

Homework

1q How do the shoot and roots of a plant respond to the pull of earth's gravity?

ans- * The plant part responds to gravity by either moving towards or away from earth.

* The shoot of a ^{Plant} responds to the pull of gravity by bending upwards ~~away from~~ away from earth (negative geotropism).

* The roots of a plant respond to the pull of gravity by bending downwards towards earth (positive geotropism).

2q Describe an activity to illustrate the phenomenon of phototropism and explain. Why does this occur?

ans- (D) Activity

* Aim → To illustrate the phenomenon of phototropism

* Materials Required →

→ Two potted plants

Procedure

- Take two potted plants and place one plant in the open so that it receives the sunlight coming from above.
- Place the other plant in a room near the window in such a way that it receives sunlight from one side only i.e. through the window.
- After some time observe both the plants.

* Observation

- The first plant has grown up straight towards light.
- The second plant has grown by bending towards the light.

* Conclusion

- Thus, the stem of the plant responds to light by showing growth movement towards light (positive phototropism).

This growth movement of the plant part (stem) is caused by the action of auxin hormone. The auxin hormone is synthesized by the meristematic tissue at the top of the

stem (or top of the shoot). The part of plant where the concentration of auxin hormone is more grows faster.