

CLASS VIII

SUBJECT: SCIENCE(BIOLOGY)

UNIT – I

Ch-1,Crop production and Management

Ch-2,Microorganism:Friend and Foe

Ch- 7,Conservation of Plants and Animals

UNIT-II

Ch-8,Cell- Structure and Function

Ch-9,Reproduction in Animals

Ch-10,Reaching the Age of Adolescence

LESSON PLAN

Month : April – May,21 Class

:VIII

Subject : Biology

Topic : Crop Production and Management

Objectives:

- Students will get knowledge about agriculture.
- Students will be able to define Crop, Kharif and

rabicrops,agriculturaltools,transplantation
etc.

- Students will be able to differentiate between manure and fertilizers.
- Students will understand about need of irrigation and its types.
- Students will know about the weeds,harvestingfestivals,green revolution, hybridisation and animal husbandry.

Previous Knowledge Testing

Questions will be asked from the students to test their previous knowledge about the topic.

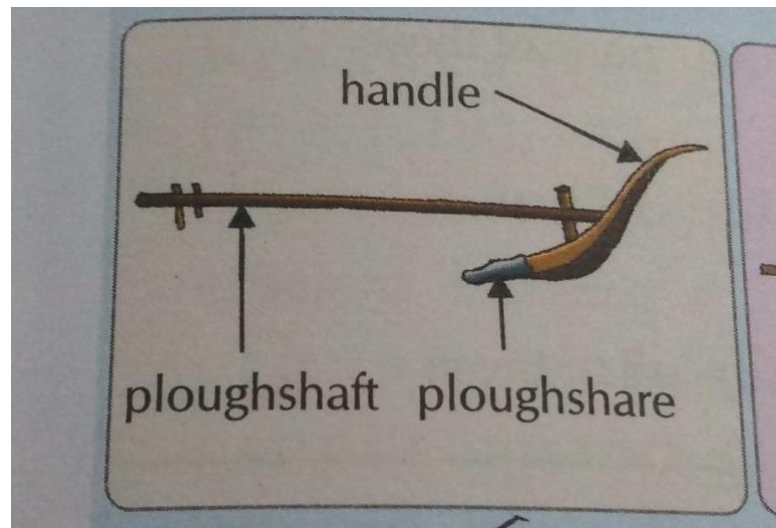
- Why do we need food?
- From where does we get food?
- Name two cereals.
- How do farmer grow crops?
- Can you recite any poem on harvesting festival?
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- **Important spellings** Sufficient, fertility, encouraged, nutrient, manure, cultivate, fertilizer, transplantation, weed, irrigation, thrashing, hybridization, emasculation.

Innovativemethods used:

- Working model of modern methods of irrigation.
- To separate good and healthy seeds from damaged ones.
- To observe the growth of seedlings with manure and fertilizer.
- Topic will explained with the help of YouTube videos.
<https://youtu.be/MYdb3NTE4nQ>
<https://youtu.be/xR2DPnyLEE0>
- Related diagrams will be drawn and explained.
- Students will make videos related to the topic and share in the class groups.

Procedure :

- (i) Topic will be introduced in the classroom by poem recitation.
- (ii) Reading and discussion of the topic will be done and important terms will be underlined.
- (iii) Content will be shown with the help of YouTube videos and related websites .



Plough

- (iv) Diagrams of various agricultural tools will be drawn .
- (v) Questions related to the topic will be discussed.
- (vi) Agricultural practices will be discussed in detail.

Participation of students :

- (i) Students will write poems on agriculture.
- (ii) Students will read the content and underline the important terms.
- (iii) Students will draw diagrams of agricultural tools.

- (iv) Students will frame questions and discussion will be done.
- (v) Students will make collage on harvesting festivals in the notebook.

Recapitulation :-

- Agricultural practices will be revised by conducting ROLE PLAY.
- Group discussion will be do on topic 'modern methods of agriculture used in India.'

Assignments :-

Q/Ans of related topic will be written in the notebook.

Related MCQ's, back exercises will be done

Related diagrams will be drawn.

Q/ans

- What are the harmful effects

Of weeds?

- Discuss the advantages of using manure.
- How do legume plants help in maintaining soil fertility?
- Name the two methods of sowing seeds.
- List any two factors on which time and frequency of irrigation depends.

- Rhizobium bacteria is found in ____.
- Urea is ____.
- ____ is an example of weedicide.

Art integration

- (i) Students will make collage on harvesting festivals in India.
- (ii) Diagrams of agricultural look will be drawn by students.
- (iii) Students will also participate in poem recitation.

Learning outcome :-

- Students will come to know about agricultural practice .
- Students will be able to define Kharif and Rabi crops.
- Students will be able to identify agricultural tools.
- They will understand difference between manure and fertilizers.
- Students will be able to critically analyse the use of fertilisers.
- Students will be able to appreciate the role of the plants in their life.
- Students will develop the skill of drawing .

Resources:

Learning science by Cordova Publication NCERT

Book

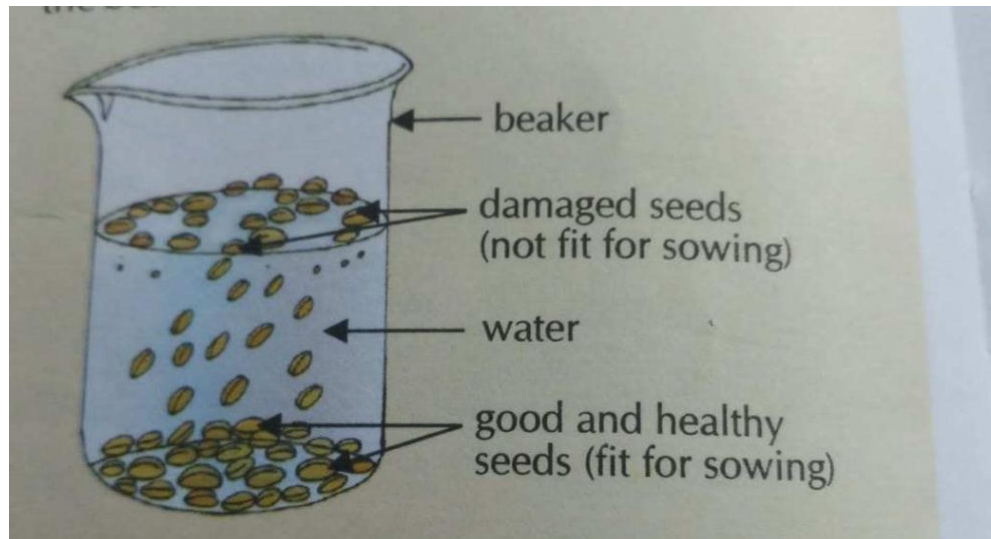
Extramarks and Cordova software

Co-Scholastic Activities :-

(i) Critical thinking, keen observation, Group discussion and communication skills will be enhanced.

(ii) Co-Scholastic Activities :-

(iii) Critical thinking, keen observation, Group discussion and communication skill will develop.



Method for separating the healthy seeds from the damaged ones



Tractor driven cultivator
Transplantation



LESSON PLAN

Month – July- August ,21

Class VIII

Subject : Science Biology

Topic : MICRO ORGANISM : FRIEND AND FOE

- **Objectives :-**
 - (i) Students will get knowledge about different types of Microorganisms.

- (ii) Students will understand about important role of micro organism in daily life
- (iii) Students become aware about Harmful Microorganisms which causes diseases in living organism.
- (iv) Students will be able to define Food Preservation and its different methods
- (v) They will understand about Nitrogen Cycle in nature.

- **Previous Knowledge Testing :-**

Following questions will be asked

- (i) Name the different types of living organisms.
- (ii) Can you see the germs which causes diseases?
- (iii) What are microorganisms?
- (iv) Where do microorganism live?

- **Important Spellings :-**

Unicellular, muticellular, bacteria, virus, algae, protozoa, antibiotics, immunity, preservation , dehydration, pasteurization, sodium benzoate, potassium, metabisulphite, assimilation, denitrification, ammonification.

- **AIDS / Innovative methods used topic :-**
- (i) Activity-To show the formation of curd takes place only in lukewarm milk
- (ii) Charts related to bacteria, virus, protozoa will be drawn.
- (iii) Activity- To observe increase in the volume of dough during the fermentation of sugar present in the dough by yeast cell.
- (iv) Content of the topic will be explained by using online resources.

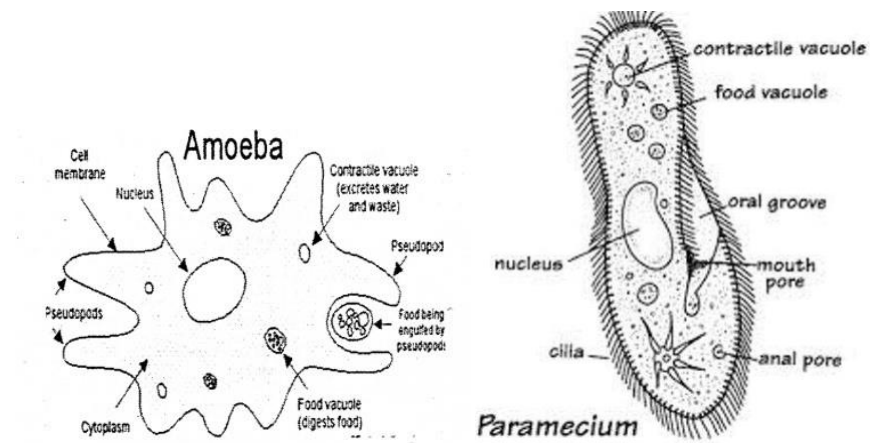
<https://youtu.be/iKg0mjkEbRk>

- **<https://youtu.be/WwW-xzOL1A4>**

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- **Procedure :-**

- (i) Introduction of topic will be given in the online class by using online resources.
- (ii) Reading and discussion of topic will be done in the class.
- (iii) Related diagrams will be drawn.
- (iv) Poem recitation on communicable diseases (v) Related question will be discussed.



- **Participation of Students :-**

- (i) Students will read the topic and discuss the topic.
- (ii) Students will draw diagrams related to the topic in the notebook.
- (iii) Student will collect pictures related to the topic and paste in the notebook.

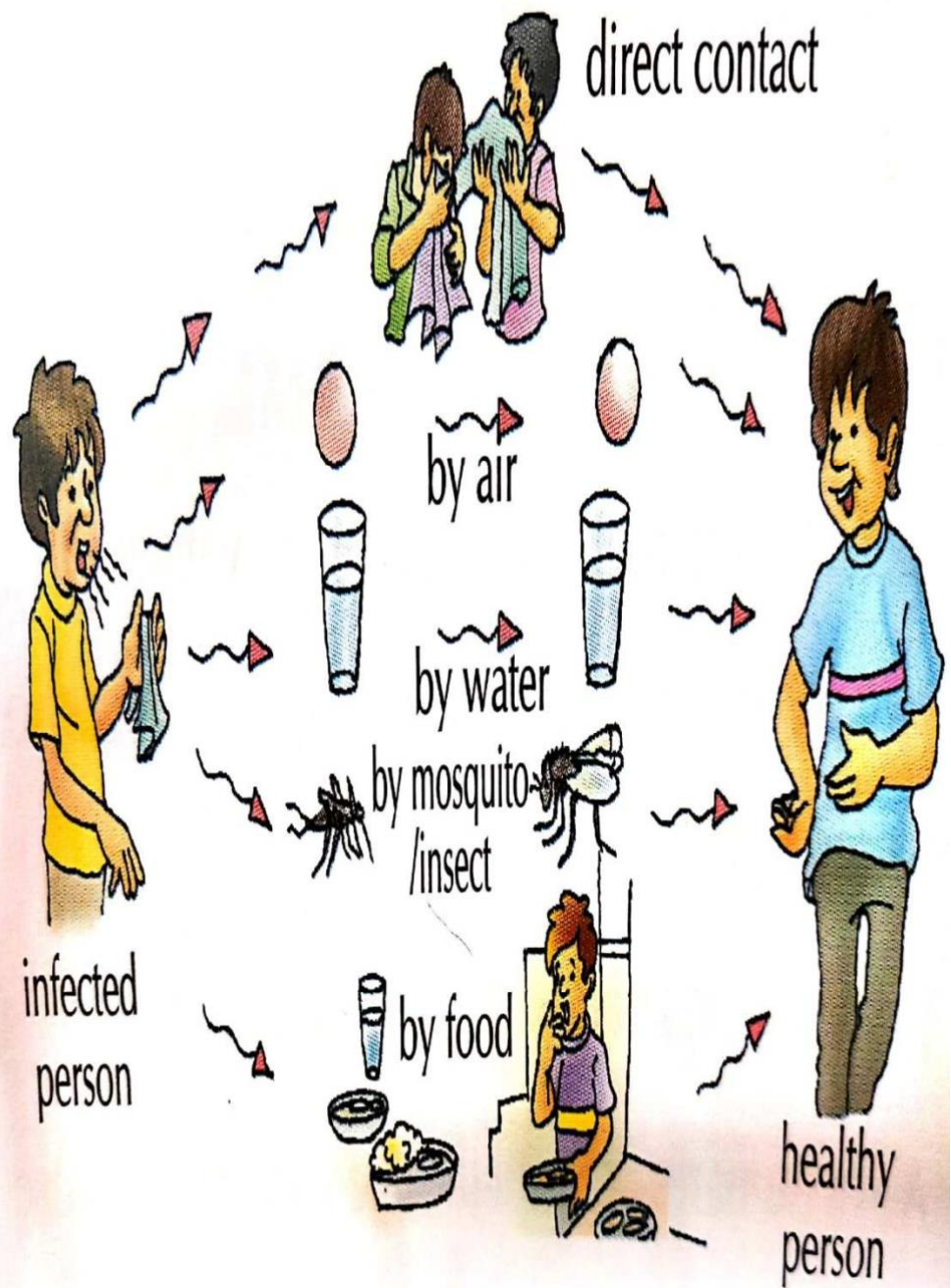


Fig. 2.10 Different modes of transmission of diseases

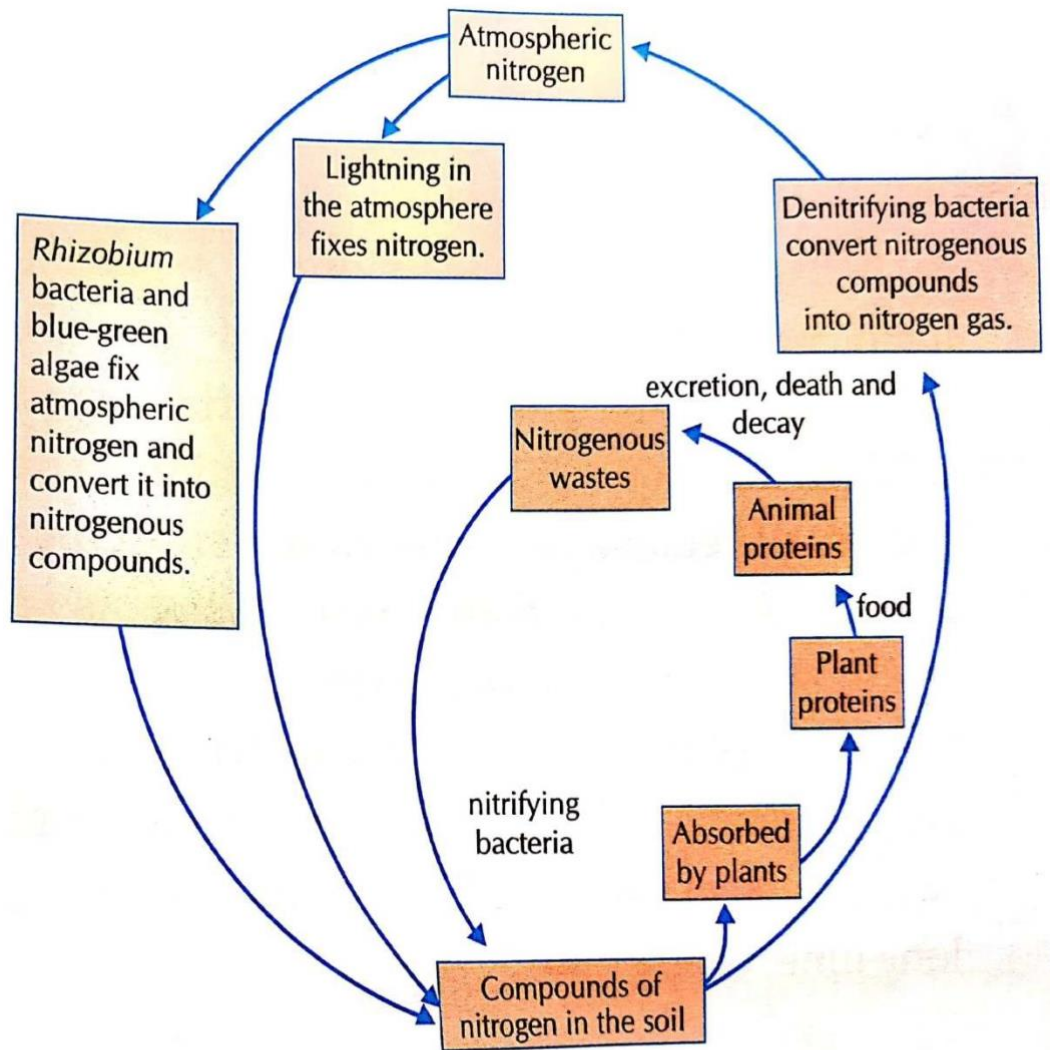


Fig. 2.15 Nitrogen cycle

Recapitulation :

Oral revision will be done by asking the following questions

1. Name the different groups of microorganism.
2. What is food preservation ?
3. Name two useful microorganism.
4. What is nitorogen fixation?

5. What are antibiotics?
6. How can we prevent communicable diseases?
7. Discuss advantages of food preservation.
8. Name any two nitrifying bacteria.

Assignments

1. Students will complete questions answers in the notebook, MCQ and back Exercises.
2. Students will paste the pictures of different microorganism in the notebook.

Art Integration:

- Chart of Nitrogen Cycle will be drawn.
- Poem recitation on communicable diseases.
- Diagram of Amoeba, Paramecium and Euglena will be drawn.

- **Learning Outcomes :-**

- (i) Students will be able to define major groups of microorganisms.
- (ii) Students will be able to identify useful microorganism and harmful microorganisms.
- (iii) Students will become aware of Different methods of food preservation
- (iv) Students will get knowledge about Nitrogen cycle.

- **Resources :-**

- (i) Learning science – By Cordova Publications
- (ii) NCERT Exemplar
- (iii) Extramarks and Cordova Software

- **Co-Scholastic Activities :-**

Critical thinking, keen observation, Group discussion and communication skill will develop.

- **Assessment**

- It will be done on the basis of Periodic test, activities activities, Oral test, class response and assignments.

LESSON PLAN (Month- August 21)

Class VIII

Subject : Science Biology

Topic : Conservation of Plants and Animals

Objectives :-

- Students will understand about importance of biodiversity.
- Students will also to define Endemic species, exotic species, endangered species, vulnerable species.
- Students will be aware about Conservation of forests and wildlife.
- Students will get knowledge about Protected areas.

Previous knowledge Testing:

Teacher will ask questions from the students .

1. What is your surrounding called?
2. Name few animals.
3. What are abiotic components of environment?
4. What do we say to the variety of plants and animals found in the nature?

Important spellings:

Biodiversity, species, habitat, desertification, poaching, exotic, endangered, environmental, flora, fauna, vulnerable, threatened, afforestation **Innovative methods used:**

- Teacher will explain the content with the help of YouTube videos and online resources.
- Teacher will explain the content from the book.
- Teacher will explain about major National parks and wildlife sanctuaries with the help of mapwork.
- Following links will be used to explain

https://youtu.be/vuWTxddqP_c

<https://youtu.be/YwiTVPWxk48>

Procedure:

- Teacher will introduce the topic with the help of online resources.
- Reading and explanation of the topic will be done in class.
- Related Q/ans will be discussed.
- MCQ will be discussed.

Participation of the students:

- Students will read and understand the content of the topic.
- Students will write related Q/ans in the notebook.
- Students will paste the related pictures in the notebook.
- Students will plant trees.
- Students will make videos related to the topic and share in the class groups.
- **ASSIGNMENTS** **AND**
RECAPITULATION:

Students will complete Q/ans in the notebook.

Students will complete MCQ and back exercises.

Students will give answers to the following questions.

1. Name any two exotic species.
2. ---- are undisturbed habitats for wildlife.
3. ----- is set up for conservation of onehorned rhinoceros.
4. ----- are biotic components.
5. What is biodiversity?
6. Why do birds migrate?

7. ---- is a National park.
8. ----- is an endangered species.
9. What is poaching?

Art Integration :-

- (i) Student will make collage on biodiversity.
- (ii) Map of India will be filled with location of major national parks and wildlife sanctuaries.
- (iii) Poem recitation on Environment conservation

1. Learning Outcomes :-

- (i) Student will become aware about importance of biodiversity.
- (ii) Students will be able to define Different type of Endemic, Exotic, Endangered spaces will be learnt by students.
- (iii) Students will become aware about conservation of forests and Wildlife.
- (iv) Students will get knowledge about different protected areas and migration.

2. Resources :-

- (i) Learning Science by Cordova Publications.
- (ii) NCERT Exemplar
- (iii) Extramarks& Cordova software.

3. Co-Scholastic Activities:-

Group discussion, awareness about environment, critical thinking and communication skill will be discussed.

Assessment:

It will be done on the basis of periodic test, activities, Oral test, class response and assignments .

LESSON PLAN (October-November)

Class VIII

Subject : Biology

Topic : Cell : Structure and Functions

Learning Objective :-

- Students will be able to define
The cell

Level of organization

Cell shape and size
Cell membrane

Cytoplasm

Nucleus

- Students will be able to differentiate between plant cell and animal cell
- Students will be able to distinguish between Prokaryotic cell and Eukaryotic cell

Previous Knowledge Testing :-

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

- (i) How are living things different from non – living things ?
- (ii) Which is the basic unit of life?

Important spellings :-

Cell membrane, cytoplasm, nucleus, mitochondria, vacuoles, endoplasmic, reticulum, ribosome, Golgi bodies, plastids, Centrosome.

AIDS / Innovative methods used topic :-

- Online resources
- Topic will be explained by using following links.

<https://youtu.be/GOCrD2OLWCK>

<https://youtu.be/zTa4j6eRV0s> Procedure

:-

- (i) Introduction of the topic will be given by using online resources.

- (ii) Reading and discussion of the topic will be done in the classroom
- (iii) Related question / answer will be discussed.
Diagrams of the followings will be drawn.
- (iv) Onion peel cell
- (v) Human cheek cell
- (vi) Plant cell
- (vii) Animal Cell

Participation of the students :-

- (i) Student will be read and discuss the topic Questions / answer will be written by the students in the notebook (ii)

Student will draw the diagrams in the notebook.

Recapitulation and Assignments:

- Students will complete Q/ans in the notebook.
- Students will draw diagram of the topic.

Students will complete MCQ and back exercises.

Following questions will be asked

- Who discovered the cell?
- ----- is the smallest cell.
- The shape of WBC is -----.
- DNA is present in-----.

Where are plastids found?

- Every cell is bound by-----.
- Bacteria and blue green algae are_____.

Art Integration :-

- (i) Shown chart of plant cell and animal cells

- (ii) Make models of plant cell and animal cell
- (iii) Role play
- (iv) Poem recitation on different shape of cell

Learning Outcomes :-

- (i) Students will come to know about cell , cell shape and cell organelles.
- (ii) Students will also develop drawing skills by drawing plant cell and animal cell.

Resources :-

- (i) Learning science – by Cordova publication
- (ii) NCERT exemplar
- (iii) Extramarks and Cordova software

Co-Scholastic activities :-

- (i) Critical thinking, keen observation, Group discussion and communication skill will develop.

Assessment: It will be done on the basis of periodic test, activities, Oral test, class response assignments.

LESSON PLAN (November-December)

Class VIII

Subject : Biology

Topic : Reproduction in Animals

Learning Objective :- Students will be able to define the following.

- (i) Modes of reproduction
- (ii) Fertilisation
- (iii) Reproduction in human beings
- (iv) Viviparous and oviparous animals
- (v) Fertilisation in human beings (vi) Test tube babies.
- (vii) Asexual reproduction.

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Previous Knowledge Testing :-

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

- (i) Differentiate between living and non living things.
- (ii) How do different organism increase their number?
- (iii) What is reproduction?

- **Important spellings :-**

Fertilisation, sperm, zygote, viviparous, oviparous, testes, scrotum, testosterone, vas deferens, urethra, oviducts, oestrogen, uterus, Amoeba, Hydra

- **AIDS / Innovative methods used to explain the topic :-**

- Online resources
- YouTube videos
- Deeksha platform
- Topic will be explained by using the following links

- <https://youtu.be/66HLbRublzl>

- **Procedure :-**

- (i) Introduction of the topic will be given in the online class.
- (ii) Reading and discussion of the topic will be done .
- (iii) Related question / answer will be discussed diagrams will be drawn and discussed
- (iv) Human ovum
- (v) Human sperm

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- (vi) Male reproductive system
- (vii) Female reproductive system

Participation of the students :-

(i) Student will be read and discuss the topic Questions / answer will be written by the students in the notebook (ii) Student will draw the diagrams in the notebook.

- **Assignments and Recapitulation:**

Students will complete Q/ans in the notebook.

Students will draw related diagrams.

Students will complete MCQ and back exercises.

Following questions will be asked by the teacher

1. What is the function of the testes?
2. Expand IVF.
3. The zygote give rise to _____.
4. Binary fission take place in _____.
5. Male gamete is also known as _____.
6. _____ produces ovum.
7. What are oviparous animals?
8. Why is reproduction important?

- **Art Integration :-**

- (i) Shown chart of male reproductive system and female reproductive system
- (ii) Group discussion

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- (iii) Role play
- (iv) Collage of viviparous animals

Learning Outcomes :-

- (i) Students will be able to define reproduction, types of reproduction.
- (ii) Students will get knowledge about male reproductive system and female reproductive system

Resources :-

- (i) Learning science – by Cordova publication
- (ii) NCERT exemplar
- (iii) Extramarks and Cordova software

Co-Scholastic activities :-

- (i) Awareness, Critical thinking, Group discussion, keen observation and communication skill will develop.

Assessment:

It will be done on the basis of periodic test, activities, Oral test, class response and assignments.

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LESSON PLAN (January-February)

Class VIII Subject : Biology

Topic : Reaching the age of adolescence

- **Learning Objective :- Students will be able to define**

- (i) Adolescence
- (ii) Puberty
- (iii) Change at puberty and adolescence
- (iv) Secondary sexual characters
- (v) Hormones
- (vi) Reproductive phase of life in human (vii) Determination of sex of a body
- (viii) Hormones other than sex hormones
- (ix) Role of hormones in completing the life cycle of insects and frogs.
- (x) Reproductive health
- (xi) AIDS

- **Previous Knowledge Testing :-**

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

- (i) Name the different stages of human life.
- (ii) What is life cycle?
- (iii) What is adolescence?

- **Important spellings :-**

Adolescence, puberty, oestrogen, progesterone, intellectual emotional maturity, hormones, menstrual cycle, menarche, menopause, personal hygiene, metamorphosis

- **AIDS / Innovative methods used topic :-**

Online resources

Ppt. and videos

YouTube links

<https://youtu.be/Q---eUEDy7w>

Procedure :-

- (i) Introduction of the topic will be by using online resources.
- (ii) Reading and discussion of the topic will be done in the classroom
- (iii) Related question / answer will be discussed.
- (iv) Table information about endocrine glands will be discussed.
- (v) Sub-topic – AIDS will be discussed and explained in detail.

• **Participation of the students :-**

- (i) Student will be read and discuss the topic
- (ii) Questions / answer will be discussed and written by the students in the notebook
- (iii) Student will complete back exercises of the topic.

Assignments and Recapitulation:

Students will complete Q/ans in the notebook.

Students will draw related charts and table.

Students will complete MCQ and back exercises

Teacher will ask questions

- 1.Name the female sex hormone.
2. What is the full form of AIDS.
3. Name sexually transmitted disease.
4. _____ produces growth hormone.
- 5._____ no. of chromosomes are present in Humanbeings.
- 6.Metamorphosis is controlled by _____.
- 7.Testes produce_____ hormone.

Art Integration :-

- (i) Poem recitation on 'say no to drugs'
- (ii) Role play on role of hormones in human body.
- (iii) Group discussion

Learning Outcomes :-

- Students will understand about adolescence, role of hormone secondary sexual characters.
- Students will get aware about reproductive health and AIDS.
- Students will get knowledge about personal hygiene, exercises and importance of balanced diet during this pandemic.
- **Resources :-**
 - (i) Learning science – by Cordova publication
 - (ii) NCERT exemplar

- (iii) Extramarks and Cordova software
- (iv) Chart making on information about endocrine glands.

- **Co-Scholastic activities :-**

- (i) Group discussion, Critical thinking, keen observation and communication skill will develop.

- Assessment:**

- It will be done on the basis of periodic test, activities, Oral test, class response and assignments.

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