

Rock Collections Lesson Plan

Context (InTASC 1,2,3)

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Created:

Lesson Topic: Types of Rocks & Their Characteristics

Grade Level: Grade 2- Grade 4

Duration: 1 - 50 minute class period

Kit Contents: http://odin-primo.hosted.exlibrisgroup.com/nmy:nmy_all:ODIN_ALEPH007803591

Desired Results (InTASC 4)

Purpose: The purpose of this activity is for the student to learn the characteristics of the three main types of rocks – igneous, sedimentary, and metamorphic.

North Dakota Science Content Standards

- Earth's Systems: Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.
 - ESS2.A (Grade 4 and up) All Earth processes are the result of energy flowing and matter cycling within and among the planet's systems. This energy is derived from the sun and Earth's hot interior. The energy that flows and matter that cycles produce chemical and physical changes in Earth's materials and living organisms.

Objectives:

1. The student will be able to identify characteristics of different types of rocks. They will also be able to name the three types of rocks and explain how they were formed.

Assessment Evidence (InTASC 6)

Evidence of meeting desired results: Students will pass a short quiz on the types of rocks.

Learning Plan (InTASC 4,5,7,8)

Instructional Strategy: (Check all that apply)

Direct Indirect Independent Experiential Interactive

Technology Use(s): (Check all that apply)

Student Interaction Align Goals Differentiate Instruction Enhance Lesson

Collect Data N/A

Hook and Hold:

Have the "Rock Cycle" song playing when the students enter the room (found at the following website under "Karaoke"):

<http://studyjams.scholastic.com/studyjams/jams/science/rocks-minerals-landforms/rock-cycle.htm>

Encourage students to sing along and make up actions to go along with the lyrics. You may want to play the song a couple of times for kids to catch on and really get into it. This song is a review of the

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three kinds of rocks and how they are formed. Explain to the students that they will be learning about the characteristics of each of these three types of rocks today by becoming scientists and making observations of the actual rocks.

Materials:

- Rock Collections Kit
- ActiveBoard
- Projector with sound
- Quiz (found below)

Procedures:

(Before Class: Set up 3 rock stations using the 3 rock collections found in the kit from Mayville State)

1. Hand out the “Observing Rocks & Minerals” chart (see below – you may want to copy the chart on the front and back of the student’s paper so they have enough space for a variety of rocks and minerals).
2. Explain to the students what all of the columns mean and how to test for those particular characteristics.
3. Discuss how scientists take notes and how they write down all of the details they can to further their knowledge and help other scientists.
4. Split groups into 3 stations and let them get to work taking notes on the rocks and minerals. Give students ample time at each station (this may push you into a second class period depending on the age group).

Summary: Show the video that is also found at the link in the Hook & Hold. This will review the types of rocks, how they are formed, and a little bit about each. Following the video give students the quiz (found below).

Reflection (InTASC 9)**Reflect On:**

- *Preparation*
- *Planning*
- *Teaching*
- *Student Engagement and Participation*
- *Evidence of Student Learning*

Standards

Council of Chief School Officers. (2011, April) *Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards: a resource for state dialogue*. Washington DC. Retrieved from http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf

North Dakota Department of Public Instruction. (2011) *North Dakota Science content standards*. Bismarck, ND. Retrieved from https://www.nd.gov/dpi/uploads/132/NDScienceStandardsDraftFormat1_03APR14.pdf

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Rocks Quiz

1. Rocks that are formed when magma (molten rock deep within the earth) cools and hardens. _____

2 Characteristics common to the type of rock in #1 are:

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2. Rocks that are formed from particles of sand, shells, pebbles, and other fragments of material. _____

2 Characteristics common to the type of rock in #2 are:

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3. Rocks that are formed under the surface of the earth from the change that occurs due to intense heat and pressure. _____

2 Characteristics common to the type of rock in #3 are:

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