

i3 STC Kit Extension Activities

North Carolina

Grade: 4th	
Kit Name: Rocks and Minerals	
Essential Standard(s): (List number, standard, clarifying objectives where appropriate) Objectives: 4.E.2.3→ Give examples of how the surface of the earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, volcanic eruptions, and earthquakes.	
Unpack the Standard (What does it mean?? What is the “Big Idea”?): Students will be able to tell different ways (both quick and slow) that the earth changes over time.	
What is the Engaging (will get the student interesting) Essential Question that the students will be trying to answer as a result of this Extension? How has the earth changed over time? What is a fossil?	
Which activities in the kit touch on the Standard(s) and how can they be adjusted to better address the Standard(s)? This extension will fit well just before the beginning of the Rocks and Minerals kit. It will help students to build background because they will learn about erosion and weathering (which help form sedimentary rocks), volcanoes (which form igneous rocks) and earthquakes (which can assist in the formation of metamorphic rocks). They will also get a little background on fossils, which will fit with another extension lesson on fossils that will come between lessons 3 and 4.	
Kit Activity (Before the kit begins.)	Extension Suggestions
	Erosion and weathering: * These are slow processes. They take a long time to happen. -Pieces of rocks and dirt (sediment) can be carried down rivers and eventually form some types of rocks. - Brainpop videos on erosion and/or weathering (if you have access) - Have a pile of dirt in a Tupperware container. Pour water from a cup or let water from the sink run in so students can see erosion in action. -See link at bottom for pictures of NC coastal erosion.
	Landslides: * These happen quickly. They are very quick erosion. They are like avalanches, but with soil, mud, and rocks instead of snow.
	Volcanoes: * Volcanoes change the earth much more quickly than erosion and weathering. -When lava cools off, it forms some types of rocks. -Brainpop video on volcanoes (if you have access) - http://chemistry.about.com/cs/howtos/ht/buildavolcano.htm -->This is a set of instructions for building a volcano if you care to include this activity. - Preview this video of Pompeii and decide if you want to share it with your class. Go to http://link.brightcove.com/services/player/bcpid1371783545001?bckey=AQ~~,AAAABCtdqgE~,SIJki0kLsZUx4I0ckzCnoEx8NetnzdFK&bclid=1367779118001&bctid=1370820516001 and click on the link for the “Pompeii” video. -Extension: http://kids.discovery.com/games/build-play/volcano-explorer

	<p>Earthquakes:</p> <ul style="list-style-type: none">*These are another quick change to the earth.-They are caused when the earth's plates rub against each other. (You can demonstrate this by rubbing two pieces of Play-Doh together and seeing how the shape of the dough changes.)-Earthquakes can cause volcanoes to erupt.-They can also cause tsunamis to occur.
	<p>Fossils:</p> <ul style="list-style-type: none">*They are the naturally preserved remains or traces of ancient life that lived in the geologic past.- Fossils are created over time by sediments formed by erosion and weathering.- By looking at fossils, we can get clues about what the world was like long ago. Later, we will learn more about fossils and explore what they can tell us about how the world has changed.
<p>Additional Suggestions (Literature connections; online resources):</p> <p>http://coastalcare.org/2011/01/rising-waters-threatened-the-coast-of-north-carolina/ → see pictures of the erosion of NC's coast (including the picture below)</p>	

