

Title: Reshaping Geological Features Through Erosion
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Science Standard: 5S2.1b Geo Features Change through Erosion (5S2.3c Use a time line to identify sequence and time for breaking down of Geo Feature)	Math Standard: 5.NBT.7 Add, Subtract, Multiply, and Divide decimals	Time: 1-2 class periods
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NGSS 3 Dimensions of Science: Earth Science
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Science and Engineering Practices: Asking questions (science) and defining problems (engineering)	Crosscutting Concepts: Cause and Effect Stability and Change	Materials: Stream Table Pieces of Sandstone (or Sugar Cubes) Water, Fan, Ice, abrasive object (nail, pencil, fingernail, etc.) Timer Handout (attached at end of lesson)
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Phenomenon/Scenario/Hook:

“Have you ever wonder where all the red sand comes from?”

Gather:

Students (groups) will get a stream table, sandstone, and choose one of the three water, fan, or ice to model erosion. The activity is to have students time, record, and diagram the weathering and erosion applied to their sandstone.

“We know that the Earth’s surface weathers and erodes by waves, wind, glaciers, gravity, and running water. How long do you think it takes to change a geological feature? You will pick one of the following to model weathering and erosion: water, ice, a fan or an abrasive object of choice. You will apply your choice but record how long it takes to change and completely break the sandstone down. Every time you apply your force start the timer and stop your timer every

time you need to observe or make adjustments. At the end you will combine all your times to give a total time of erosion.”

Reason:

“What did you discover? What do your diagrams look like? What is the total time of weathering and erosion for your piece of sandstone? Why do you think it took that team longer? Shorter? Those would become the variables (force, size of sandstone). Was one type of force more effective? Water? Ice? Fan/Wind? Abrasive object? How could we change this experiment so that our data was more comparable to each others’ experiments?

Communicate:

Write in your journal 3-5 sentences explaining how time is invested with weathering and erosion of geological features.

Formative Assessment: https://docs.google.com/forms/d/111FRZrMZML2a-481trJXhGMM-m9YSHo3hsCqYF-fnG8/edit	Resources, handouts, links etc:
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Name

Reshaping Geographical Features Through Erosion

Choice of Weathering and Erosion: _____

Attempts	Time

Diagrams of Eroded Sandstone
