Class 9
Syllabus of Biology

TERM I
Chapter 5 - The Fundamental unit of life

Cell structure(April)

Cell organelles(May)

Chapter 6 - Tissues
PlantTissue (July)

REVISION (August)

Exam-Term 1(September)

TERM II

CHAPTER - 6 Tissues
Animal tissue (October)

CHAPTER - 12
Improvement In Food Resources (Before Animal Husbandry) (November)

CHAPTER - 12
Improvement In Food Resources (From Animal Husbandry till last) (December)

CHAPTER - Natural Resources (Internal Assessment) (January)

Revision (February)

Final Exam - (March)

TERM I

ClassIX ***Subject :Biology***

Number of Teaching days of each month - 10

Topic 5: The Fundamental unit of life

(Part – 1)

Learning Objectives:-Students will be able

(i) ***To explore and identify discovery of a dead and living cell.***

(ii) ***To identify the various parts of microscope, process of diffusion and osmosis.***

(iii) ***To recognize the shapes of cells of human body.***

Previous Knowledge Testing:-

Some questions will be asked to test students :-

(i) ***Which basic material can be used to make wall?***

(ii) ***Which is the structural and functional unit of life?***

(iii) ***Can you see RBCs with naked eye?***

(iv) ***Which gases we inhale and exhale during breathing?***

Vocabulary used :- Cork, safranin, microscope organelles, diffusion, selectively permeable membrane, flexibility, hypotonic, isotonic, hypertonic, endocytosis.

AIDS / Innovativemethods

(i) ***Microscope parts will be explained by smart board.***

(ii) ***Diagrams of different cells will be drawn by the teacher on black board and students will draw side by side in their notebooks.***

(iii) **Students will make different shapes of cells using materials like thread,wool ,beads etc.**

(iv) **Activities based on osmosis in raisins and potato will be shown by the teacher.**

Procedure:-

- ***Term 'Biology' will be explained to the students. Parts of microscope will be shown. Various discoveries and the scientists who had discovered various cell organelles will be discussed. Topics diffusion & osmosis will be explained. Students will be made to read the content from NCERT one by one & underline the important term.***
- ***Diagrams of various cells from the human body will be shown by teacher through the smart board. Students will also frame questions side by side.***
- ***Digital content would be share to students.***

Participation of the students:-

(i) ***Students will read the content one by one from NCERT & underline the important terms.***

(ii) ***Students will frame questions & will be discussed.***

(iii) ***Students will draw the diagram related to content.***

Recapitulation:-

(i) Quiz will be conducted to recap the chapter.

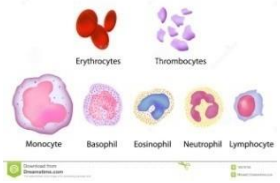
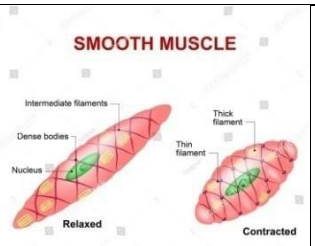
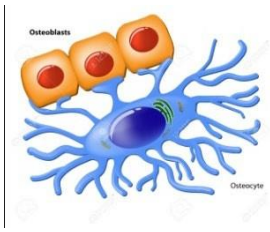
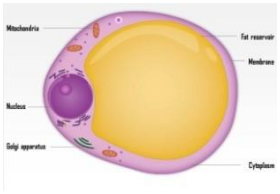
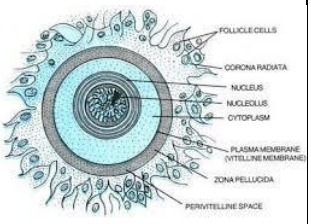
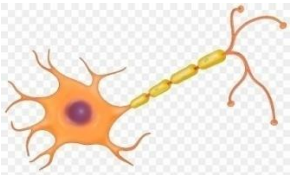
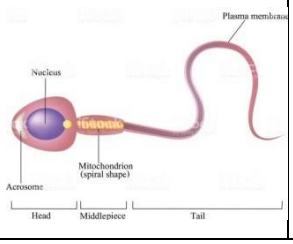
(ii) MCQ will bedone.

(iii) Class Assignment will be given.

Art Integration:-

- ***Students will draw diagram of various shapes of cells present in human beings.***
- ***Students will make video on activity hypotonic, hypertonic and isotonic solution.***

SIMPLE MICROSCOPE:

Blood cells 		**Bone cell** 
Fat Cell 	**Ovum** 	**Nerve Cell** 
Sperm Cell 		

Learning Outcomes:-

(i) ***Students will be able to recognize the parts of microscope.***

(ii) ***Students will understand the differences between osmosis and diffusion by doing different activities.***

(iii) ***They would be able to identify shapes of various cells like onion and cheek cells.***

(iv) ***Students will develop the skill of drawing through diagram.***

Resources:-

(i) ***NCERTBook.***

(ii) ***Modern Biology for class IX***

(iii) ***Biology Today – By Cordova Publications***

(iv) ***https://youtu.be/zPTwzDGdRCc***

(v) ***https://youtu.be/YB9o6Jg1EuM***

***Co- ScholasticActivities*:-**

- ***Visual and thinking skills will be developed.***
- ***Creative skills will be learned.***

Assessment:-

- ***MCQ***
- ***Oral Tests***
- ***Written Tests***
- ***Periodic Test***
- ***Assignment***

Feedback and remedial teaching

****Focus on Reading skills***

****Individual attention will be given to students***

****Use of pictures and mazes***

Inclusive practices and full participation without discrimination

****All students will be encouraged to participate.***

****Recognising, accommodating and meeting the needs of all the students.***

****Including hands on learning and sensory activities.***

Class IX

Subject :Biology

No. of teaching days of each

month10

Topic: The Fundamental unit of life

(Cell Organelles)

(Part – 2)

Learning Objective:-

- ***(i)*** ***To make the students able to distinguish between prokaryotic and eukaryotic cell.***
- ***(ii)*** ***To make the students identify hypotonic, hypertonic and isotonic solution.***
- ***(iii)*** ***To understand the structure and functions of various cell organelles.***

Previous Knowledge Testing:- ***Some questions will be asked to the students.***

- ***(i)*** ***By which part, plants absorb water and from where?***
- ***(ii)*** ***Name some stains used to stain the cells.***
- ***(iii)*** ***Which is the fluid content in the cell?***
- ***(iv)*** ***Which organelle in plant cell contain chlorophyll?***
- ***(v)*** ***Why is the cell called structural and functional unit of life?***

VocabularyUsed:-

Chromosomes, nucleoid, vesicles, cisternae,

membrane biogenesis, cristae, leucoplast, turgidity, endocytosis.

AIDS / Innovative methods used to explain the topic :-

(i) Smart board

(ii) 2-D models of animal and plant cell.

(iii) Drawn diagrams of various cell through colourfull pens.

(iv) To prepare temporary mount of onion peel & check cell will be shown by activity.

(v) Role Play on cell organelles.

Procedure:-

- ***Types of solutions, cell wall, prokaryotic cell, parts of nucleus will be explained cell organelles endoplasmic reticulum, Golgi apparatus, lysosomes, mitochondria, plastids, and vacuoles will be explained through smart board.***
- ***Students will read the content from NCERT and will be made to underline the important terms.***
- ***Content will also be explained by smart board .***
- ***Students will frame questions side by side & discussion will be done.***
- ***Questions will be discussed through examples from life.***

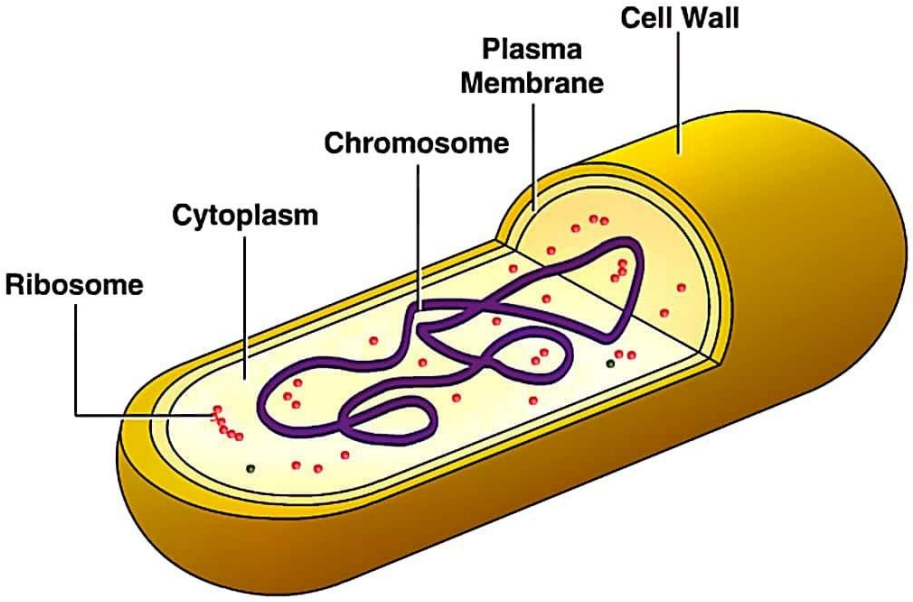
Participation of the students:-

(i) Student will read the content one by one and underline the important terms.

(ii) Students will frame questions and will be discussed.

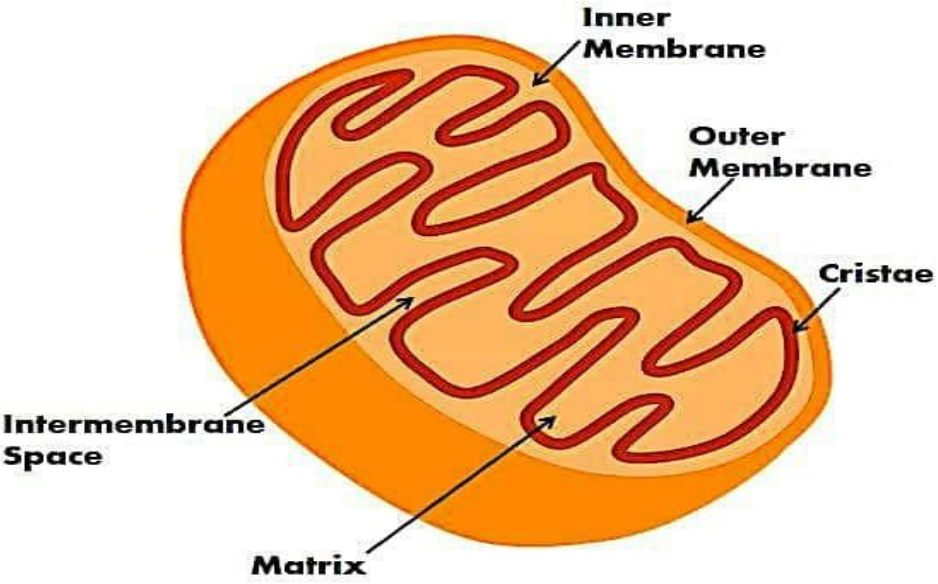
(iii) ***Students will observe how to remove peel from onion and take cells from cheek in the lab by the teacher.***

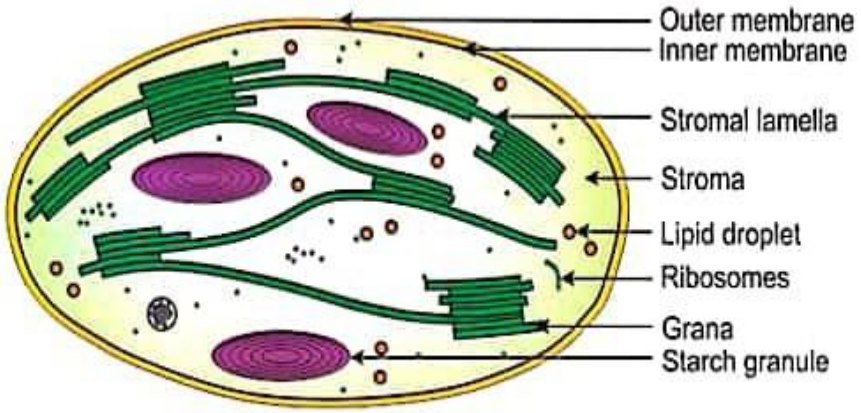
(iv) ***Roleplay on different cell organelles will be performed by students of various groups and group leader will make the video and will share in the class.***



Prokaryotic Cell

Mitochondrion





Electron micrograph of a section of chloroplast

Recapitulation:-

(i) What are main parts of nucleus.

(ii) Differences between prokaryotic and eukaryotic cell.

(iii) Functions of various cell organelles.

(iv) Mitosis and meiosis.

(v) Why are lysosomes are called suicide bags.

Art Integration:-

- ***Students will draw diagrams of various cell organelles by using different colours and materials like thread, wool, clay, beads etc.***
- ***Roleplay on cell organelles will be performed.***

Learning Outcomes:-

- ***Children will learn the structure and function of different cell organelles.***
- ***Reading skills while comprehending the questions asked will be developed.***
- ***Critical thinking skills through open questions will be learned.***
- ***Creativity will be developed by drawing diagrams.***

- ***Enactment skills will be learnt through roleplay.***

Resources:-

(i) NCERT Text Book for classIX

(ii) Science Biology – By Modern publication(IX).

(iii) Biology – By Dinesh publications(IX).

(iv) Link-https://youtu.be/IA0DhWDTUpU

CO-Scholastic Activities:-

- ***Thinking and communication skills will be learned.***
- ***Creative skills will be developed.***

Assessment:-

Students will be assessed on the basis of

- ***MCQ***
- ***Oral Tests***
- ***Written Tests***
- ***Periodics***
- ***Assignment***

Feedback and remedial teaching

*Focus on Reading skills
*Individual attention will be given to students
*Use of pictures and mazes

Inclusive practices and full participation without discrimination

*All students will be encouraged to participate.
*Recognising, accommodating and meeting the needs of all the students.
*Including hands on learning and sensory activities.

Assignment

1. ***Name the reticulum which has ribosomes attached to it.***
2. ***Name the cell organelle which is involved in the formation of lysosomes.***
3. ***What are the chromosomes made up of ?***
4. ***What will happen if a plant cell is placed in hypertonic solution ?***
5. ***When does chromatin change into chromosomes ?***
6. ***Name a membraneless cell organelle.***
7. ***What is the name of membrane surrounding sap vacuole ?***
8. ***By which process root hair absorb water from the soil ?***
9. ***Write composition of chromosomes?***
10. ***Which object was used by Robert Hooke to observe cells ?***
11. ***What is the meaning of latin word 'Cell ' ?***
12. ***Name the process by which amoeba acquires itsfood.***
13. ***In which cell organelle, storage, packaging and modification of newly formed proteins occur ?***
14. ***Write types of cell division.***
15. ***In which type of cell division two identical daughter cells are formed ?***
16. ***Which organelle is called factory of ribosomes ?***
17. ***Where are genes located ?***
18. ***Name the organelle present only in plants which have their own genome and ribosomes ?***
19. ***Where stroma is present in a cell ?***
20. ***In which form does the mitochondria release energy ?***

Class IX

Subject : Biology

No. of teaching days of each month - 10

Topic: Chapter–6 Tissue (Plant tissue)

(Part – 1)

Learning Objectives:-

(i) ***To make the students understand the following topics.***

(ii) ***Definetissue.***

(iii) ***Types and sub types of various types of tissues.***

(iv) ***Classification of meristematic tissue on the basis of their location & function of each type.***

(v) ***Location, characteristics & functions of various types of plant tissue.***

Previous Knowledge Testing:-

Some questions will be asked to students.

(i) ***Name the structural and functional unit of life.***

(ii) ***Have you seen T.S of root and stem ?***

(iii) ***Have you observed different types of groups of cells in them ?***

(iv) ***What is tissue ?***

(v) ***What are the differences between animal and plant tissue ?***

Vocabulary used:-

meristematic, differentiation, parenchyma, collenchyma, sclerenchyma, aerenchyma, chlorenchyma, trachaids, vessels, epidermis, suberin, sieve tubes etc.

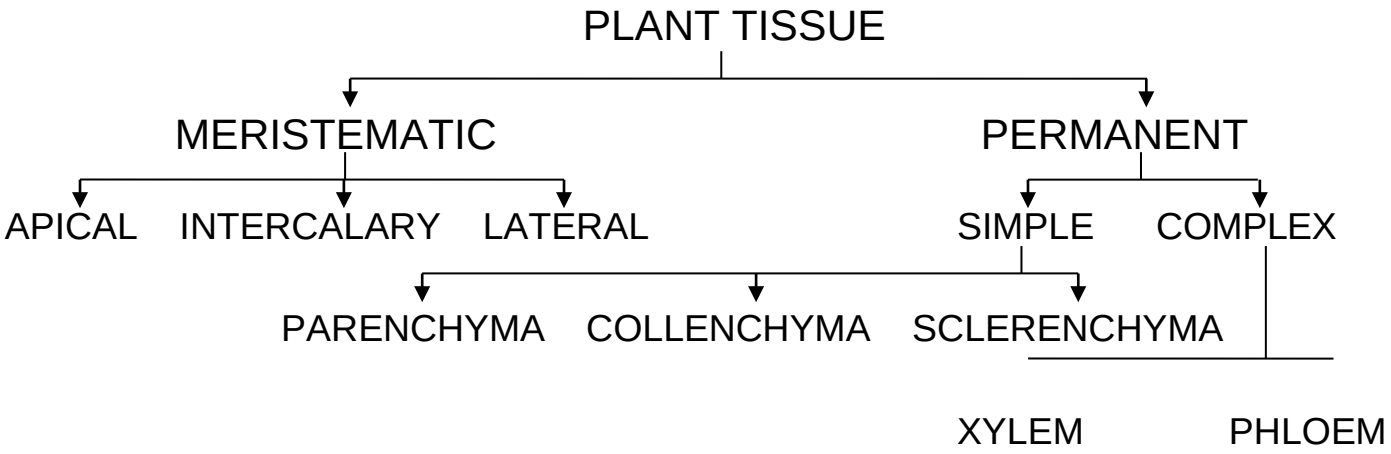
AIDS / Innovative methods used:-

- ***(i)*** ***Students will be shown difference in thickening of cell wall & inter cellular spaces by displaying on smart board.***
- ***(ii)*** ***Students will make permanent tissues using clay of different colours, threads and beads etc.***
- ***(iii)*** ***Students will display difference in thickening of cell wall on a glass sheet or hardboard.***
- ***(iv)*** ***Diagrams of parenchyma, collenchyma and sclerenchyma will be drawned.***

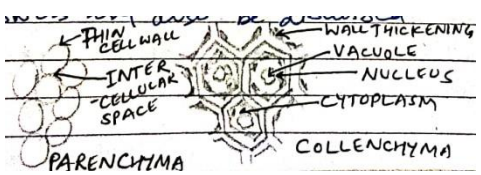
Procedure:-

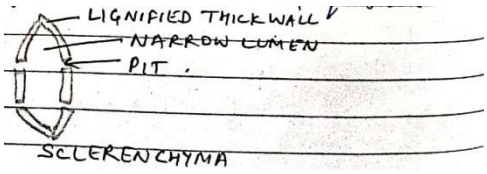
- ***(i)*** ***Transverse section of stem will be drawn & brief explanation of various parts will be given.***
- ***(ii)*** ***Classification of meristematic tissue will be explained drawing diagram in notebooks and through smart board to children.***
- ***(iii)*** ***Location, characteristics and function of all the plant tissue will be discussed.***
- ***(iv)*** ***Difference between meristematic and permanent tissue will be discussed by involving students.***

(v) Differences among parenchyma, collenchyma and sclerenchyma will also be discussed.



- ***Students will do activity by using clay & thread to show differences in thickness of cell wall and intercellular spaces.***
- ***Students will also read the content from NCERT one by one.***
- ***Students will also draw diagrams with the help of teacher.***
- ***Related questions answers will also be discussed.***





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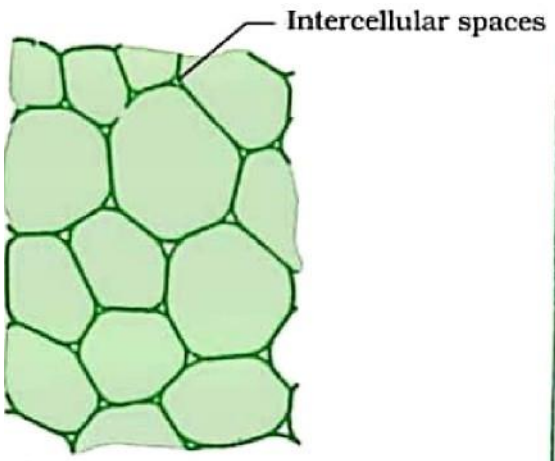
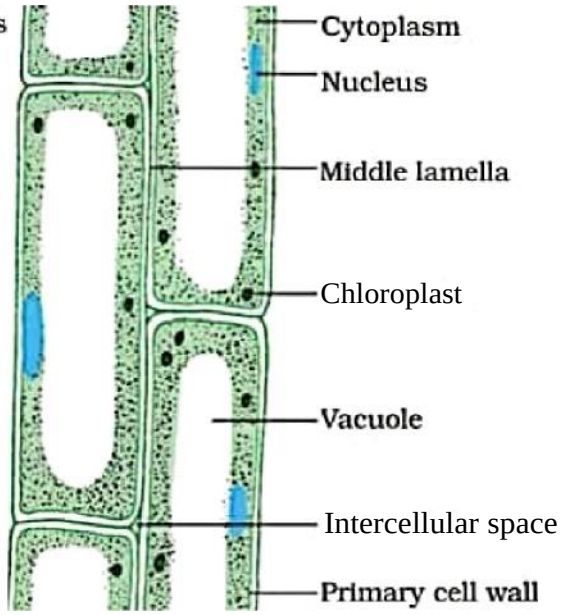
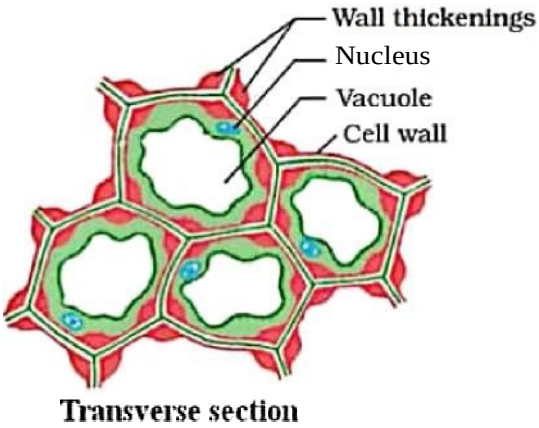


Ti siisveivse section

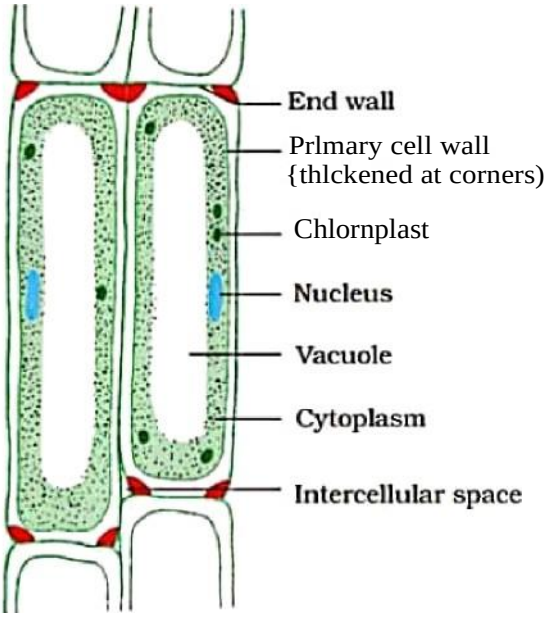


Loiigltii‹linal section

Collenchyma



Transverse section



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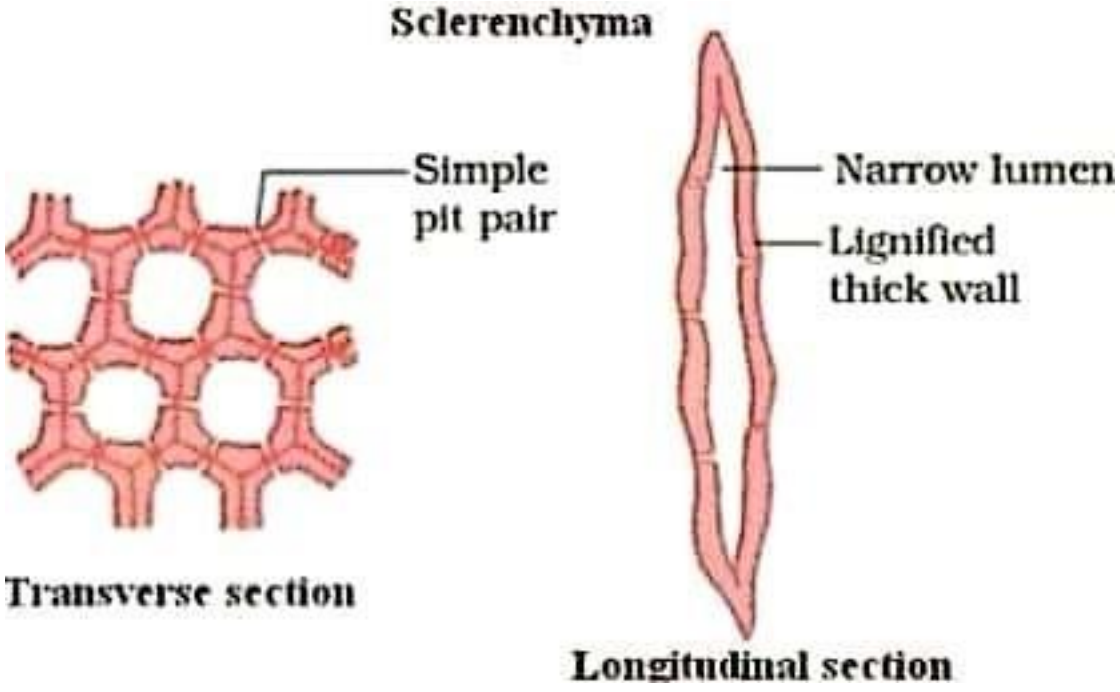
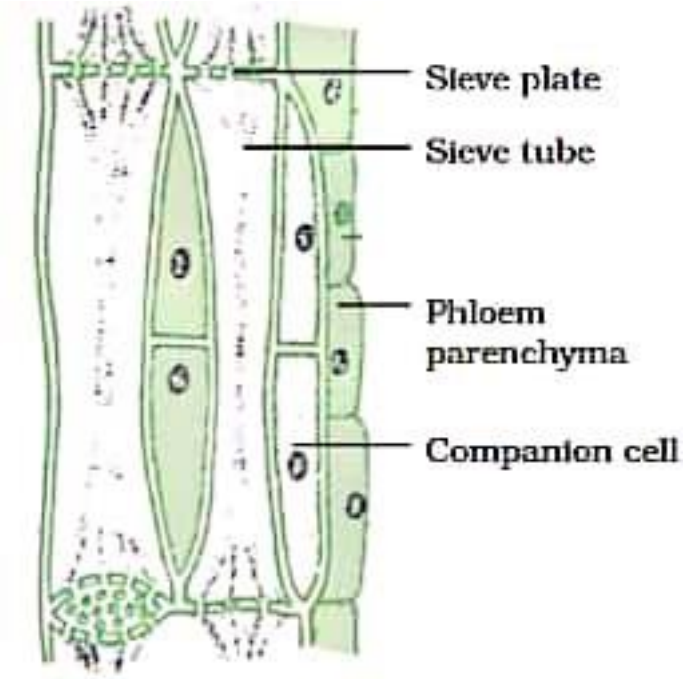




Section of phloem

Participation of students:-

(i) ***Students will make parenchyma, collenchyma & sclerenchyma tissue with the help of threads & clay.***

(ii) ***Students will draw diagrams in their notebook.***

(iii) NCERT and Extra Questions will be done in the notebook.

Recapitulation :- Teacher will ask some questions to students:-

(i) What is a tissue ?

(ii) How Parenchyma, Collenchyma and Sclerenchyma differ in their thickening of cell wall ?

(iii) Why vacuole in absent in meristermatic tissue.

(iv) What is role of epidermis ?

(v) What is the reserve food for plant tissue ?

(vi) Why are plant cells rigid in nature ?

Art Integration:-

- *Students will show differences in wall thickenings and intercellular spaces by displaying on glass or hard board by using clay of different colours or by usingthreads.*
- *Activity showing the function of Xylem vessels in stem for carrying water will be performed and video will be made.*

Learning outcomes:-

(i) Students would be able to state the importance of different types of tissue.

(ii) Students will be able to classify different type of plant tissue.

(iii) Students would be able to draw diagrams of T.S of Parenchyma, Collenchyma and Sclerenchyma.

(iv) Students would also understand various functions of Parenchyma, Collenchyma & Sclerenchyma, Xylem and Phloem.

(v) *Reading skills will be developed while comprehending the questions asked.*

Resources:-

(i) *NCERT Text Book of classIX*

(ii) *BIOLOGY – By Pardeep Publications(IX)*

(iii) *Science BIOLOGY – By Modern Publications.*

(iv) ***Link-https://youtu.be/-rGetleD-DI***

CO-Scholistic Activities:-

- *Learning and visual skills will be developed.*
- *Acting skills will be learned by roleplay.*
- *Creative skills will be developed by drawing and making different permanent tissues.*

Assessment:-

- *Oral Test*
- *Written Test*
- *Activities*
- *MCQ*
- *Assignment*
- *RolePlay*

Feedback and remedial teaching

**Focus on Reading skills*
**Individual attention will be given to students*
**Use of pictures and mazes*

Inclusive practices and full participation without discrimination

**All students will be encouraged to participate.*
**Recognising, accommodating and meeting the needs of all the students.*
**Including hands on learning and sensory activities.*

Assignment

Very short answer questions:

1. *Name the vascular tissue in plants.*
2. *Name the tissue that helps in growth of plants.*
3. *How many types of meristematic tissue are there ? Name them.*
4. *What iscambium?*

5. ***Which meristem helps to increase the girth of stem or root?***
6. ***Which form of permanent tissue help in storage of food?***
7. ***Which tissue makes up the husk of coconut?***

<u>Short Answer Questions:</u>

8. ***What is a tissue ? Give examples.***
9. ***What is differentiation ?***
10. ***What is lignin ? Where is it present and what is its use ?***
11. ***What is stomata? What are its functions ? Explain with diagram.***
12. ***Name the constituents of phloem.***
13. ***Name different types of simple permanent tissues.***
14. ***What are chlorenchymatous tissues ?***
15. ***What is the role of epidermis in plants ?***

<u>Long Answers Questions:</u>

16. ***Classify meristematic tissue according to their location. Give functions of each.***
17. ***Differentiate between:***

a) ***Parenchyma and Collenchyma***
b) ***Collenchyma and Sclerenchyma***
c) ***Xylem and Phloem***

TERM - II

Class IX

Subject : Biology

No. teaching days of each month - 10

Topic : Chapter – 6 (Cont.) Animal Tissue Part-2

Learning Objectives:-

(i) Students will be able to understand the differences between animal and plant tissue.

(ii) Types and subtypes of animal tissue.

(iii) Students will be acquainted with the knowledge of location, characteristics and functions of epithelial tissue, connective tissue, muscular tissue and nervoustissue.

(iv) Comparison of plant and animal tissue.

Previous Knowledge Testing:-

Some questions will be asked to test students :-

(i) How our internal body parts are protected ?

(ii) What are the components of blood ?

(iii) Which tissue helps in movement of body organs ?

(iv) Do we as animals have undifferentiated cells in our body ?

Vocabolary Used:-

Epithelium, Columnar, cuboidal, squamous, intercalary disc, alveoli etc.

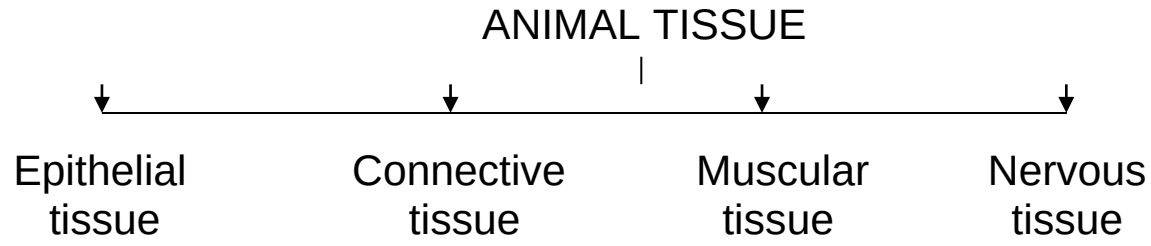
AIDS / Innovative methods used:-

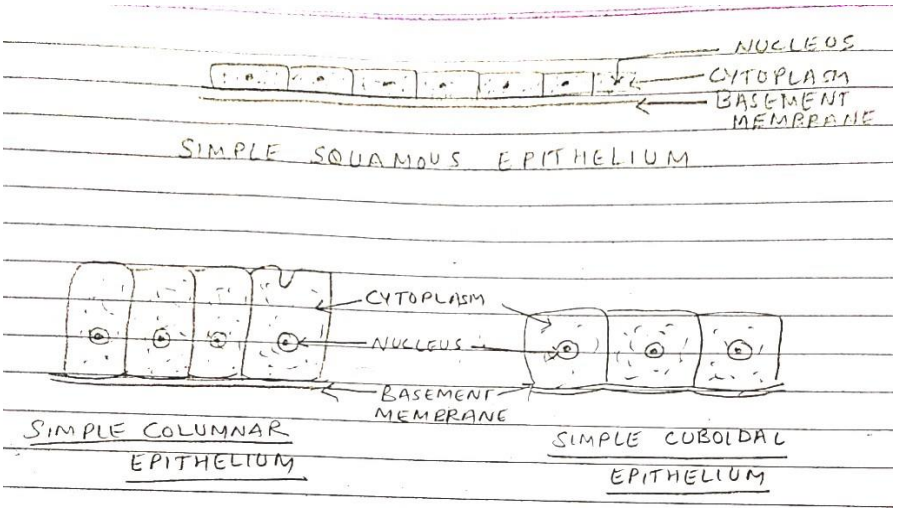
- ***Diagrams of striated, smooth and cardiac muscles will be drawn by the teacher and drawn by students also.***

- ***Digital content will be shared to students on smart board.***
- ***Presentation will be given by students on different types of tissues by showing diagrams.***

Procedure:-

- ***L-6 'tissues' will be continued. Topic 'animal tissue will be taken up. Types of animal tissue will be explained.***





- ***Location, characteristics and functions and types of animal tissues will be explained.***
- ***Students will read the content from NCERT book.***
- ***Related diagram will be drawn by the students with the help of teacher.***

- ***Related question answers will be discussed with the students.***

Participation of the students:-

(i) ***Students will draw diagrams of various types of tissues with the help ofteacher.***

(ii) ***Students will read the content one by one.***

(iii) ***Students will frame questions to the topic.***

(iv) ***NCERT Questions will be done in notebooks.***

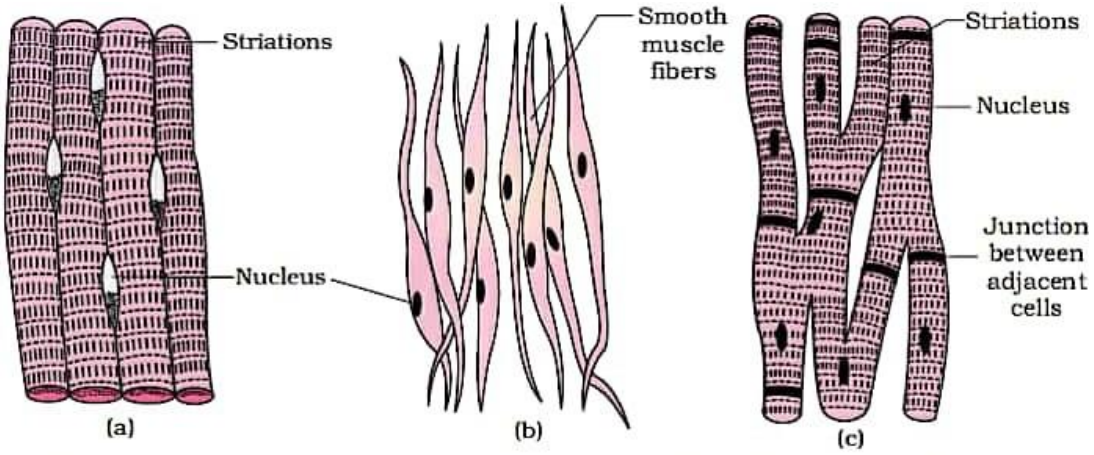
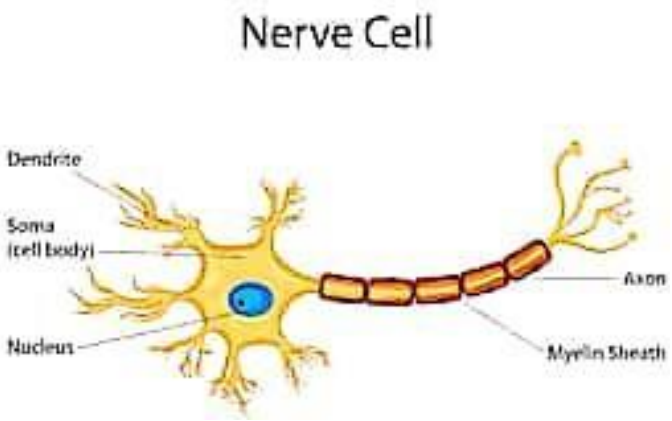


Figure 7.7 Muscle tissue : (a) Skeletal (striated) muscle tissue (b) Smooth muscle tissue (c) Cardiac muscle tissue



Recapitulation →Questions will be asked

(v)What is the difference between

a) Blood and Lymph

b) Straited and Unstraited Muscle

c) Ligament and tendon

(vi) What are different types of epithelial tissue ?

(vii) What is function of nervous tissue ?

Art Integration:-

- ***Students will draw colourful diagrams of various types of animal tissues by using pencil colours.***

Learning Outcomes:-

(i) Students would understand the location, characteristics and functions of various types of animal tissue.

(ii) Students would be able to draw diagrams of various types of animal tissues.

(iii) Students would be able differentiate between bone and cartilage, tendon and ligament.

Resources:-

(i) NCERT science Text Book for ClassIX

(ii) Science Biology – By Modern Publication.

(iii) Biology – By Dinesh Publications(IX)

(iv) Link-https://youtu.be/8IANWaZLIvg

Co-Scholastic Activities:-

- ***Visual,learning and thinking skills will be developed.***
- ***Creative skills will be learned by drawing diagrams.***

Assessment:-

Oral Test

Written Test

Quiz

Periodic Test

Assignment

Feedback and remedial teaching

****Focus on Reading skills***

****Individual attention will be given to students***

****Use of pictures and mazes***

Inclusive practices and full participation without discrimination

**All students will be encouraged to participate.*

**Recognising, accommodating and meeting the needs of all the students.*

**Including hands on learning and sensory activities.*

ASSIGNMENT

<u>Name the following:-</u>

1. ***The fat storing tissue of our body →***
2. ***The animal tissue that links bone to another bone →***
3. ***The tissue which connects muscle to bone →***
4. ***The tissue that acts for transportation of oxygen →***
5. ***Epithelium present in the lining of alveoli →***
6. ***Tissue present in the brain →***
7. ***Tissue that forms inner lining of our mouth →***

8. ***Contractile proteins are found in →***

Answer the following:-

9. ***Which are locations of cartilage in human body ?***
10. ***Explain the structure of nervous tissue with diagram ?***
11. ***Differentiate between***
    a) ***Bone and cartilage***
    b) ***Blood and lymph***
    c) ***Tendon and ligament***
12. ***What is epithelial tissue ? Write its functions ?***

ClassIX **Subject :Biology**

No. of teaching days of each month - 10

Topic : Improvement in Food Resources

LearningObjectives:-Students will get knowledge about

i. ***Improvement in crop yields***
ii. ***Crop variety improvement***
iii. ***Crop production management***
iv. ***Manure and fertilizers***
v. ***Irrigation***
vi. ***Cropping patterns***
vii. ***Storage of grains***
viii. ***Animal Husbandry***
ix. ***Cattle farming, poultry farming, fish production, bee keeping etc.***

Previous Knowledge Testing:-

Following questions will be asked to test the previous knowledge about topic .

i. ***What is food ?***
ii. ***From where do we get food ?***
iii. ***Name the sources of food ?***
iv. ***How farmers are able to produce food ?***
v. ***Define agriculture.***

Vocabulary used:- ***improvement , agriculture , cropping patterns , kharif and rabi crops , nutrients , manure , fertilizers , irrigation , animal husbandry ,***

poultry farming , broiler , marine fisheries , inland fisheries , bee - keeping etc.

AIDS/Innovativemethodsused:-

- ***Chart on different diseases will be made.***
- ***Table of different types of crops and their examples will be made.***
- ***Table of difference between manures and fertilizers will be made.***
- ***Table of difference between marine and inland fisheries will be made.***
- ***Chart on different cropping pattern will be made by the students.***

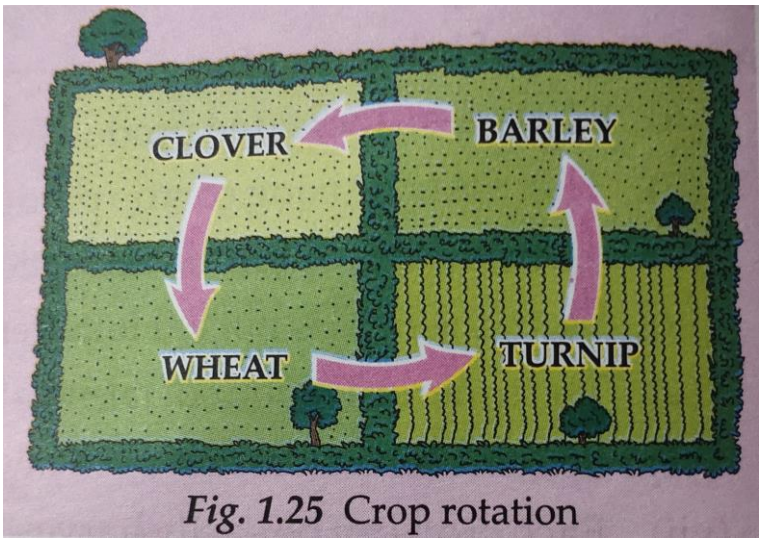


Fig. 1.25 Crop rotation

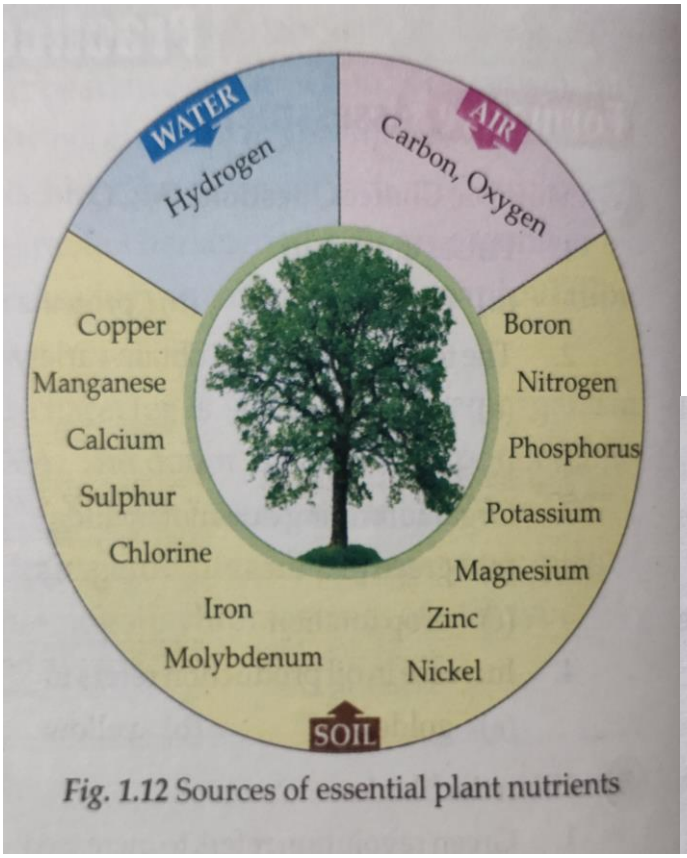


Fig. 1.12 Sources of essential plant nutrients

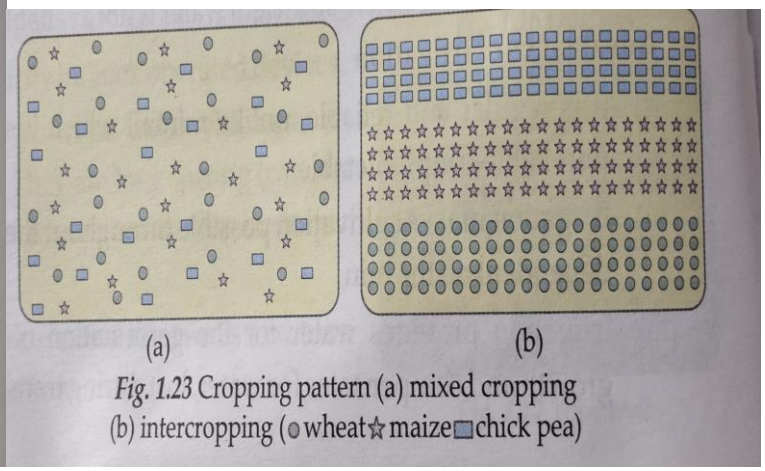
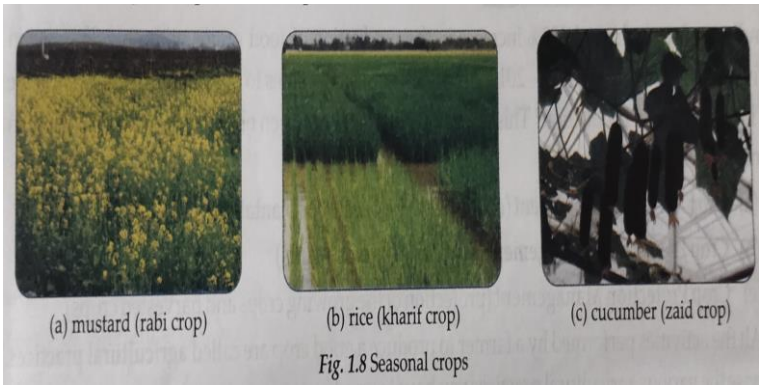


Fig. 1.23 Cropping pattern (a) mixed cropping (b) intercropping (○ wheat ☆ maize □ chick pea)



(a) mustard (rabi crop) (b) rice (kharif crop) (c) cucumber (zaid crop)

Fig. 1.8 Seasonal crops

Fig. 1.37 Jersey–exotic breed of cow

Fig. 1.38 Brown Swiss–
improved breed of cow

Procedure:-

(i) ***Reading and discussion of the topic will be done in the class.***

(ii) ***Children will understand importance of agriculture and animal husbandry in details in the class during explanation and discuss of the topics related to the chapter.***

(iii) ***Related question answers will bediscussed.***

Participation of the students:-

Student will read and discuss the topic.

- ***Related question answers and NCERT Questions will be done innotebook.***
- ***Table on different types of crops will be made.***
- ***Presentations of cropping pattern in different form.***

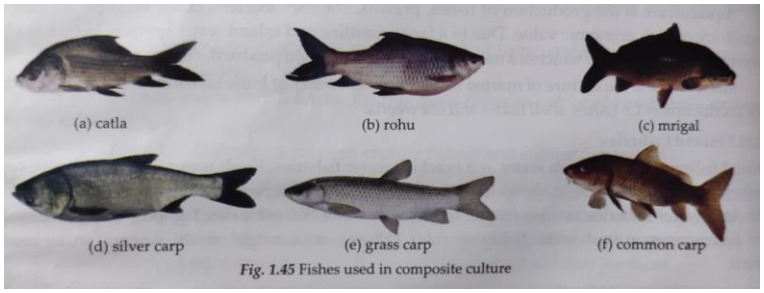


Fig. 1.45 Fishes used in composite culture

Recapitulation

1. ***Name the types of crops grown in India.***
2. ***Give two examples each of each types.***
3. ***What are manures and fertilizers ?***
4. ***What are macronutrients and micronutrients?***
5. ***For what purpose the chemical fertilizers are used in crop fields ?***
6. ***Name two marine fishes and two fresh water fishes.***

4. Art Integration:-

(i) ***Groupdiscussion***

(ii) ***Presentation of the topic throughvideo***

(iii) Chartmaking

(iv) Quiz

Learning Outcomes:-

**** Students will get knowledge about different types of crops grown in India.***

**** Students will also learn about the difference between manures and fertilizers.***

**** Students will explore the importance of animal husbandry.***

Resources:-

i. Science Biology by Modern publication

ii. NCERT science Text Book for ClassIX

iii. Link : https://youtu.be/BohT_vjlDgc

Co-Scholastic activities:-

- ***Group discussion***
- ***Keen observation***
- ***Critical thinking***
- ***Communication skill by presentation***
- ***General awareness skill will be developed***

Assessment:-

- ***Oral Test***
- ***Written Test***
- ***Periodic Test***
- ***Presentation***
- ***Assignment***

Feedback and remedial teaching

**Focus on Reading skills*

**Individual attention will be given to students*

**Use of pictures and mazes*

Inclusive practices and full participation without discrimination

**All students will be encouraged to participate.*

**Recognising, accommodating and meeting the needs of all the students.*

**Including hands on learning and sensory activities.*

Assignment

1. ***What is GM ? Name any one such crop which is grown in India ?***
2. ***List out some useful traits in improved crop ?***
3. ***Why is organic matter important for crop production ?***
4. ***Why is exccessive use of fertilizers not good for environment ?***
5. ***If there is low rainfall in a village throughout the year , what measures will you suggest to the farmers for better cropping ?***
6. ***Define hybridization.***
7. ***Discuss the role of hybridization in crop improvement ?***
8. ***Why bee keeping should be done in good pasturage ?***
9. ***Write the modes by which insects affect the crop yield ?***
10. ***Discuss why pesticides are used in very accurate concentration and in very appropriate manner ?***
11. ***Name two types of animal feed and write their functions ?***
12. ***Suggest some preventive measures for the disease of poultry birds.***
13. ***Name common marine fish consumed as food .***
14. ***Honey provides us which type of nutrients.***
15. ***Which process involves use of earthworms in preparing manure ?***

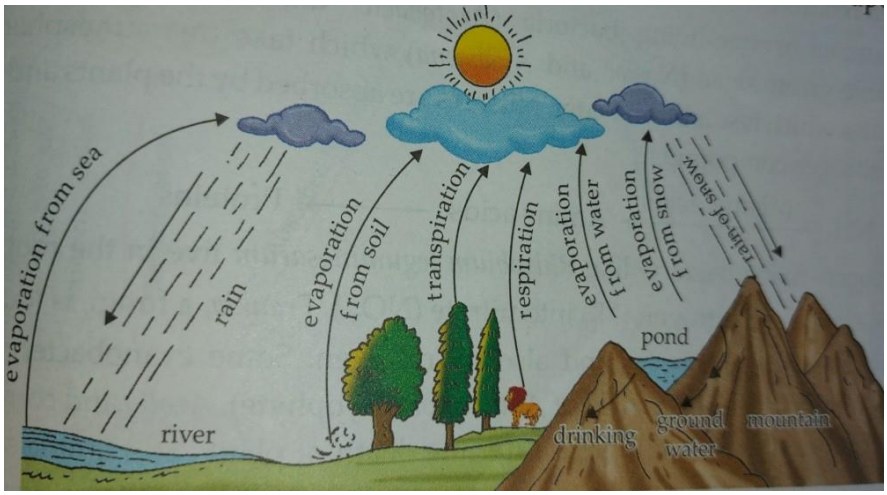
ClassIX ***Subject :Biology***

Topic: Natural Resources

This topic will be assessed by the teacher for the internal assessment parameters

Learning Objective:-Students will learn about

i. ***Air, The role of atmosphere in climate control.***
ii. ***Rain, Water-A wonderful Liquid***
iii. ***Water pollution, Soil Pollution***
iv. ***Biogeo chemical cycles.***
v. ***The water cycle***
vi. ***The Nitrogen cycle***
vii. ***The carbon cycle***
viii. ***The oxygen cycle***
ix. ***The green house effect***
x. ***Ozone Layer***



Water Cycle inNature

Participation of the students:-

(i) Student will read the topic.

(ii) Student will give presentation on various topics like water cycle, carbon cycle, nitrogen cycle, and oxygen cycle, air, water, soil pollution etc.

(iii) Different cycles will be drawn and shown during presentation.

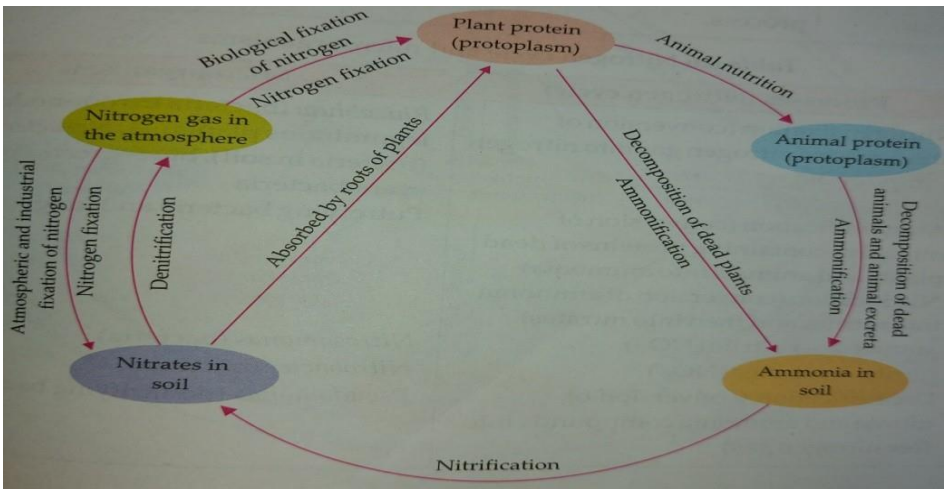
(iv) Videos on different pollutions will be shared.

Learning Outcomes:-

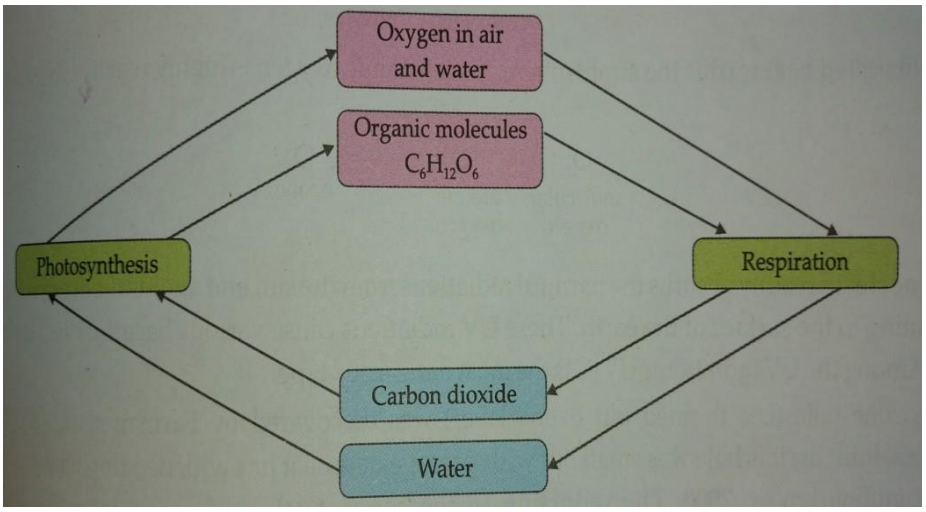
i. Students will learn about types of pollution.

ii. Students will also learn about, water cycle, oxygen cycle, carbon cycle, nitrogen cycle.

iii. Students also learn about ozone layer, green house effect.



Nitrogen Cycle



Oxygen Cycle

Resources:-

- ***Science biology–Biology by Modern publication***
- ***NCERTBook***
- ***Digital Content***

Art Integration:-

- ***Group discussion***
- ***Chart Making***
- ***Presentation***

CO-Scholastic Activities:-

- ***Visual skills***
- ***Learning skills***
- ***Creative skills***
- ***Communicative skills will be developed***

Assessment:- On the basis of presentation