

IGCSE Biology

YR 10

Chemical Coordination

In Plants

Name _____

How do plants respond to the environment?

1. The three different types of plant responses to the environment are

1. _____

2. _____

3. _____

2. What is a tropism?

3. What are the tropism stimuli that act on a plant?

1. _____

2. _____

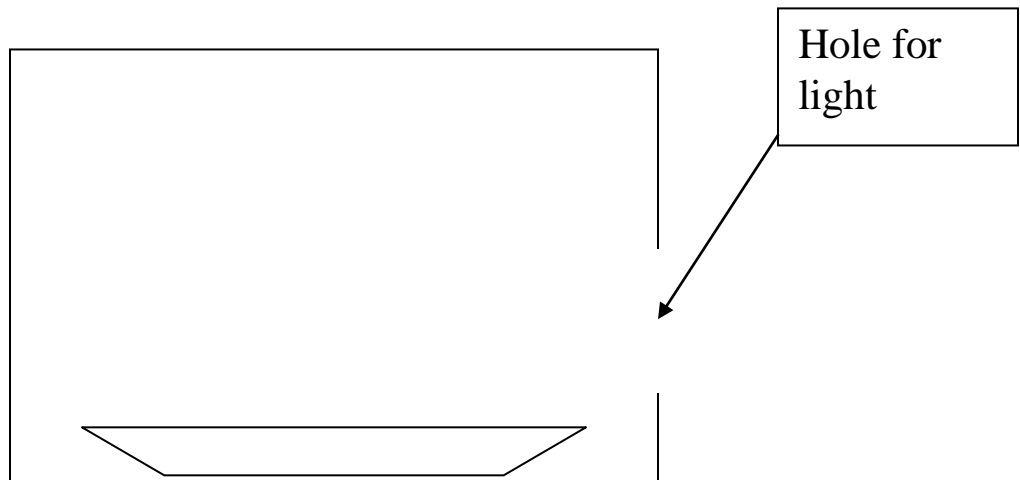
4. Positive tropism is plant growth _____ the stimulus and negative tropism plant growth _____ the stimulus

5. Why do plants need to grow towards the light?

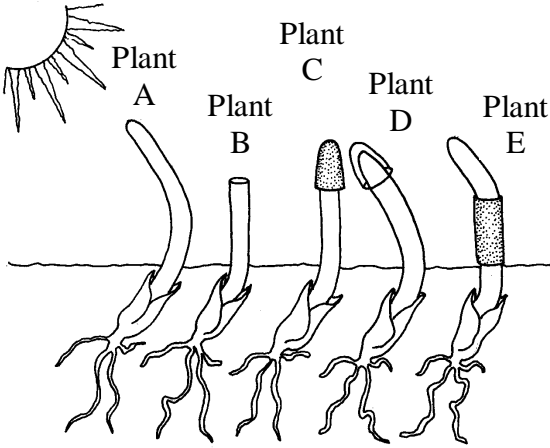
6. Stems exhibit _____ phototropism while most roots exhibit _____ phototropism. Roots exhibit _____ geotropism while stems and leaves exhibit _____ geotropism

7. Some plants are hydrotropism. What does this mean?

8. If we grew seeds in a box with a hole in it so light only entered in one direction the plants would look like this:



9. Look at this picture. Use it to decide which part of the plant is sensitive to light



10. What is the correct term for plants growing towards the light?

Plant Hormones

Here is a listing of the various types of plant hormones. Describe their function

a. Auxin _____

b. Cytokinin _____

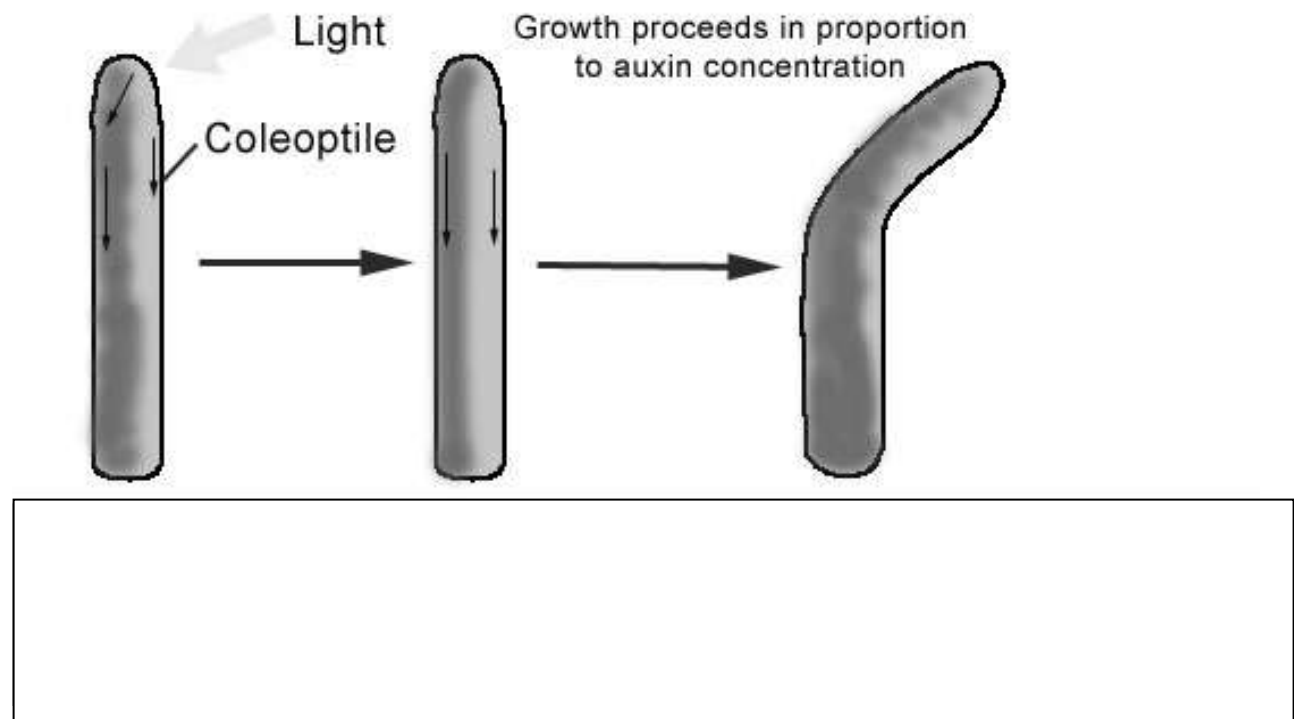
c. Gibberillin _____

d. Abscisic acid _____

e. Ethylene _____

What group of chemicals does auxin belong to? _____

Complete the diagrams of "Phototropism and auxin"



Photoperiodism

1. Describe photoperiodism

2. What are the different types of photoperiodis?

3. Give an example for each type.

4. What is the purpose of a clinostats?

5. Write your answer for Experiment 14 on pg 140 here.

20. Write your answers for Experiment 15 on pg 141 here.