

Leaves & Making Food

Vine Canopy Walk with Sproutling

Learning target

Explain at a simple level how plants make their own food.



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

Leaves; light; air and water; sugar production; growth

Open Vine Canopy Walk - 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.



Leaves & Making Food - key ideas

1. The first clues

Green leaves capture light. Plants use light energy to make sugars from water and carbon dioxide, a gas in air.

2. How the clues connect

These sugars support growth and other life processes. Minerals remain important, but mineral nutrients are different from the sugars plants make.

3. Our evidence record

Our comparison gives two similar plants equal water and suitable temperature, but different light. The light difference can affect food production; it does not show that leaves eat sunlight as matter.

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-Is1-molecules-organisms-structures-and-processes>

Talk through the evidence

1. What do plants make through photosynthesis?

Expected answer: Sugars

Reasoning: Green leaves capture light. Plants use light energy to make sugars from water and carbon dioxide, a gas in air.

2. Which gas is used in making these sugars?

Expected answer: Carbon dioxide

Reasoning: Green leaves capture light. Plants use light energy to make sugars from water and carbon dioxide, a gas in air.

3. Which condition differs in our comparison?

Expected answer: Light

Reasoning: Our comparison gives two similar plants equal water and suitable temperature, but different light. The light difference can affect food production; it does not show that leaves eat sunlight as matter.

4. What is the role of sunlight here?

Expected answer: It supplies energy

Reasoning: Our comparison gives two similar plants equal water and suitable temperature, but different light. The light difference can affect food production; it does not show that leaves eat sunlight as matter.

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.