Alabama Through Time

Trace how changing landscapes shaped life across three eras

SS24.AS.1a "Summarize how the geography and biodiversity of Alabama formed and evolved during the Paleozoic, Mesozoic, and Cenozoic Periods."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB In each paragraph, underline one change to Alabama's land or water and circle one example of life. Draw an arrow linking a geographic condition to the life it supported.

A Landscape Written in Rock and Water

1 In the Paleozoic Era, much of what is now Alabama lay beneath warm, shallow seas. Layers of mud and shells built up on the seafloor and later became rock, including limestone that holds fossils of sea animals. As continents collided late in the era, the Appalachian Mountains rose in northeastern Alabama. To the west, low, wet forests grew near the coast. Buried plant remains from these swamps eventually became coal. Alabama's rocks therefore record both marine life and land plants, while mountain building began to shape the state's northern terrain.

2 During the Mesozoic Era, the supercontinent Pangaea broke apart, and the Gulf of Mexico opened to Alabama's south. Rivers carried sand and mud toward the new coastline, while sea levels rose and fell over the region. In the Late Cretaceous, a shallow sea covered much of southern Alabama. Tiny marine organisms lived in its waters; their remains helped form the chalk now found in a broad belt across the state. Sea creatures also left fossils in these deposits. Northern Alabama remained higher land, where forests and other land organisms lived. These contrasting habitats show how a shifting shoreline changed where life could thrive.

3 In the Cenozoic Era, the sea retreated from much of Alabama's Coastal Plain, though shorelines still shifted as sea levels changed. Rivers cut through older sediments and carried them south, building floodplains and the Mobile-Tensaw Delta near the Gulf. Over time, flowing water separated populations into different streams and created habitats ranging from rocky northern channels to slow coastal wetlands. Freshwater fish and mussels diversified in these river systems; Alabama now has exceptional freshwater biodiversity. The state's present landscape carries traces of earlier eras: Appalachian highlands, chalk from an ancient sea, and river valleys shaped more recently by moving water.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did Paleozoic seas, swamps, and continental collisions each leave a different trace in Alabama?

2. Summarize how Mesozoic changes to the Gulf and shoreline shaped southern Alabama's rocks and marine life.

3. How did Cenozoic rivers change both Alabama's land and its freshwater life?

4. What two different geographic changes produced Alabama's Appalachian highlands and chalk belt?

3 YOUR TURN

Your own words

Write a 75 to 95 word audio guide that takes a visitor through Alabama's Paleozoic, Mesozoic, and Cenozoic history. Explain how geography shaped life in each era, and connect at least one earlier change to a later landscape or habitat.

ANSWER KEY

Alabama Through Time

HIGH SCHOOL · SS24.AS.1a

PART 1 · READ AND MARK

In each paragraph, underline one change to Alabama's land or water and circle one example of life. Draw an arrow linking a geographic condition to the life it supported. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did Paleozoic seas, swamps, and continental collisions each leave a different trace in Alabama?	**Seas left limestone with marine fossils, swamp plants became coal, and continental collisions raised the Appalachian Mountains.**
2	Summarize how Mesozoic changes to the Gulf and shoreline shaped southern Alabama's rocks and marine life.	**The Gulf opened and the shoreline shifted. A shallow sea covered southern Alabama, where marine organisms lived and left remains that helped form chalk and other fossil-bearing deposits.**
3	How did Cenozoic rivers change both Alabama's land and its freshwater life?	**Rivers cut through sediments and built floodplains and the Mobile-Tensaw Delta. Different stream habitats helped freshwater fish and mussels diversify.**
4	What two different geographic changes produced Alabama's Appalachian highlands and chalk belt?	**Paleozoic continental collisions raised the Appalachian highlands. A Mesozoic shallow sea supported organisms whose remains helped form the chalk belt.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Start in northern Alabama, where Paleozoic continental collisions raised the Appalachian highlands. Nearby seas left limestone with marine fossils, while swamp plants later became coal. Travel south to the Cretaceous chalk belt: as the Gulf opened and shorelines shifted, shallow water supported tiny organisms whose remains became chalk. Finally, follow a Cenozoic river toward the Mobile-Tensaw Delta. Its moving water built floodplains and separated stream habitats, helping freshwater fish and mussels diversify. Today's landscape preserves evidence of each changing environment.

Accept other accurate cause-and-effect summaries supported by the passage. For the audio guide, look for all three eras, a geographic change linked to life in each, and a connection between an earlier change and a later landscape or habitat.