

STAAR EOC Biology - Study Resources and Practice Questions

Plant Systems

TEKS

- B.10.B - Describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in plants.
- B.9.B - Compare the reactants and products of photosynthesis and cellular respiration in terms of energy and matter.

Textbook Chapters

- Chapter 20, 21, 22

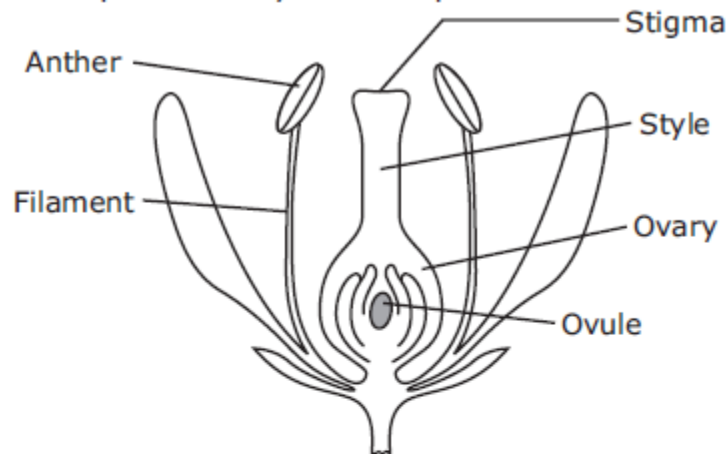
Videos

- Watch the following 3 Crash Course Biology videos on the Khan Academy website:
“Nonvascular Plants”; “Vascular Plants”; “Plant Reproduction”
 - <https://www.khanacademy.org/partner-content/crash-course1/partner-topic-crash-course-bio-ecology/crash-course-biology/v/crash-course-biology-135>

Other Resources

- Wikipedia article: Plants
 - <https://en.wikipedia.org/wiki/Plant>
 - Use links to explore related topics.
- Biology4Kids website: Plants
 - http://www.biology4kids.com/files/plants_main.html
 - Be sure to hit “next page on Plants.”
- Missouri Botanical Garden: Biology of Plants
 - <http://www.mbgnet.net/bioplants/>

- 7 The outermost layer of plant stems in dicotyledons consists of epidermal cells and guard cells that surround openings called stomata. The epidermal cells are usually covered with a waterproof layer that provides protection from injury and water loss. The stomata allow gas exchange. The epidermal cells and stomata have functions similar to those of which two human body systems?
- A Skeletal and respiratory
 B Cardiovascular and skeletal
 C Integumentary and respiratory
 D Cardiovascular and integumentary
- 51 Changes in water pressure within guard cells cause the cells to open or close the stoma. This response helps the plant maintain homeostasis by —
- A stabilizing the plant's temperature through the evaporation of water
 B regulating the amount of water the plant loses during transpiration
 C allowing oxygen needed for photosynthesis to enter the plant
 D enabling the plant to release more carbon dioxide at night for photosynthesis
- 53 The diagram shows the reproductive system of a plant.



Which of the following best describes the interaction that occurs between a plant's reproductive parts during self-fertilization?

- A Pollen is released from the anther and is transferred to the stigma. A pollen tube forms and grows through the style. The pollen tube reaches the filament, where the sperm fertilizes the egg.
- B Pollen moves from the ovule up through the style and is released from the stigma. The pollen is transferred to the anther, where the sperm fertilizes the egg.
- C Pollen is released from the anther and is transferred to the stigma. A pollen tube forms and grows through the style. The pollen tube reaches an ovule within the ovary, where the sperm fertilizes the egg.
- D Pollen is released from the stigma and is transferred to the anther. A pollen tube grows down from the anther through the filament and fuses with the ovule, where the sperm fertilizes the egg.