

# Rock Clue Detectives

Use fossil clues to make a claim about long ago.

**S3E2.a** "Construct an argument from observations of fossils (authentic or reproductions) to communicate how they serve as evidence of past organisms and the environments in which they lived."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## 1 READ AND MARK \_\_\_\_\_ Read it twice

**YOUR JOB** Underline each fossil clue. Circle the words that tell what the clue shows about living things or the place.

### Clues in a Rock Layer

- ① At a cliff in Georgia, a science team studied layers of rock. In one layer, they found fossil fish bones and small clam shells. Fossils are parts or signs of living things from long ago that were saved in rock. The fish bones and shells are clues that fish and clams once lived near this place.
- ② Close to the shells, the team saw fossil footprints with three toes. When the animal stepped there, the ground was soft mud. Later, mud filled the prints and became rock. These prints are clues that a three-toed animal walked on soft ground. The prints do not tell the animal's color, but they show what it did.
- ③ Together, the fossils support a claim about the past. The fish bones and clam shells support the idea that water was nearby because fish and clams live in water. The three-toed footprints support the idea that soft mud was nearby because feet can press into soft mud. From these clues, the team can argue that this place had water and muddy ground long ago.

## 2 ANSWER WITH EVIDENCE Use the passage

1 What two fossils show that fish and clams once lived near this place?

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2 What claim about the place do the fish bones and clam shells support? Why do they support that claim?

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3 Name one fossil observation that supports water nearby and one fossil observation that supports soft ground. Tell what each observation shows.

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4 What do the fossil footprints show about the animal? What do they not show?

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## 3 YOUR TURN Your own words

Write two sentences that make a claim about this place long ago. Use the fish bones or clam shells and the footprints as clues, and tell what each clue shows. Then observe an actual fossil specimen or faithful reproduction your teacher provides. On extra paper draw and label two visible features, identify the observed item, and write a claim about a past organism or environment. Use a visible feature plus the teacher-provided identification/context to explain your claim. Tell one thing this fossil alone cannot show. A story description alone does not count as the observation.

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**PART 1 • READ AND MARK**

Underline each fossil clue. Circle the words that tell what the clue shows about living things or the place. Accept any marking that follows this job and points at the right text.

**PART 2 • ANSWERS**

| # | QUESTION                                                                                                                                       | ANSWER                                                                                                                                      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | What two fossils show that fish and clams once lived near this place?                                                                          | <b>Fossil fish bones and small clam shells.</b>                                                                                             |
| 2 | What claim about the place do the fish bones and clam shells support? Why do they support that claim?                                          | <b>They support the claim that water was nearby because fish and clams live in water.</b>                                                   |
| 3 | Name one fossil observation that supports water nearby and one fossil observation that supports soft ground. Tell what each observation shows. | <b>Fish bones or clam shells support water nearby. Three-toed fossil footprints support soft ground because an animal stepped into mud.</b> |
| 4 | What do the fossil footprints show about the animal? What do they not show?                                                                    | <b>They show that a three-toed animal walked on soft ground. They do not show the animal's color.</b>                                       |

**PART 3 • YOUR TURN (SAMPLE ANSWER)**

This place had water and muddy ground long ago. Fish bones show that water was nearby, and three-toed footprints show that an animal walked on soft mud.

Accept fish bones or clam shells as the water clue in Question 3. For the open response, accept a reasonable claim that uses both a water clue and the footprint clue, with an explanation of what each clue shows. Before the activity, provide an authentic fossil or a museum/educational faithful cast or clear photograph of an identified fossil, with its label/source and a short factual organism/context note. A fossil bivalve shell or its faithful cast is one accessible option; ensure the actual sample visibly supports the features being discussed. Have students inspect it rather than copy narrated details. Check two observed features, labeled drawing, claim and linked reasoning; accept uncertainty and do not infer a precise animal color, age or geographic habitat from shape alone. Example only for a corresponding identified sample: curved paired-shell shape and visible ribs support a past shelled bivalve; the identification note explains its aquatic life, while this shell alone does not give its color. Do not substitute an invented fossil sketch or modern shell without clearly faithful reproduction provenance.