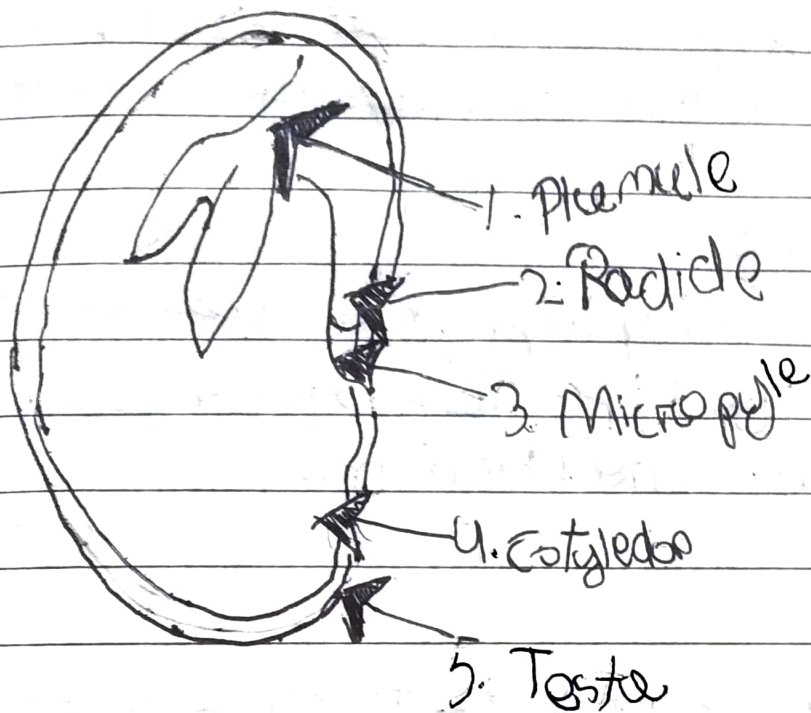


Ch 2 The flower (Worksheet)

- 1) Given below is a longitudinal section of a bean seed. Label the parts marked 1 to 5 and write their functions.



- 1) Plumule: It develops into a shoot
2) Radicle: It develops into a root
3) Micropyle: It is a small hole that allows the water to pass through.
4) Cotyledon: It contains food for the seedling.
5) Testa: It is a hard outer covering that protects seed from mechanical injury.

2) A seed which shows hypogeal germination. ~~Rice~~ Rice

b) A monocot seed. Maize

c) A dicot seed. Pea

d) A seed which shows epigeal germination. Pea

3.

a. Radicle and plumule.

The embryo consists of of radicle that develops into a ~~shoot~~ ~~and~~ ~~a~~ plumule that develops into a shoot.

b. Hilum and micropyle.

The micropyle is a small opening that allows water to pass through and to the seedling. The inner concave of the seed has a scar called hilum.

c. Testa and tegmen.

The exposed outer part is the testa and the inner part is tegmen.

4) Give two functions of fruits.

• They protect seeds from unfavorable environmental conditions.

• It stores food and water.

5) a) Radicle — Shoot

b) Plumule — Stereoleed material

c) Cotyledon — Root

d) Testa — Absorb water needed for germination

e) Micropyle — Protection of seed

Q Radicle emerges out of the seed earlier than plumule. What one advantage is served by this?

A: As the radicle emerges out of the seed earlier than plumule and develops into a root it helps in providing water and minerals for further growth of the ~~stem~~ plumule.

7) Some seeds have no cotyledons. [✓]

b) Warmth is necessary for ~~the~~ germination of seeds. [✓]

c) All seeds have two cotyledons. [X]

d) Oxygen is necessary for the germination of seeds. [✓]

8) a) Radicle: Develops into a root.

b) Cotyledon: Stores food and water

c) Endosperm: Stores food in the form of starch

d) Micropyle: Absorb water needed for germination

9) a) Oxygen, suitable temperature and water.

b) a) Roots: Radicle

b) Leaves: Plumule

10



1st stage
(complete
seed)



2nd stage
(radicle
emerged)



3rd stage
(plumule
emerged)