

Plant Life Cycles & Roles

Buried Seed Vault with Sproutling

Learning target

Connect a plant's life cycle to its role in an environment.



Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

Seed-to-adult cycle; reproduction; plant diversity; food and habitat roles

Open Buried Seed Vault - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.



Plant Life Cycles & Roles - key ideas

1. The first clues

Many flowering plants grow from seeds into mature plants that produce new seeds. This cycle continues through new generations.

2. How the clues connect

Plants differ: not every plant has flowers or produces seeds in the same way. A model of one flowering plant is not the pattern for all plants.

3. Our evidence record

Our flowering plant feeds a leaf-eating insect and shelters a small animal. Plants support other organisms through food and habitat as well as continuing their own life cycles.

Keep the science accurate

Plants make food using light, air and water; soil supplies support/minerals, not ready-made plant food. No photosynthesis equation required.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: <https://www.nextgenscience.org/dci-arrangement/4-ls1-molecules-organisms-structures-and-processes>

Talk through the evidence

1. What continues the cycle into a new generation?

Expected answer: New seeds growing

Reasoning: Many flowering plants grow from seeds into mature plants that produce new seeds. This cycle continues through new generations.

2. Do all plants have flowers?

Expected answer: No

Reasoning: Plants differ: not every plant has flowers or produces seeds in the same way. A model of one flowering plant is not the pattern for all plants.

3. How does our plant support the insect?

Expected answer: It provides food

Reasoning: Our flowering plant feeds a leaf-eating insect and shelters a small animal. Plants support other organisms through food and habitat as well as continuing their own life cycles.

4. Which summary fits the evidence?

Expected answer: Plants grow, reproduce and support other life

Reasoning: Our flowering plant feeds a leaf-eating insect and shelters a small animal. Plants support other organisms through food and habitat as well as continuing their own life cycles.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.