

Section 24–2 Seed Development and Germination (pages 618–621)



TEKS FOCUS: 13A Significance of structural adaptations of plants to their environments; 13B Methods of development of plants; **TEKS SUPPORT:** 7B Natural selection in adaptation

This section explains how seeds develop and are dispersed. It also describes factors that influence the dormancy and germination of seeds.

Seed and Fruit Development (page 618)

1. What is a fruit? _____
2. What happens as angiosperm seeds mature after fertilization is complete?

3. The outer layer of the seed that protects the embryo and its food supply is called a(an) _____.
4. Is the following sentence true or false? Both cucumbers and tomatoes are fruits.

5. Circle the letter of each sentence that is true about fruits.
 - a. As seeds mature, the ovary walls thicken to form a fruit.
 - b. Fruits can carry one seed or several seeds.
 - c. A fruit is a ripened ovary that encloses a seed or seeds.
 - d. The inner wall of the ovary never touches the seed.

Seed Dispersal (page 619)

6. Why are seeds that are dispersed by animals typically contained in fleshy, nutritious fruits? _____
7. Circle the letter of why seeds dispersed by animals are covered with tough coatings.
 - a. The seeds need to be able to float on water.
 - b. The coatings enable the seeds to pass through an animal unharmed.
 - c. The seeds need to be digested by the animal that eats them.
 - d. The coatings prevent the seeds from being eaten by animals.
8. Why are seeds dispersed by wind or water typically lightweight?

9. How are the seeds of ash and maple trees dispersed long distances from the parent plants? _____

10. What adaptation does a coconut seed have that helps its dispersal? _____

Seed Dormancy (page 620)

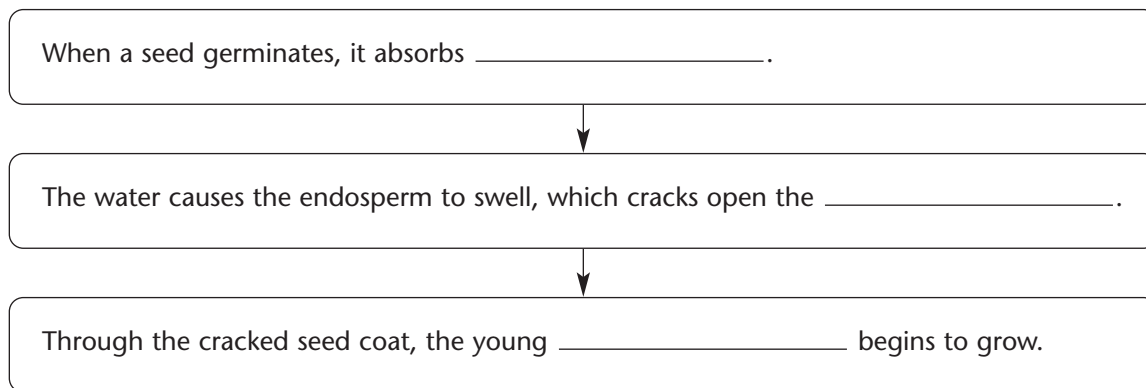
11. What is dormancy? _____

12. What are two environmental factors that can cause a seed to end dormancy and germinate?
a. _____ b. _____
13. What are two purposes served by seed dormancy?
a. _____
b. _____
14. Is the following sentence true or false? Some pine tree seeds remain dormant until the high temperatures generated by a forest fire cause cones to open and release the seeds.

Seed Germination (page 621)

15. What is seed germination? _____

16. Complete the flowchart about seed germination.



17. Circle the letter of each sentence that is true about seed germination.
- a. In some dicots, the cotyledons protect the first foliage leaves.
 - b. In most monocots, the cotyledon remains within the seed.
 - c. In some dicots, the cotyledons remain below the soil and provide food for the seedling.
 - d. In most monocots, the cotyledon emerges above ground to protect the leaves.