**Rock Cycle Model Project**

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| **Goal:** Develop a model to describe the cycling of Earth's materials (rocks) and the flow of energy that drives this process.***How do the materials in and on Earth’s crust change over time?***https://sites.google.com/a/msad51.org/jaceymorrill/_/rsrc/1390952877676/Greely-Middle-School/2013-2014/unit-2/rocks-and-minerals/rock-cycle-model/Screen%20Shot%202014-01-28%20at%206.47.49%20PM.png**Required Components of the Project:** * CREATE:
	+ Create a detailed model of the rock cycle including all the steps, rock types and processes **with labels.**
	+ Use the following words in your project: weathering, erosion, deposition, compaction, cementation,

 metamorphism, heat, pressure, melting, cooling, solidification, sediment, sedimentary rock, metamorphic rock, magma, extrusive, intrusive, and igneous rock. * + Give one example of each type of rock (sedimentary, metamorphic, and igneous).
	+ Explain how each type of rock is formed.
* COMMUNICATE:
	+ Demonstrate your ability to organize information, be neat, colorful, creative, and to show full knowledge of the

rock cycle and the three types of rocks. * ANALYZE: On a separate piece of paper,
	+ *Include a description of your model.*
		- Why did you choose the model you created?
		- What makes this a good model for the rock cycle?
		- What are some of the limitations (disadvantages) of this model?
		- What could you do to make your model better?
	+ *Include 3 resources sources used in APA style.*

**Types of Projects Allowed:**Students in the past have created:* Movie
* 3D Model
* Poster
* Cartoon Book
* Pop-Up Book
* Minecraft Model
* Video Game
* Cake
* Board Game
* PowerPoint Presentation

If you have an idea not listed, please ask me. There are many other wonderful possibilities. **Creative Ideas:** * Do not just take images from the internet, take pictures or draw your own.
* Bring in real rocks to use as examples of each type of rock.
* Make 3D models or have pieces on your board "stick out."
* Glue real rocks on your board.
* Show the rock cycle in a way you **have not** seen it before.

**Assessment Score**

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|   |  A+ --> A- |  B+ --> B- |  C+ --> C- | D+ --> F |
| **ESS2.1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.** | The student demonstrates a mastery of the concepts related to the major groups of rocks, how they form, and how they fit into the rock cycle. | The student demonstrates an adequate understanding of the concepts related to the major groups of rocks, how they form, and how they fit into the rock cycle. | The student demonstrates some confusion about the concepts related to the major groups of rocks, how they form, and how they fit into the rock cycle. | The student demonstrates a weak understanding of the concepts related to the major groups of rocks, how they form, and how they fit into the rock cycle.  |
| **B1: Creative, neat, organized** | Project is very neat. No misspellings or grammatical errors. Obvious, high quality effort is shown.  | Project is moderately neat and has no more than two misspellings and/or grammatical errors. Project shows good effort and quality.  | Project is moderately neat, but has three or more misspellings and/or grammatical errors. Project shows average effort and quality. | Project lacks neatness with sloppy handwriting or artwork. Poorly drawn/created, showing obvious signs of rushing or lack of effort. |
| **A2: Students use *models* to examine a variety of real-world phenomena from the physical setting and compare advantages and disadvantages of various *models*.** | Model of rock cycle is complete with all relevant parts. Explanation of model is detailed and both advantages and disadvantages of the model are given.Suggestions for improvement of model are offered. | Model of rock cycle is complete with most relevant parts. Explanation of model is given and one advantages and one disadvantage of the model are provided.Suggestions for improvement of model are not offered. | Model of rock cycle is missing a few relevant parts. Explanation of model is given and one advantages or one disadvantage of the model is provided.Suggestions for improvement of model are not offered. | Model of rock cycle is missing major parts.No explanation of model is provided.Suggestions for improvement of model are not offered. |

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