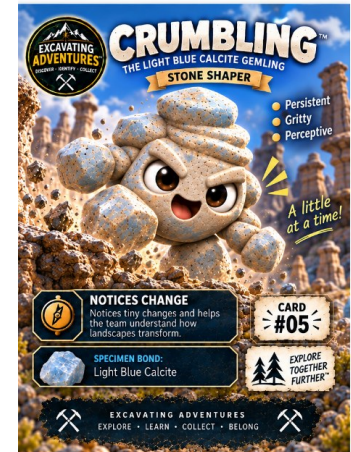


Gravity & Rapid Landscape Change

Landslide Ledge with Crumbling

Learning target

Explain how gravity and surface conditions influence movement.



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

Downhill movement; landslides; slope; vegetation; rapid versus slow change

Open Landslide Ledge - 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.



Gravity & Rapid Landscape Change - key ideas

1. The first clues

Gravity pulls material downhill. Landslides can move rock and soil rapidly, while other downhill movements are slow.

2. How the clues connect

Steeper slopes, water and loss of vegetation can affect how material moves. No single classroom model predicts every real hillside.

3. Our evidence record

Our supplied slope tests lose more loose soil from the bare steep tray than the planted gentler tray. These are model results to compare, not a reason to visit an unstable slope.

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 pulls material downhill?

Expected answer: Gravity

Reasoning: Gravity pulls material downhill. Landslides can move rock and soil rapidly, while other downhill movements are slow.

2. Can landscape change happen rapidly?

Expected answer: Yes, a landslide can be rapid

Reasoning: Gravity pulls material downhill. Landslides can move rock and soil rapidly, while other downhill movements are slow.

3. Which tray lost more soil in our record?

Expected answer: The bare steep tray

Reasoning: Our supplied slope tests lose more loose soil from the bare steep tray than the planted gentler tray. These are model results to compare, not a reason to visit an unstable slope.

4. What is a fair conclusion?

Expected answer: The tested conditions affected movement

Reasoning: Gravity pulls material downhill. Landslides can move rock and soil rapidly, while other downhill movements are slow.

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.