

Renewable Living Resources

Timber Trail with Earthling

Learning target

Explain what makes a resource renewable and why rate of use matters.



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

Forests; crops; regrowth; responsible use; limits on renewal

Open Timber Trail - 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.



Renewable Living Resources - key ideas

1. The first clues

Living resources such as trees and crops can regrow. They are renewable only when the conditions and time needed for renewal are available.

2. How the clues connect

Using a resource faster than it regrows can reduce the supply. Renewable does not mean unlimited or impact-free.

3. Our evidence record

Our simplified forest record adds 10 trees while 20 are harvested during the same period. That pattern reduces the counted trees; a better plan considers regrowth and habitat needs.

Keep the science accurate

Renewable does not mean unlimited or impact-free. Use evidence and tradeoffs, not a universally best energy source.

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-ess3-earth-and-human-activity>

Talk through the evidence

1. What makes trees a renewable resource?

Expected answer: They can regrow

Reasoning: Living resources such as trees and crops can regrow. They are renewable only when the conditions and time needed for renewal are available.

2. What happens in the given 10-in, 20-out model?

Expected answer: The counted supply declines

Reasoning: Using a resource faster than it regrows can reduce the supply. Renewable does not mean unlimited or impact-free.

3. What should a harvest plan consider?

Expected answer: Regrowth and habitat conditions

Reasoning: Our simplified forest record adds 10 trees while 20 are harvested during the same period. That pattern reduces the counted trees; a better plan considers regrowth and habitat needs.

4. Does renewable mean unlimited?

Expected answer: No

Reasoning: Using a resource faster than it regrows can reduce the supply. Renewable does not mean unlimited or impact-free.

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.