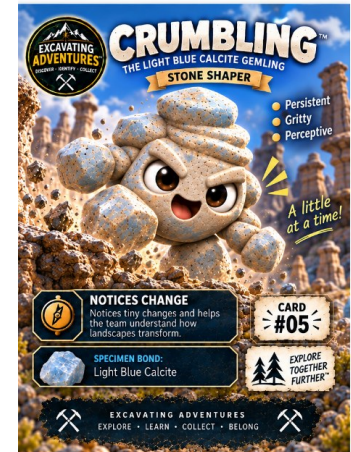


Deposition & Protecting Soil

Sediment Vault with Crumbling

Learning target

Explain where sediment collects and compare ways to reduce soil loss.



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

Settling particles; deltas and dunes; erosion control; evidence-based choices

Open Sediment 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.



Deposition & Protecting Soil - key ideas

1. The first clues

Deposition happens when transported sediment settles. Rivers may build deltas, and wind may build dunes, as material accumulates.

2. How the clues connect

Plant roots, ground cover and other designs can help reduce soil loss. Compare evidence because a useful design in one place may need changes elsewhere.

3. Our evidence record

Our equal-rainfall test collects much less sediment from covered soil than bare soil. Keeping the slope and rainfall alike makes ground cover the useful comparison.

Keep the science accurate

Explain breaking, moving and settling distinctly. Chemical weathering is descriptive; no acid experiments are 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-ess2-earths-systems>

Talk through the evidence

1. What does a growing delta show?

Expected answer: Sediment deposition

Reasoning: Deposition happens when transported sediment settles. Rivers may build deltas, and wind may build dunes, as material accumulates.

2. Which design reduced soil loss in our test?

Expected answer: Covered soil

Reasoning: Our equal-rainfall test collects much less sediment from covered soil than bare soil. Keeping the slope and rainfall alike makes ground cover the useful comparison.

3. Why keep rainfall the same?

Expected answer: To compare the ground-cover effect fairly

Reasoning: Our equal-rainfall test collects much less sediment from covered soil than bare soil. Keeping the slope and rainfall alike makes ground cover the useful comparison.

4. Which journey ends in deposition?

Expected answer: Particles travel, then settle

Reasoning: Deposition happens when transported sediment settles. Rivers may build deltas, and wind may build dunes, as material accumulates.

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.