

Name: _____ Teacher: _____

6.ESS2.2 How Water Shapes the Earth's Surface

Formative Assessment Task: Sand From Mountains

Scenario

Gulf Coast beaches like those found in Apalachicola, Florida are known for their fine white sand (see Photo A). These beaches are made of quartz, a type of igneous rock, that originated in the Appalachian Mountains (see Photo B).




Photo A


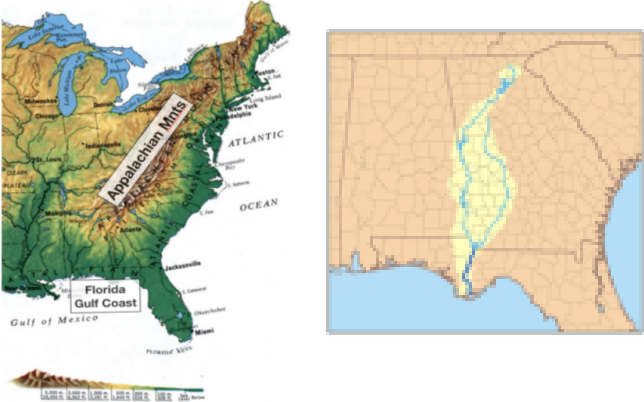



Photo B

Task 1

Describe how each piece of evidence in the chart below helps explain how the white sand beaches of Apalachicola, Florida formed.

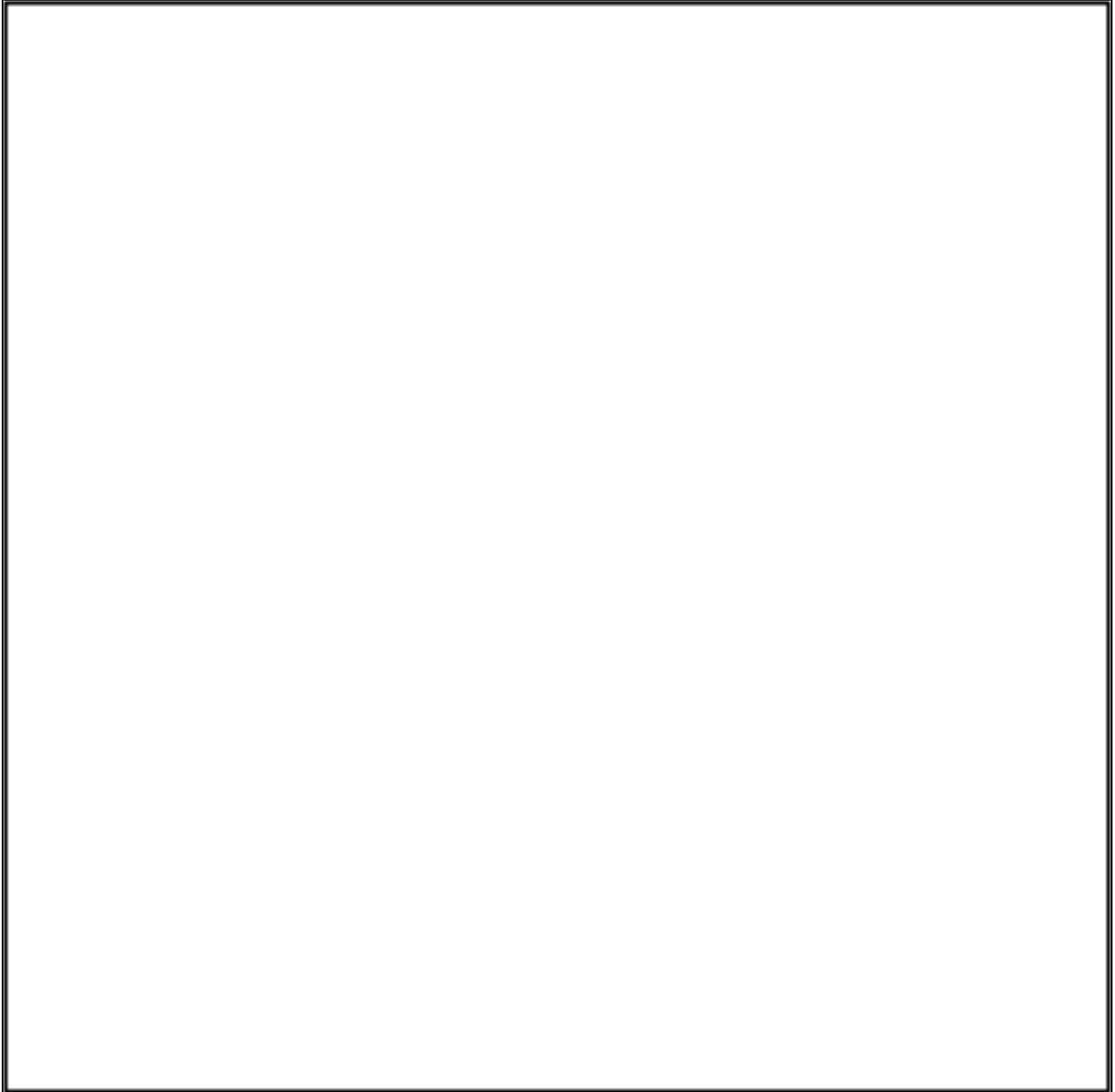
Evidence	How Evidence Helps Explain Formation of White Sand Beaches in Apalachicola, Florida
<p>A) The Appalachian Mountains are some of the oldest mountains on the planet. They were once over 8,000 meters high and are now 2,000 meters high.</p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Evidence	How Evidence Helps Explain Formation of White Sand Beaches in Apalachicola, Florida
<p>B) Quartz is a common mineral that forms beneath the Earth's surface. It can be found on the surface of the Appalachian Mountains.</p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>C) The Apalachicola River formed at the end of the last ice age (more than 10,000 years ago). Over 700 miles long, the river links the Appalachian Mountains with the Gulf Coast as seen in the maps below.</p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>D) The Gulf of Mexico is a shallow ocean basin that has small but consistent waves.</p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Task 2

Draw a scientific model that explains how the quartz rock from the Appalachian Mountains transformed into the small grains of white sand found on the beaches of Apalachicola, Florida. In your model, include:

- The processes (weathering, erosion, deposition)
- How the energy is being transferred to drive the processes
- How the matter is being cycled through the processes
- How the processes have changed the Earth's surface



Task 3

Three students were discussing whether it is possible for the sand from the Apalachicola beaches to become part of a different mountain eventually.

- Cisco said it is possible that the sand could become a part of another mountain in the next 10,000 years.
- Barry said it is possible, but he thinks it would take much longer, even millions of years, for the sand to become part of another mountain.
- Felicity said it was not possible for the sand to become part of a new mountain.

Write a claim stating which student you agree with and explain your reasoning with evidence below.

Claim:

Explanation:
