



Name

Period

Date

SECTION
22.5

PLANT HORMONES AND RESPONSES

Study Guide

KEY CONCEPT

Plant hormones guide plant growth and development.

VOCABULARY

hormone	auxin	gravitropism
gibberellin	tropism	photoperiodism
ethylene	phototropism	
cytokinin	thigmotropism	

MAIN IDEA: Plant hormones regulate plant functions.

1. What is a hormone?

2. Give two reasons why plant hormones may be released.

Take notes about the four main groups of plant hormones in the chart below.

Plant Hormone	Processes Involved In
3. gibberellins	
4. ethylene	
5. cytokinins	
6. auxins	

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CHAPTER 22
Plant Growth, Reproduction

Section 22.5 STUDY GUIDE CONTINUED

MAIN IDEA: Plants can respond to light, touch, gravity, and seasonal changes.

Match the term from the word box with the correct description.

phototropism	thigmotropism	gravitropism	rapid response	photoperiodism
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- _____ 7. Growth in response to being touched
- _____ 8. Response to being touched not involving growth
- _____ 9. Growth in response to gravity
- _____ 10. Response to changing lengths of day and night
- _____ 11. Growth in response to light

Vocabulary Check

12. The prefixes *photo-*, *thigmo-*, and *gravi-* refer to light, touch, and gravity, and the Greek word *trope* means “a turning.” How do these word parts relate to the meanings of *phototropism*, *thigmotropism*, and *gravitropism*?

13. In the space provided below, illustrate the process of phototropism as it occurs at the cellular level. Use Figure 22.16 as a reference. Be sure to label areas of high auxin concentration.