Clues in the Ground

Weighing evidence about early human life

6-9.WH.1.1 "Analyze types of evidence used by anthropologists, archaeologists, and other scholars to reconstruct early human and cultural development."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline three different physical clues in the passage. Circle two natural causes that could make a clue misleading.

What Happened Beside the River?

1. Imagine an excavation beside an ancient river. Archaeologists uncover a thin soil layer that has not been disturbed by later digging. Inside it lie chipped stone flakes and a larger stone with matching chips missing. The flakes' sharp edges and their fit with the larger stone suggest that someone shaped it there, rather than that the river broke the stones at random. Because the objects share a layer, the workers can study them as possible clues to the same period. Yet the layer alone cannot reveal who made the tool or why.

2. A few steps away, the same layer holds blackened plant seeds and animal bones bearing narrow cuts. An archaeologist might infer that people prepared food near the tool-making spot. But a natural fire could blacken seeds, and sharp rocks moved by water can scratch bones. A specialist studies the cuts under magnification to see whether their shape matches marks made by stone tools. Another specialist identifies the seeds to learn which plants may have been present nearby. Together, these clues make a food-preparation explanation stronger, but they do not prove what any one person ate.

3. Anthropologists ask how the finds might connect to human ways of living. They compare patterns at other sites, such as where tools, food remains, and traces of fires occur together. Soil scientists also study how river floods could have moved objects into the layer. If the flakes fit the larger stone and the cut marks match tool marks, those clues support human activity even if some seeds arrived by flood. Each type of evidence answers a different question. By weighing several clues and possible natural causes, scholars build an explanation of the past rather than a certain story.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do the stone flakes and larger stone support the idea that someone shaped a tool? What natural cause must archaeologists consider?

2. How could the seeds and bones support a food-preparation explanation? Give one reason this evidence is not certain.

3. Why does a specialist examine the cuts on the bones under magnification?

4. Why do soil scientists study floods even though the finds lie in the same soil layer?

3 YOUR TURN

Your own words

At a different river site, researchers find a pile of freshwater shells. In three or four sentences, propose two kinds of evidence not described in the passage that could help test whether people gathered and ate the shellfish. Explain what each might suggest, and give one natural explanation for the pile.

ANSWER KEY

Clues in the Ground

GRADES 6-9 · 6-9.WH.1.1

PART 1 · READ AND MARK

Underline three different physical clues in the passage. Circle two natural causes that could make a clue misleading. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do the stone flakes and larger stone support the idea that someone shaped a tool? What natural cause must archaeologists consider?	**The flakes fit missing chips on the larger stone, suggesting someone shaped it. Archaeologists must consider whether the river broke the stones.**
2	How could the seeds and bones support a food-preparation explanation? Give one reason this evidence is not certain.	**Blackened seeds and cut bones could come from preparing food. A natural fire could blacken seeds, or rocks moved by water could scratch bones.**
3	Why does a specialist examine the cuts on the bones under magnification?	**The specialist checks whether the cuts have the shape of stone-tool marks rather than scratches made by rocks moved by water.**
4	Why do soil scientists study floods even though the finds lie in the same soil layer?	**A flood could have moved some objects into the layer, so sharing a layer does not prove that all the objects came from the same human activity.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would check nearby stone tools for tiny shell fragments stuck to their edges, which might suggest that people used the tools to open shells. I would measure the shells to see whether most are large, since people might have chosen larger ones to eat. A flood could also gather shells in one pile, so the pile alone does not prove that people ate them.

Accept other plausible evidence if the student explains what each kind might indicate and names a natural way the pile could form. An inference should not be presented as proof.