5th GRADE

GRADE LEVEL OVERVIEW

Enhancement Activities/Strategies for Gifted/High Ability Learners: Sample Science Learning Plan

Big Idea/ Topic
• Earth and Changes Over Time – Erosion and Weathering

Standard Alignment
S5E1. Obtain, evaluate, and communicate information to identify surface features on Earth caused by constructive and/or destructive process. a. Construct an argument supported by scientific evidence to identify surface features as being caused by constructive and/or destructive processes. b. Develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes. c. Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes. (Clarification statement: Examples include seismological studies, flood forecasting (GIS maps), engineering/construction methods and materials, and infrared/satellite imagery.) Crosscutting Concepts: Cause and Effect Connections to Other Content Areas: ELAGSE5W2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly. a. Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b. Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c. Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Provide a concluding statement or section related to the information or explanation presented. ELAGSE5W8: Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work and provide a list of sources. ELAGSE5W9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

Advanced Research
Challenge your students to work in pairs to create a “National Park Geologic Tour.” They may use various websites to create a slideshow presentation that will depict the geological features of a national park (as a result of weathering and erosion).

Communication
Have the students practice their slideshow presentations and then have them present them to either their class or other classes. Also, you could invite parents or grandparents to hear the presentations.

Critical Thinking and Critical Problem-Solving Skills
Locate a spot around your home or on the school grounds were erosion is causing a problem. Is it on the playground or around the downspouts at your house? Research possible solutions and propose a way to fix the problem. Is wind or water the cause of the problem? Can you change the way wind or water create or add to the problem? Would a physical barrier help…or would it amplify the problem? Would it help to add a second ground water to travel to reduce the flooding in an area? Record your research on a graphic organizer or using Cornell notes.

Creative Thinking and Creative Problem-Solving Skills
Create a game using the topic constructive and destructive processes. Students take turns naming vocabulary, examples, events, etc. related to constructive and destructive processes. You could play using a timer and alphabet cards.

Awareness of Self—Student’s Well-being
Use your knowledge of weathering and erosion to identify a space near your home or school with an erosion challenge. Record your observations every day for a month. Notice any changes due to weather and wind. Investigate possible solutions. Share your findings with partners or the class.