LO-**Sect 1: Plant Diversity**

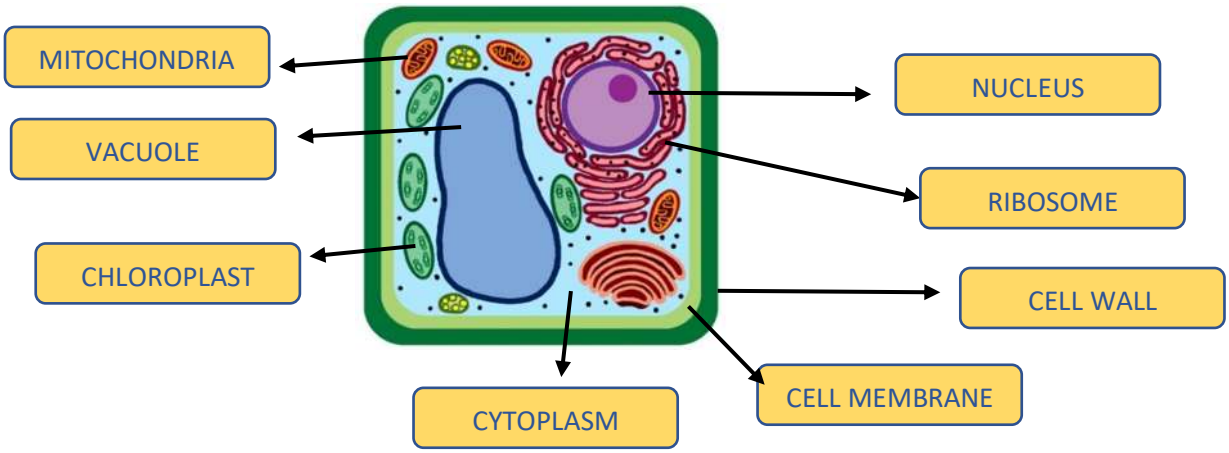
Students are expected to: - label the plant cell

- identify the structures and functions of a plant

- describe how a plant's structure ensure its survival

1. **LABEL THE PARTS OF THE PLANT CELL USING THE WORDS GIVEN IN THE WORD BANK BELOW-**

NUCLEUS, CHLOROPLAST, MITOCHONDRIA, CYTOPLASM, CELL WALL, RIBOSOME, CELL MEMBRANE, VACUOLE



2. **MATCH THE ORGANELLE WITH ITS FUNCTION**

a.	Cytoplasm	Stores genetic material and controls cell functions(e)
b.	Cell wall	It allows the selective substance to move in and out of the cell h
c.	Ribosome	It is produces energy by respiration of food f
d.	Chloroplast	It is jelly-like substance in which chemical reaction takes place-a
e.	Nucleus	It stores cell sap (water) and keeps cell turgid g
f.	Mitochondria	It gives shape and rigidity to the cell b
g.	Central Vacuole	It traps sunlight to carry out photosynthesis d
h.	Cell membrane	It is the protein factory of the cell c

3. **Name the three cell organelles that are found ONLY in plant cell**
   a. Cell wall
   b. Chloroplast
   c. Vacuole

4. **Identify, drag and place the root, its function and example in the right correct boxes**.

Name of the root	Function	Example
Tap root	Stores food	Beet and carrot
Prop root	Additional support	Corn plant
Fibrous root	Anchors the plant in soil strongly	Rice plant

5. **Drag the boxes and align correct property and example of the stem**

Hard and strong | Flexible | Mint | Tree

Woody stem	Hard and strong	Tree
Herbaceous stem	Flexible	Mint

6. **IDENTIFY THE FUNCTIONS OF THE PLANT, DRAG AND PLACE THE BOX INFRONT OF THE PART**

ROOT	Absorbs water and nutrients from soil
STEM	Transports water and food t various parts of the plant
LEAVES	Prepares food by photosynthesis
FRUIT	Contains seed

LO-**Sect 2: Plant Reproduction**

Students are expected to:

- differentiate between asexual and sexual reproduction in plants

- describe the differences between the life cycles of seedless and seed plants

1. **Write the difference between sexual and asexual reproduction with the help of word bank provided-**

   Identical to parent, One, Any gender, male, two, combination of both parents, Female, Both male and female, egg, sperm

Characteristics considered	**Sexual reproduction**		**Asexual reproduction**	
Number of Parent	two		Two	
Gender of parent	, male Female,		Any gender	
Genetic comparison with parent	combination of both parents		Identical to parent	
Name of gamete/sex cells produced	Male- sperm	Female- egg	Male-	Female-

2. Which type of reproduction should a Gardner use to use produce many plants of **same** desired (wanted) trait? Justify your answer.

   Farmers and florists often use asexual reproduction to produce multiple plants with desired traits.

3. Which type of reproduction would you suggest for getting the plants of **new/ different** traits than parents? Justify the answer.

   Sexual reproduction in plants for different traits.

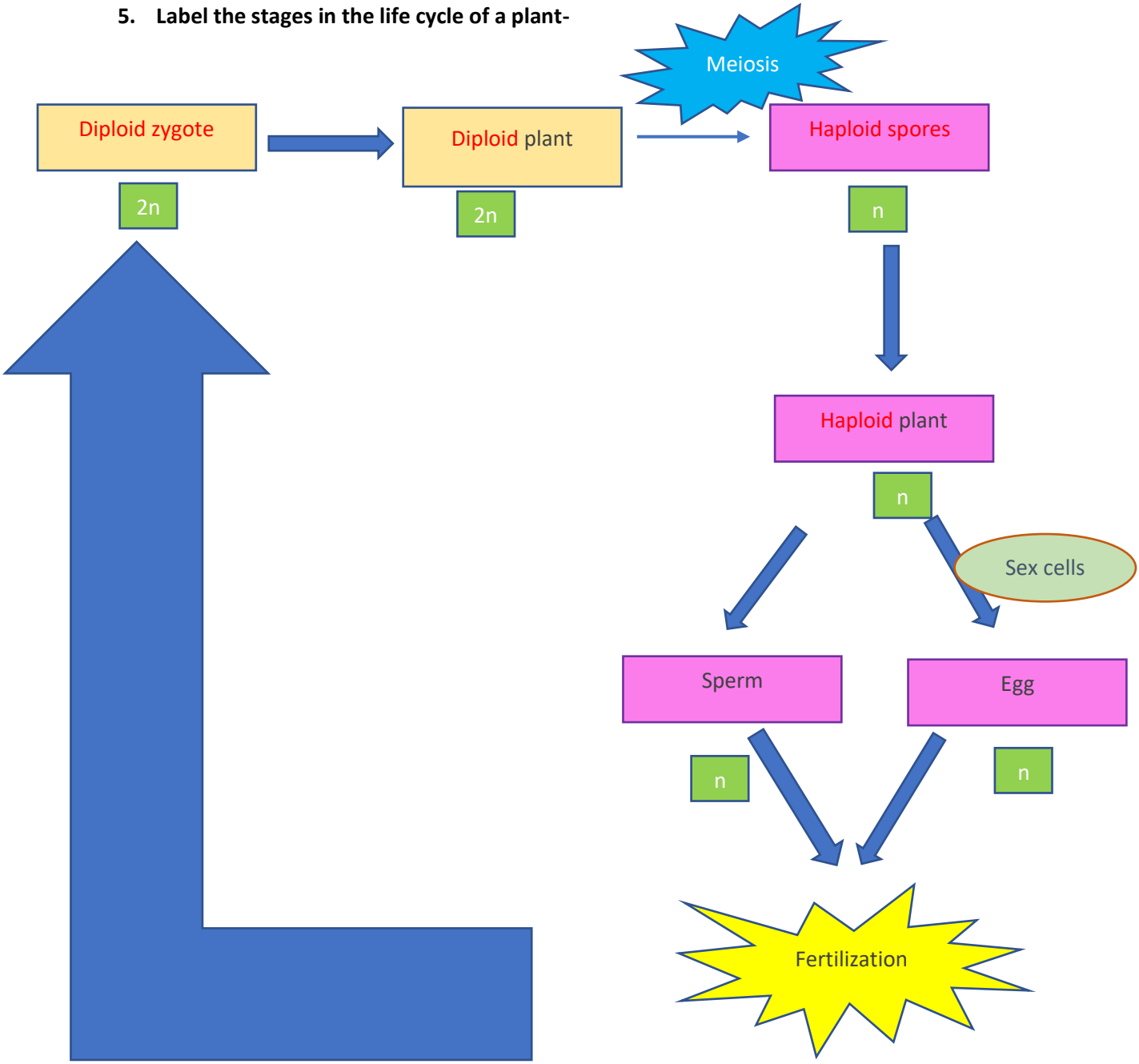
4. **From the word bank chose and write the structures written below in front of the stage of the plant cycle -**

Plant, Gametes, Spores, sperm, zygote, egg

Gametophyte stage- (n- haploid stage – sperm, egg, gametes

Sporophyte stage- (2n- diploid stage) __spores, zygote ,plant.

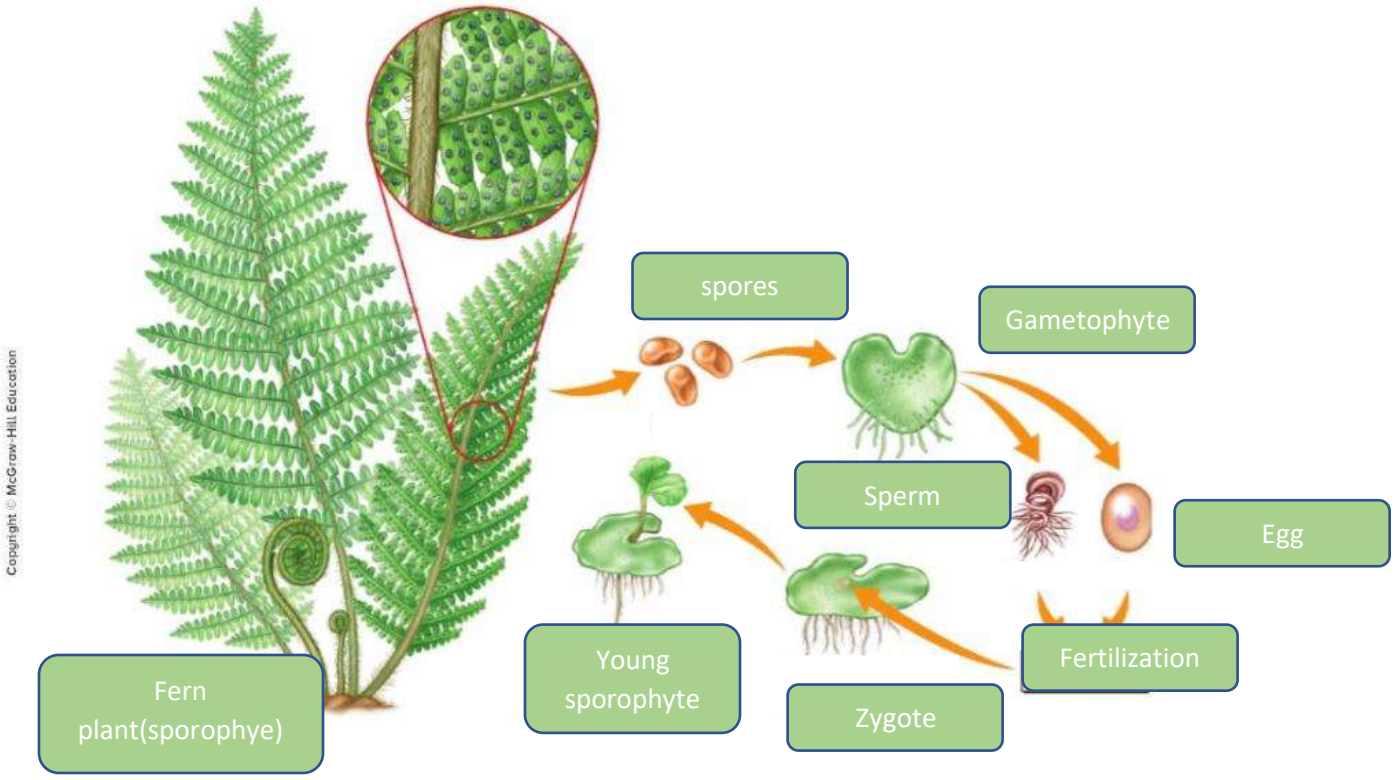
5. **Label the stages in the life cycle of a plant-**



6. **Label the FERN lifecycle using the words given in the word bank below-**

Zygote, Young sporophyte , Gametophyte , Fern leaf (sporophyte) , Sperm, Spore, Egg, Fertilization

Mark a line to separate sporophyte and gametophyte stage and label it as Gametophyte and Saprophyte.



7. **Which type of cell division forms sex cells in plants? Meiosis**
8. **Which life stage in the plant life cycle is diploid? Sporophyte**

7. Label the life cycle of Seed plants with the help of words in given in the word bank-

Seed, Tree, Fertilization, Sperm, Egg, Male cone, Female cone, Pollen, Embryo, young plant

Mark a line to separate sporophyte and gametophyte stage and label it as Gametophyte and Saprophyte.

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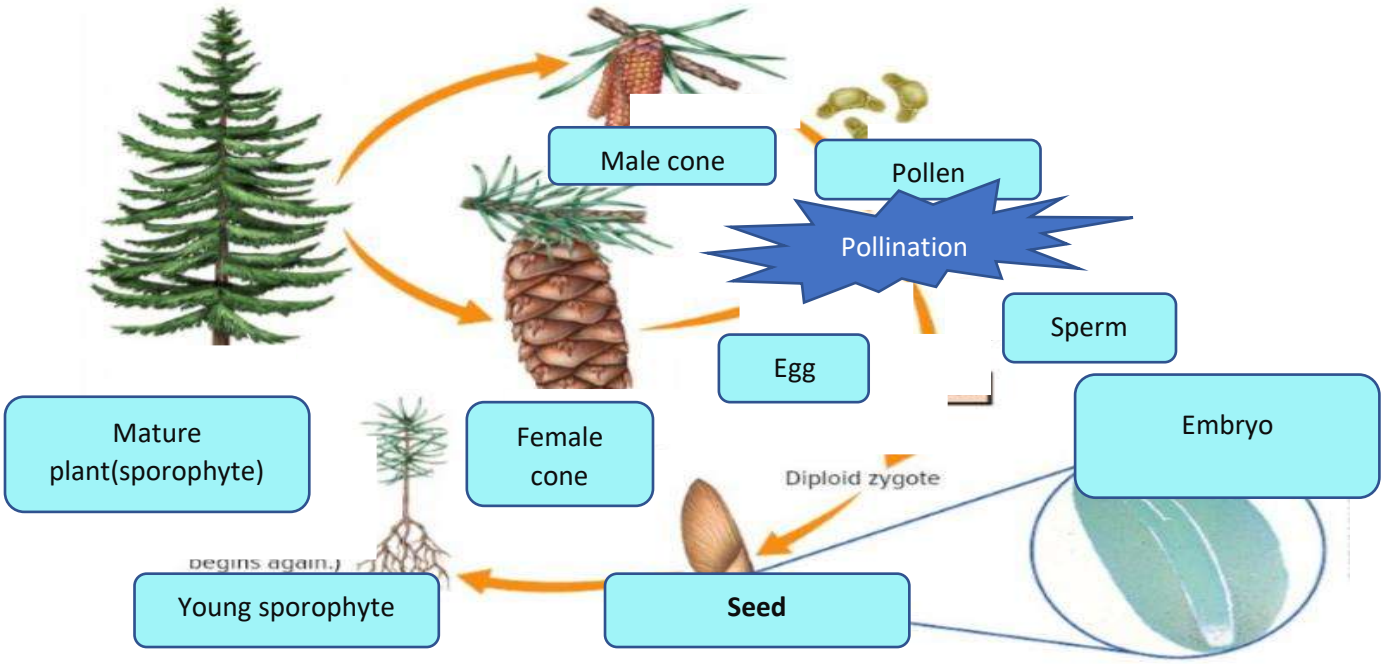
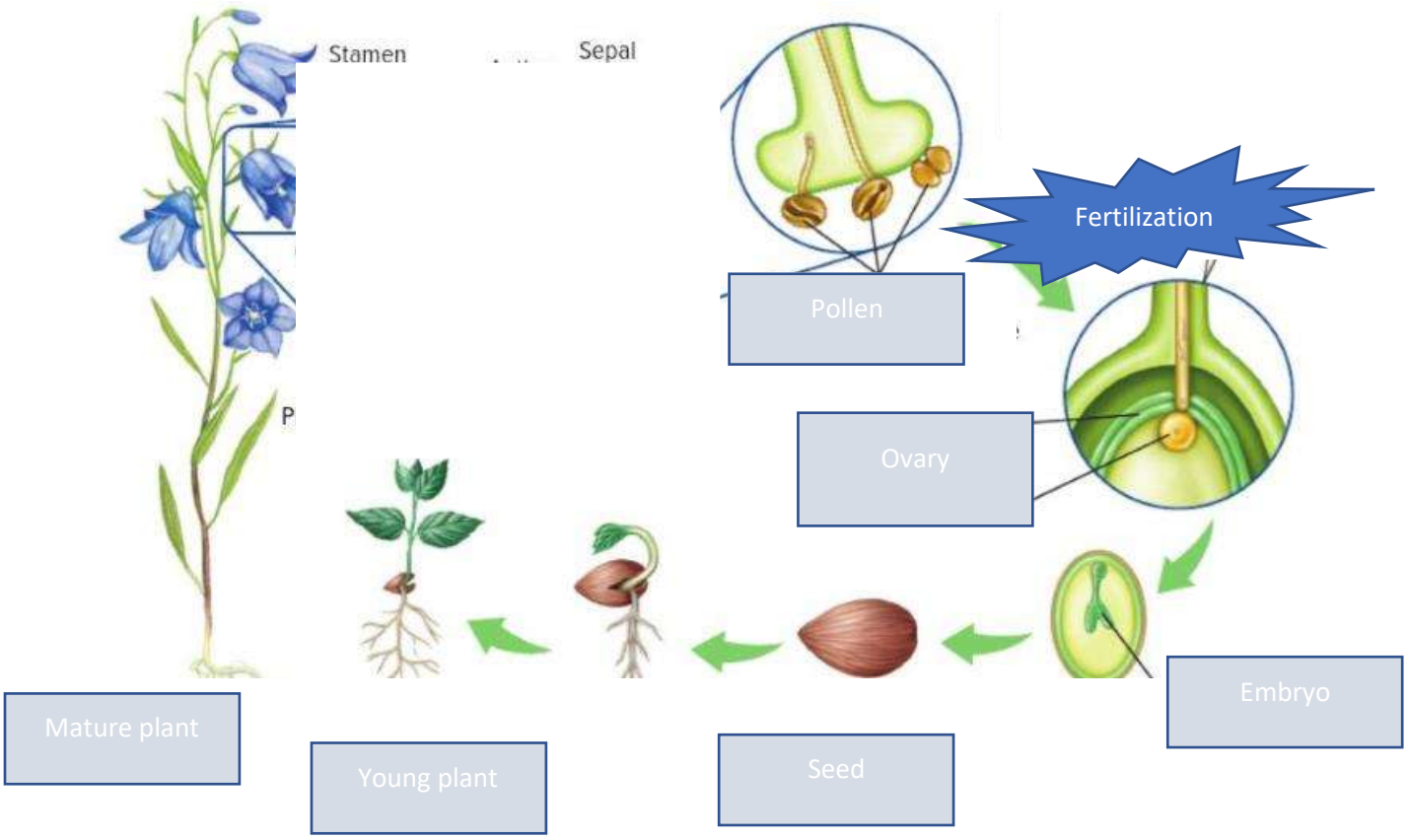


8. Label the life cycle in flowering seed plants with the help of word bank given below

Ovule, Ovary, Pollen, Seed, Young plant, Mature Plant, Fertilization, Embryo



9. Which is the correct definition of pollination?

a. Pollen lands on the to the female part of the flower of same species

b. Pollen lands on the to the female part of the flower of different species

c. Combining of pollen with ovule

d. Combining of ovule with ovary

10. Which of the following is female reproductive part of the flower?

a. Pistil
b. Stamen
c. Sepal
d. Petal

11. **Tick the male reproductive part of the flower**.
    a. Petal
    b. Pistil
    c. Ovary
    d. Stamen
12. **In a seed plant which part of the following stores the egg?**
    a. Anther
    b. Style
    c. Ovary
    d. Ovule
13. **In a seed plant which part contains the sperm?**
    a. Anther
    b. Pollen
    c. Stigma
    d. Pistil
14. **What is formed when an egg combines with the sperm?**
    a. Baby
    b. Zygote
    c. Young plant
    d. Gametophyte
15. **Which structure marks the beginning of sporophyte stage in a plant cycle?**
    a. Young plant
    b. Zygote
    c. Mature plant
    d. Gametes
16. **Select the correct equation of photosynthesis**

$6CO_2 + 6H_2O + Energy \longrightarrow C_6H_{12}O_6 + 6O_2$

$CO_2 + O_2 \longrightarrow C_6H_{12}O_6 + H_2O + ENERGY$

$CO_2 + C_6H_{12}O_6 \longrightarrow H_2O + O_2 + ENERGY$

$CO_2 + 12H_2O + ENERGY \longrightarrow C_6H_{12}O_6 + O_2$

10. **Select the correct equation of respiration**

$6CO_2 + 6H_2O \text{----------} \rightarrow C_6H_{12}O_6 + 6O_2 + \text{ENERGY}$

$C_6H_{12}O_6 + 6O_2 \text{-----} \rightarrow 6CO_2 + 6H_2O + \text{ENERGY}$

$C_6H_{12}O_6 + 6O_2 + \text{ENERGY} \text{-----} \rightarrow 6CO_2 + 6H_2O$

$CO_2 + 12H_2O + \text{ENERGY} \text{----------} \rightarrow C_6H_{12}O_6 + O_2$