

## THE STANDARD

# Landscape Changes

*"Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time."*

 ANCHORING PHENOMENON

## Seashells on Top of a Mountain

Show 4th graders a photo of a tall, dry mountain far from any ocean. Then show a close-up: the rock near the top is packed with fossil seashells. How did ocean animals end up frozen in the rock at the very top of a mountain? Let the rock layers start telling that story.

## DRIVING QUESTION

*"How did seashell fossils end up in the rock at the top of a mountain with no ocean anywhere near it?"*

 INVESTIGATIVE 1

### The Canyon and the River

Show a photo of a deep canyon with many colored rock layers in its walls and a small river at the very bottom. The river looks too tiny to have made such a giant canyon. Use this one to sharpen the anchor's big idea: the layers stacked first, then slow change (a river cutting down) carved through them over a very long time.

## DRIVING QUESTION

*"How could a small river at the bottom cut all the way through that many rock layers?"*

 INVESTIGATIVE 2

### Two Layers, Two Kinds of Fossils

Give students a simple drawing of a road cut with two stacked layers. The bottom layer has leaf and plant fossils and no shells. The layer above it is full of shell fossils. This one zooms in on the exact pattern in the clarification statement, so students practice reading fossils as evidence.

## DRIVING QUESTION

*"If the bottom layer has plants and the top layer has shells, what changed about this place over time?"*