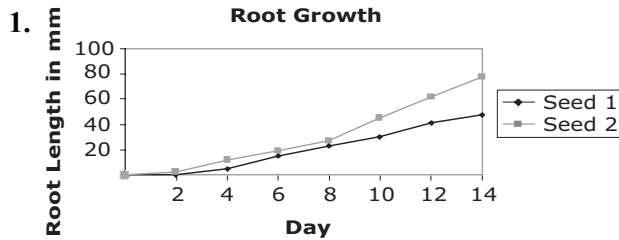


BLM Answers

BLM 12-1 Root Growth



- Approximately 20 mm. Encourage students to estimate the difference in length between Days 6 and 8.
- Seed 2. Answers may vary. For example, The root of Seed 2 is growing very quickly. Plants with long roots are more able to absorb water and nutrients, and grow into a strong plant.

BLM 12-2 Making Food

- The covered parts of leaves turned yellow or brown.
 - The plant would die. Explanations may vary. For example: Without sunlight, the leaves cannot produce food for the plant.
- Answers may vary. For example: There may not be enough sunlight for plants in deep shade to make food.

BLM 12-3 Compare Asexual and Sexual Reproduction

Look for 1 similarity and 2 differences. For example:

Asexual Differences: 1 parent; offspring are clones; new plants grow from roots, stems, or leaves

Similarity: produce offspring

Sexual Differences: 2 parents; offspring different from parents; new plants grow from seeds

Paragraphs will vary. Students should mention two differences for each of asexual and sexual reproduction. Example answers are in italics.

Both asexual and sexual reproduction results in new plants. However, there are differences between asexual and sexual reproduction. Asexual reproduction *involves one parent producing identical plants. Each plant is a clone of its parent. New plants are produced from roots, stems, and leaves.*

Sexual reproduction *involves two parents, a male and a female, producing plants that are different from*

each other and from the parents. New plants are produced from seeds.

BLM 12-4 Plant Systems Word Puzzle

- e) gravity
- k) response
- c) glucose
- g) photosynthesis
- j) respiration
- p) stomata
- n) starch
- a) anther
- i) pollen
- m) stamen
- o) stigma
- f) ovary
- h) pistil
- b) asexual reproduction

BLM 12-5 Chapter 12 Practice Test

- b) stamen
- e) stigma
- a) eggs
- f) pollen
- c) ovary
- d) pistil
- g) anther
- Sketches will vary but should show how each plant part responds to the environment. The labels should clarify each response. For example:
 - Leaf response to touch — Sketch shows a leaf snapping shut on an insect.
 - Root response to gravity — Sketch shows roots growing down.
 - Stem response to light — Sketch shows stem growing upward and toward light.
- b) respiration
- b) photosynthesis
- d) plants take in oxygen and release carbon dioxide and water
- b) plants take in carbon dioxide and release glucose and oxygen
- Xylem tubes carry water and nutrients from the roots to the stems and leaves.
 - Phloem tubes carry food made in the leaves to all other parts of the leaves.
- Wording may vary. Answers are in italics.
 - seed*; grows into new plant

- b) leaf; *carries out photosynthesis*
 - c) root; holds the plant and takes in water
 - d) fruit; *grows around seeds*
15. Look for 1 similarity and 2 differences. For example:
Asexual Differences: 1 parent; offspring are clones; new plants grow from roots, stems, or leaves
Similarity: produce offspring
Sexual Differences: 2 parents; offspring different from parents; new plants grow from seeds
- BLM 12-6 Chapter 12 Test**
- 1. b) ovary
 - 2. f) stigma
 - 3. d) eggs
 - 4. e) pistil
 - 5. c) anther
 - 6. g) stamen
 - 7. a) pollen
 - 8. Sketches will vary but should show how each plant part responds to the environment. Labels should clarify each response. For example:
 - a) Stem response to light — Sketch shows stem growing upward and toward light.
 - b) Root response to gravity — Sketch shows roots growing down.
 - c) Leaf response to touch — Sketch shows a leaf snapping shut on an insect.
 - 9. c) photosynthesis
 - 10. a) respiration
 - 11. a) plants take in carbon dioxide and release oxygen and glucose
 - 12. b) plants take in oxygen and release carbon dioxide and water
 - 13. a) Phloem tubes carry food made in the leaves to all other parts of the leaves.
 b) Xylem tubes carry water and nutrients from the roots to the stems and leaves.
 - 14. Wording may vary. Answers are in italics.
 - a) fruit; *grows around seeds*
 - b) root; *holds the plant and takes in water*
 - c) *flower*; has male and female sex organs
 - d) *leaf*; carries out photosynthesis
 - 15. Look for 1 similarity and 2 differences. For example:
Asexual Differences: 1 parent; offspring are clones; new plants grow from roots, stems, or leaves
Similarity: produce offspring
Sexual Differences: 2 parents; offspring different from parents; new plants grow from seeds