

Grade 2: Our Changing Earth

Stage 1 Desired Results		
ESTABLISHED GOALS: <u>Competencies:</u> <u>Nature of Science and Engineering</u> - Students will demonstrate the ability to work collaboratively and individually to generate testable questions or define problems, plan and conduct investigations using a variety of research methods in various settings, analyze and interpret data, reason with evidence to construct explanations in light of existing theory and previous research, and effectively communicate the research processes and conclusions. <u>Patterns</u> - Students will demonstrate the ability to observe and describe patterns in natural and human designed phenomena and use those patterns to support claims about the observed or predicted relationships among phenomena. <u>Stability and Change of Systems</u> - Students will demonstrate the ability to investigate and analyze static and dynamic conditions of natural and human designed systems in order to explain and predict changes over time. <u>Content Standards:</u> 2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly. 2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land 2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. 2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.	Transfer	
	<i>Students will be able to independently use their learning to recognize that any size causal event can produce profound or long-term effects.</i>	
	Meaning	
	ENDURING UNDERSTANDINGS <i>Students will understand that...</i> - patterns in the natural world can be observed. - things may change slowly or rapidly. - developing and using technology has impacts on the natural world. - Scientists study the natural and material world.	ESSENTIAL QUESTIONS Is it better for the changes on Earth to be fast or slow?
	Acquisition	
	<i>Students will know...</i> - that some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. - that wind and water can change the shape of the land. - that maps show where things are located. One can map the shapes and kinds of land and water in any area. - that water is found in the ocean, rivers, lakes, and ponds. - that water exists as solid ice and in liquid form. - that because there is always more than one possible solution to a problem, it is useful to compare and test designs. <u>Student vocabulary:</u> avalanche, canyon, earthquake, erosion, evaporation, flash flood, iceberg, lake, ocean, plains, pond, river, seasons, slope, stream, tsunami, volcano, wildfire	<i>Students will be skilled at...</i> - extracting information regarding Earth's events (earthquakes, tsunamis, etc.). - making observations, including map-reading and using a map key, to obtain information on natural phenomena (such as where water is found on Earth). - constructing a model which represents the shapes and kinds of land and water in a particular region. - constructing a model designed to slow or prevent wind or water erosion. - comparing and contrasting multiple solutions designed to slow or prevent wind/water erosion.

	<i>Teacher vocabulary: compare, experiment, identify, investigate, model, observe, pattern, predict</i>	
Content Area Literacy Standards		21st Century Skills
not applicable		• manage and use information • be self-directed learners • analyze media • solve problems • reason effectively

Stage 2 - Evidence	
Evaluative Criteria	Assessment Evidence
	PERFORMANCE TASK(S):
	OTHER EVIDENCE:

Stage 3 – Learning Plan	
Summary of Key Learning Events and Instruction	
Language Arts Integration	Mathematics Integration
• RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. • RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. • RI.2.9 Compare and contrast the most important points presented by two texts on the same topic. • W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. • W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). • W.2.8 Recall information from experiences or gather information from provided sources to answer a question. • SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. • SL.2.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.	• MP.2 Reason abstractly and quantitatively. • MP.4 Model with mathematics. • MP.5 Use appropriate tools strategically. • 2.NBT.A Understand place value. • 2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • 2.MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
Technology Integration	District Materials

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