

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

• The shoot part of the plant shows negative geotropism by growing in the opposite direction of the gravity.

• The root part of the plant shows positive geotropism by growing in the same direction of the gravity.

2) Describe an activity to illustrate the phenomenon of phototropism and

exp^lain why does this occur

Phototropism is the growth which response to a light stimulus. The cells on the plants that are furthest from the light have a chemical called auxin that reacts when phototropism occurs.

Activity -

- i) Fill a conical flask with water
- ii) Cover the neck of the flask with a wire mesh.
- iii) Keep two or three freshly germinated bean seeds on the wire mesh.
- iv) Take a cardboard box which is open from one side.
- v) Keep the flask in the box in such a manner that the open side of the box faces light coming from a window.
- vi) After two or three days, you will notice that the shoots bend towards light.

and roots away from light

vii) Now turn the flask so that the shoots are away from light, and the roots towards the light.

viii) Leave it undisturbed in this condition for a few days