

WORKSHEET NO. 1  
CLASS 8 (A,B,C,D,E) 2020-21  
SUBJECT-BIOLOGY

Parents are expected to ensure that the child reads a scientific description of the 'Transport System in plants' from a book or on internet.

CHAPTER 1 - TRANSPORT OF FOOD AND MINERALS IN PLANTS

TOPIC - TRANSPORT SYSTEM IN PLANTS

All organisms have a way of transporting substances like nutrients, water and oxygen from one part of the body to another. The transport system in plants is also called vascular system. They are of two types : Xylem and Phloem

1. XYLEM

It conducts water and minerals. It is composed of four types of cells:

- (i) Xylem vessels are thick walled, non living, long, tubular cells.
- (ii) Xylem tracheids are nonliving, elongated cells with pointed ends. Along with xylem vessels, tracheids also conduct water and minerals
- (iii) Xylem fibres are thick walled, non living cells and provide mechanical support.
- (iv) Xylem parenchyma are the only living cells. They perform storage function.

2. Phloem

It transports organic food manufactured by the leaves. It is composed of four types of cells:

- (i) Phloem vessels are called sieve tubes. They are cylindrical, thin walled, living cells arranged end to end. They transport food synthesized in the mesophyll cells of leaves to all non green parts of plants
- (ii) Companion cells help sieve tubes in loading and unloading.
- (iii) Phloem fibres provide mechanical strength.
- (iv) Phloem parenchyma stores food.

Transport system in plants has two main functions:

- 1. Transport of water and minerals absorbed by roots to different parts of plant.
- 2. Translocation of food from source to sink, i.e., from leaves to all other parts of plant.

ANSWER THE FOLLOWING QUESTIONS

Q1. Fill in the blanks.

- (i) Transport system in plants is formed of \_ tissue.
- (ii) \_ is the water conducting tissue in plants.
- (iii) \_\_\_ are the only living cells present in xylem.
- (iv) \_ present in phloem provide mechanical strength.
- (v) The tissue responsible for translocation of food is \_.

Q2. Give the functions of the following-

- (i) Companion cells
- (ii) Phloem parenchyma
- (iii) Phloem vessels

Q3. Name the different types of cells in Xylem and give their functions.

Q4. Give two functions of the transport system in plants.

The End.