



SUBJECT: BIOLOGY

CHAPTER: 1

CHAPTER NAME: TRANSPORTATION IN PLANTS.

PERIOD-2

CHANGING YOUR TOMORROW

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Water absorption by the roots.

- water is very crucial for plants for different metabolic activities.
- One of the most significant functions of the roots is to absorb water and minerals from the soil.
- Terrestrial plants obtain their water supply from the soil
- The root system of plants consists of main root, which gives out lateral roots
- The lateral roots bear a large number of fine outgrowths called root hairs.

Root hair

- The root hair contains a cell wall made of an outer layer of pectin and an inner layer of cellulose. Functions of Root Hair:
 - Increase the surface area of absorption of the root.
 - Allows the entry of water due to imbibition and passive diffusion.
 - The cell membrane is selectively permeable in nature and restricts the movement of molecules into and from the root hair.



- <https://www.youtube.com/watch?v=Eer3VuC4M8U>

Specialty of root hairs.

- Ability of roots to absorb water depends on three factors:
 - Large surface area,
 - Root hairs with cell sap at higher concentration than soil water.
 - Thin-walled root hairs.

semi-permeable membrane

- A membrane which allows the entry of some substances but does not allow other substances to move across is called semi-permeable. Example: root hairs.

Home Assignment.

- Exercise Question No-8 and Long Answer Question No-1

THANKING YOU
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