nerve cells & neurons. Brain, spinal cord & nerves are composed of nervous tissue. A neuron is made of cell body, short processes (dendrites) & axons. They receive & conduct impulse (is a passage of electrical activity along axons of nerve cells). Once the nerve cells is damaged cannot be regenerate again. Functions - They carry impulse.
3. Share with students the structure of neuron in detail.

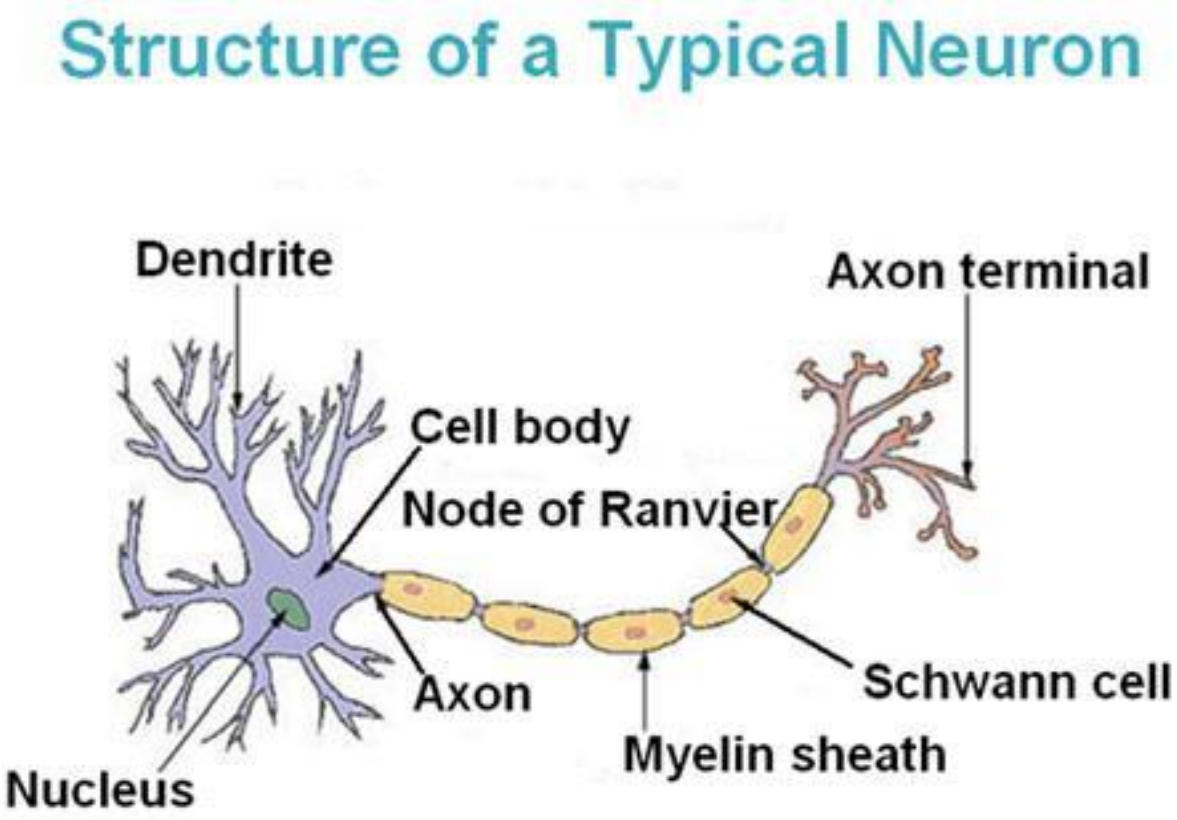
***Check your Understanding***

a. Why nerve cell do not reproduce?

# Resources Suggested

Resource 17 (nerve cell),

# Resource 17:


Structure of a Typical Neuron
Dendrite
Axon terminal
Cell body
Node of Ranvier
Axon
Schwann cell
Myelin sheath
Nucleus

# 4. WORKSHEETS

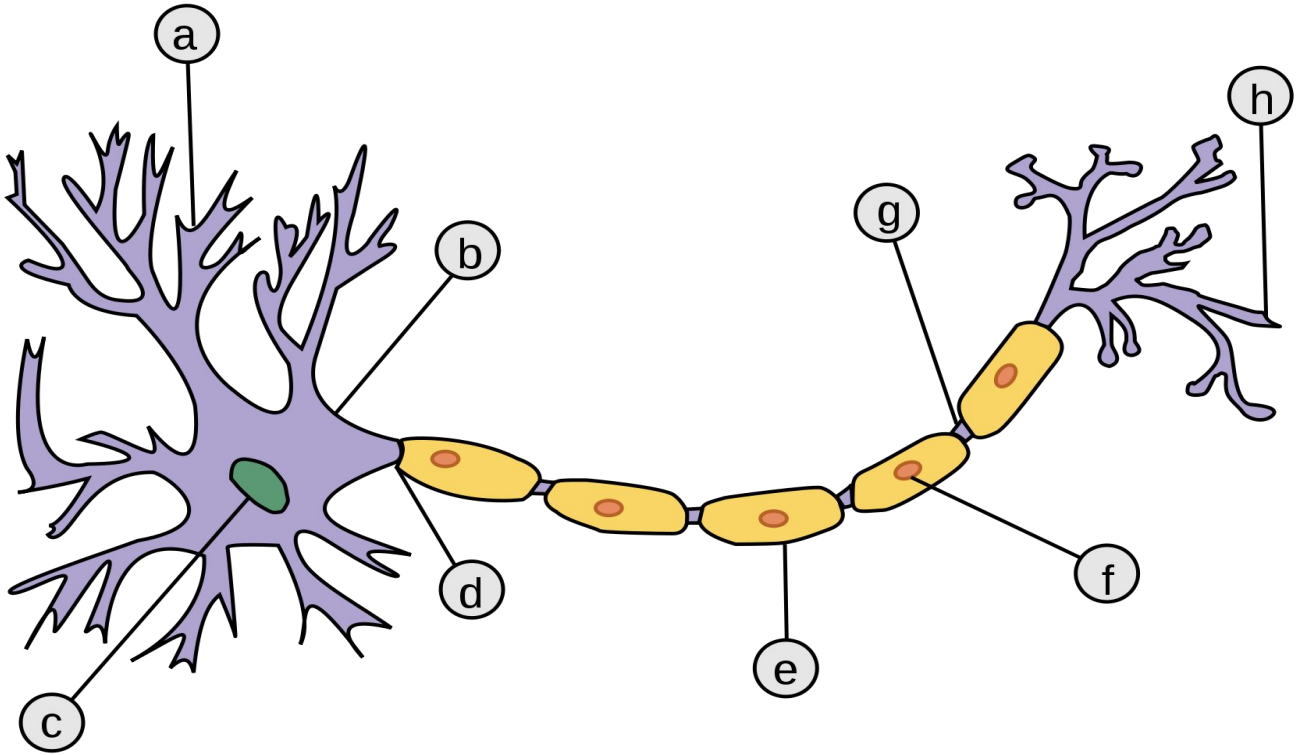
*Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.*

# Worksheet 1

**Use it like: test after the chapter is complete, homework**

**Answer the following questions in brief:**

1. **Which muscle in our body do the combine feature of voluntary and involuntary muscles?**
2. **Which muscles in the body contract slowly but also get fatigue slowly?**
3. **Difference between bone and cartilage.**
4. **Label the diagram**




## 5. Difference between muscular tissue.

# Worksheet 2

**Use it like: checking students understanding in class, oral test**

**Fill in the blanks:**

1. Cells having common origin acquire difference appearance because of _____.
2. Permanent tissue are formed of _____ cells.
3. _____ and _____ are protective tissue.
4. _____ fibre are abundant in tendon.
5. Flexibility in plants is due to _____.

# Worksheet 3

**Name the following:**

1. **Tissue that stores fat.**
2. **Tissue formed of one type of cell only.**
3. **The material deposit in the cell wall of sclerenchyma cell.**
4. **Water proof layer present on the outer wall of epidermal cell.**
5. **Processes of neuron that bring impulse into the cell body of neuron.**

# 5. SOLUTIONS

*This section gives you sample answers for activities and questions listed above.*

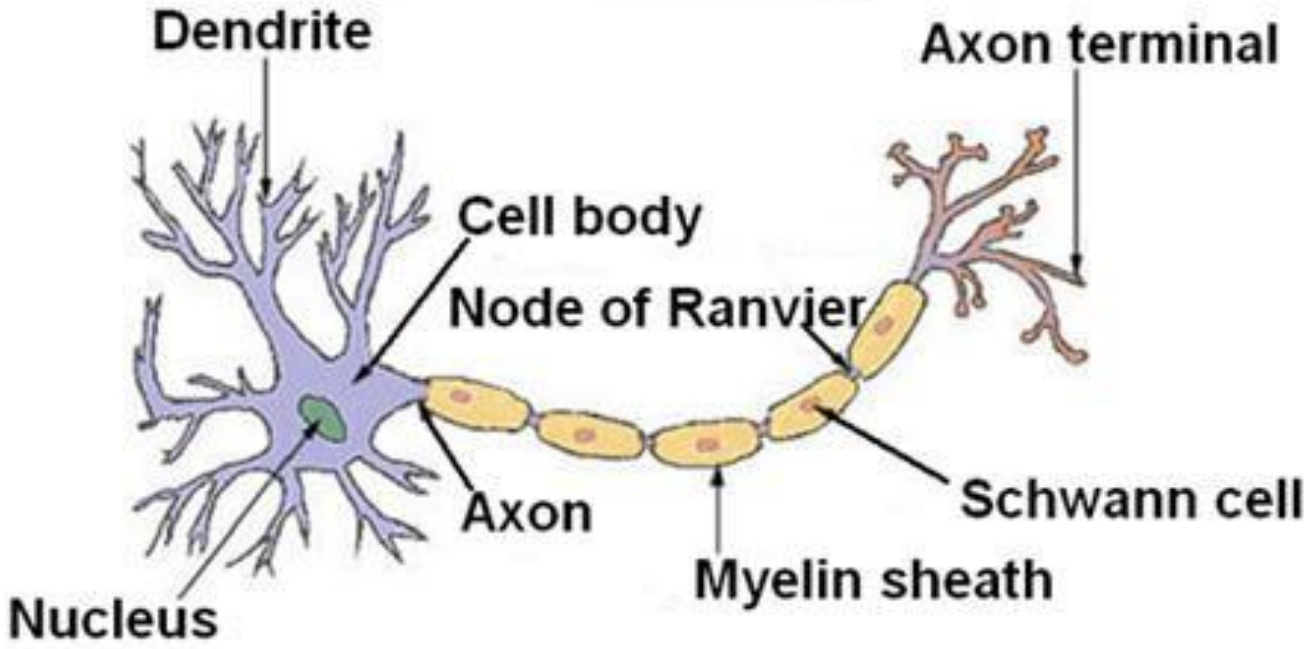
# Worksheet 1

1. Cardiac muscles.
2. Non- striated muscles.
3.

| S.No | Bones | Cartilage |
|---|---|---|
| 1. | It is hard & inflexible. | It is soft & flexible. |
| 2. | They have calcium & phosphate. | They are made up of protein. |
| 3. | They are porous. | They are non – porous. |
| 4. | Throughout body | The tissue occurs in pinnae of ears, ends of nose, and walls of respiratory ducts. |
| 5. | They provide framework, support, and movement. | They absorb stress & provide flexibility. |

4.

# Structure of a Typical Neuron



5.

| S.No | Types | Striated muscles | Smooth muscles | Cardiac muscles |
|---|---|---|---|---|
| 1. | Cells | Long, cylindrical cells. | Elongated, spindle shape cells. | Small, cylindrical cells. |
| 2. | Ends | Have blunt ends | Pointed ends. | Broad ends. |
| 3. | Striation | They have Striation | They donot have Striation | They have Striation but are very light. |
| 4. | Nature | Voluntary | Involuntary | Involuntary |
| 5. | Nucleus | Multinucleate | Uninucleate | Uninucleate |
| 6. | | Un branched fibre | Un branched fibre | Branched fibre |
| 7. | | Skeletal muscles | Unstriated muscles | Heart muscles |
| 8. | Occurrence | In limb, body wall, tongue, upper part of oesophagus. | In dermis, urinogenital & digestive tracts, blood vessels. | In wall of heart |

# Worksheet 2

1. Cell differentiation
2. Specialized
3. Cork and epidermis
4. Collagen
5. Collenchyma

# Worksheet 3

1. Adipose tissue
2. Simple tissue
3. Lignin
4. Cuticle
5. Dendrites

# 6. EXTRA RESOURCES

*Carry out the following suggested activities/ tasks if you have the time and resources to do them*

1. **Video Links:**

Show the following videos to the students on computer/ tablet/ screen:

a) Connective tissue:
https://www.youtube.com/watch?v=L3OydHheqKA

b) Epithelial tissue:
https://www.youtube.com/watch?v=UIINGF9MnNA

2. **Extension involving more concepts:**
**Purpose:** Hands on activity
Create a clay model of various kinds of tissues or location of various tissues in plants/ animals