

6th Grade – Rockin' Around

(Constructive and Destructive Earth's Processes)

Class Description

During this teacher led journaling time, students will compare and contrast samples of sedimentary, igneous and metamorphic rock types.

Location: Devils Kitchen Picnic Area

Duration: 30-45 minutes

Standards Addressed:

Science 3.1 *Complex interrelationships exist between Earth's structure and natural processes that over time are both constructive and deconstructive.*

Enduring Understandings/Essential Questions

Natural Earth processes have change, and will continue to change, Earth's surface features over time.

Models are used in science to study processes that are difficult to observe directly.

How do forces inside Earth and on the surface build, destroy, and change Earth's crust?

How do constructive and destructive forces interact in cycles to change Earth's surface over time?

Vocabulary Addressed

Constructive

Destructive

Weathering

Erosion

Sediments

Mechanical weathering

Chemical weathering

Models

Cycle

Uplift

Mountain building

Rock cycle

Sedimentary rock

Igneous rock

Metamorphic rock

Layers of the Earth (crust, mantle, outer core, inner core)

Evidence

Theme, etc.

Theme: Uplift and weathering and erosion have all contributed to the landscape of the Monument. We can model these processes to see their effects.

Objectives:

-Students will be able to identify the Redlands fault as evidence of uplift.

-Students will be able to construct a model, demonstrating uplift, continual stream erosion and flash floods.

Major Concepts:

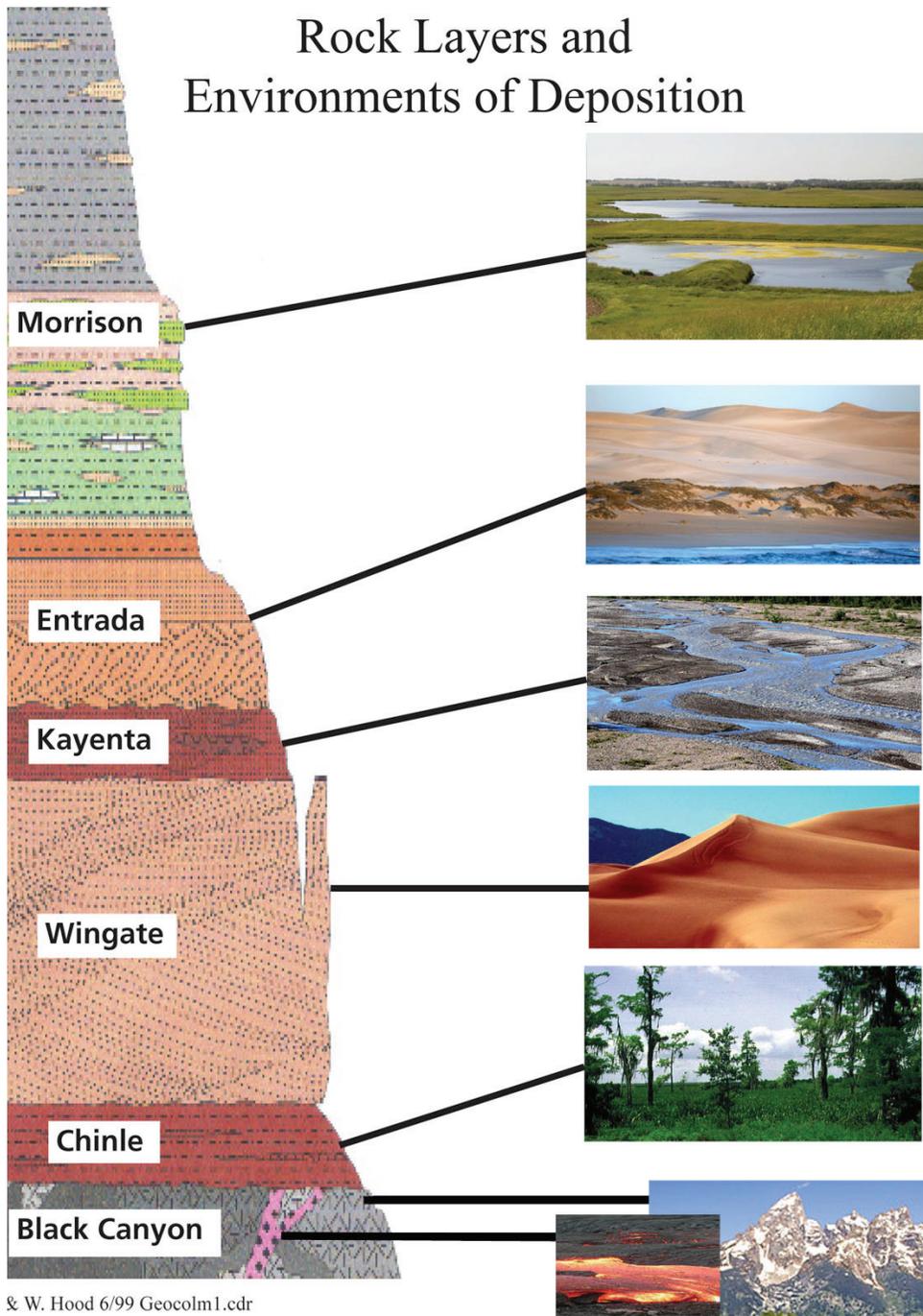
-A fault is evidence that the earth's crust has moved, uplifted. (rock layers don't match up)

-Weathering and Erosion have shaped the landscape here: flashfloods contribute to carving the canyons

Sample Class Outline

Review what students have learned in school/field trip and have students use prompts to complete their journal assignment.

Rock Layers and Environments of Deposition



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Rockin' Around!

Examine the rock samples.
Use the stratigraphic column on the back of this page to help you learn more about these rocks.

- Describe the texture of each rock. How are they similar? Different?
- Can you determine the environment of deposition the rock came from? How confident are you? State your evidence and reasoning.
- Which of these rocks is the oldest? What clues did you use to determine this?
- Write a narrative story about events that have shaped this rock. Include some constructive and destructive forces in your story such as: plates moving, mountain building, deposition, cementation, examples of weathering and erosion. *You may want to write the story from the point of view of the rock!*

