

Sedimentary Rocks

Crystal Waterfall with Rockling

Learning target

Explain how sediments can form rock and recognize that some sedimentary rocks form in other ways.



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

Sediments; deposition; compaction and cementation; sandstone, shale and limestone

Open Crystal Waterfall - 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.



Sedimentary Rocks - key ideas

1. Break, move, settle

Weathering breaks rock into smaller pieces called sediment. Erosion carries those pieces away. Deposition happens when they settle.

2. Loose pieces become rock

Layers can pile up. Compaction presses sediment together. Cementation happens when minerals bind the pieces. This is one way sedimentary rocks form.

3. Read the rock clues

Sandstone forms from sand-sized grains. Shale forms from very fine mud. Limestone often forms from shells or minerals that collect in water.

Keep the science accurate

Waterfall is a setting cue for sediment transport, not a claim that a waterfall instantly creates sedimentary rock.

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.nps.gov/subjects/geology/rocks.htm>

Talk through the evidence

1. Many sedimentary rocks form from...

Expected answer: Layers of sediment

Reasoning: Sediment can settle, compact, and become cemented into rock.

2. A rock breaks into smaller pieces. What happened?

Expected answer: Weathering

Reasoning: Weathering breaks rocks into smaller pieces.

3. The water slows and grains settle. Which marker fits?

Expected answer: Deposition

Reasoning: Deposition happens when transported sediment settles.

4. Which sample is sandstone?

Expected answer: Cemented sand-sized grains

Reasoning: Sandstone is a sedimentary rock made from sand-sized grains.

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.