ANSWER KEY

SECTION: REPRODUCTION OF FLOWERING PLANTS

1. pollination
2. fertilization
3. B
4. C
5. A
6. D
7. C
8. B
9. D
10. A
11. ovule
12. ovary
13. dormant
14. water, air, and warmth
15. germination
16. B
17. C
18. A

SECTION: PLANT RESPONSES TO THE ENVIRONMENT

1. positive tropism
2. negative tropism
3. tropism
4. B
5. A
6. B
7. A
8. short-day plants
9. long-day plants
10. B
11. A
12. change color
13. breaks down
14. show through

Vocabulary and Section Summary

SECTION: PHOTOSYNTHESIS

1. photosynthesis: the process by which plants, algae, and some bacteria use sunlight, carbon dioxide, and water to make food
2. chlorophyll: a green pigment that captures light energy for photosynthesis
3. cellular respiration: the process by which cells use oxygen to produce energy from food
4. stoma: one of many openings in a leaf or a stem of a plant that enable gas exchange to occur (plural, stomata)
5. transpiration: the process by which plants release water vapor into the air through stomata

SECTION: REPRODUCTION OF FLOWERING PLANTS

1. dormant: describes the inactive state of a seed or other plant part when conditions are unfavorable to growth

SECTION: PLANT RESPONSES TO THE ENVIRONMENT

1. tropism: the growth of all or part of an organism in response to an external stimulus, such as light

Section Review

SECTION: PHOTOSYNTHESIS

1. Sample answer: Photosynthesis is the process by which plants make food. Chlorophyll is a green pigment that captures energy from sunlight. Cellular respiration is the process by which energy is released from food.
2. D
3. Sample answer: Photosynthesis produces glucose and oxygen. Oxygen is used during cellular respiration to release energy from glucose and other food molecules.
4. Sample answer: Carbon dioxide enters the leaf through stomata. Oxygen and water exit the leaf through the stomata.
5. 72 carbon dioxide molecules and 72 oxygen molecules
   ($6 \times 12 = 72$ molecules)
6. Sample answer: Photosynthetic organisms form the base of nearly all food chains on Earth. They also produce the oxygen needed for cellular respiration. Without photosynthetic organisms, many animals would starve. Eventually, there may not be any oxygen for cellular respiration.
7. Sample answer: Chlorophyll reflects many wavelengths of green light. So, the chlorophyll would not capture much energy from the light of a green filter.