

Plant Reproduction

Unit: Plants

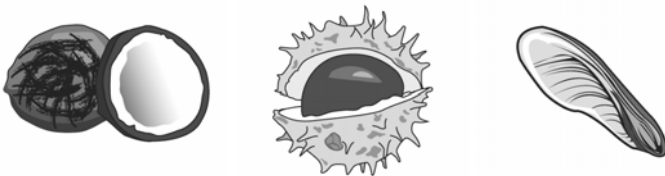
Topic: How Plants Grow

Concept: Reproduction

Objectives assessed: The student will be able to demonstrate understanding that:

- A mature plant produces seeds, cones, or spores, its reproductive structures.
- Flowers have structures that allow them to be pollinated.
- Soil, water, light, and temperature conditions must be right before a seed can germinate.
- The conditions of soil, water, light, and temperature that make germination possible are different for each plant.
- Pollinated flowers create new seeds.
- Wind, water, and animals help spread pollen.
- Plants distribute seeds, cones, or spores widely in a variety of ways to compete with other plants.

Students will need about 15–20 minutes to complete this brief constructed response.



A

Look at the three pictures of plant seeds. Tell how the shape of each seed makes it likely that it will travel away from the parent plant.

B

What are three things that will help a seed start to grow when it reaches a new place?

Correct response(s):

Sample response A:

A coconut is round, hard, and waterproof. It is able to roll or float away. A burdock has hooks. It can stick to an animal's fur and be carried away. A sugar maple seed has a big wing attached. It can be carried away by the wind.

Sample response B:

Plant seeds germinate in response to many stimuli, including moisture, light, and warmth. Some seeds germinate only after a time in harsh conditions, such as the heat of a forest fire or the acidity of an animal's digestive tract.

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Response scoring tool:

Part A

Score	Content
3	The student response shows a thorough understanding of the relationship between form and mode of transport for all three seeds. There are no major errors.
2	The student response shows understanding of the relationship between form and mode of transport for one or two seeds. There are minor errors.
1	The student response shows limited understanding of the relationship between form and mode of transport for seeds. There are major errors.
0	No response or response not appropriate to the question.

Part B

Score	Content
3	The student response shows a thorough understanding of three conditions that may help a seed germinate (e.g., soil, water, light, temperature). There are no major errors.
2	The student response shows understanding of one or two conditions required for germination. There are minor errors.
1	The student response shows limited understanding of the conditions needed for seed germination. There are major errors.
0	No response or response not appropriate to the question.

For students who are not demonstrating complete mastery of this concept, the Discovery Education Science video, reading, and interactive resources found in the Learn and Explore sections of this concept can be assigned to them as remediation.