

Earth Science Chapter Review



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BACKGROUND INFORMATION

Subject(s):	Science
Topic or Unit of Study:	Earth Science Chapter Review
Grade/Level:	5

STANDARDS & ASSESSMENT

Standards:

NJ- New Jersey Core Curriculum Content Standards

- **Subject** : Science (2009)
 - **Standard** : 5.1 Science Practices: Science is both a body of knowledge and an evidence-based, model-building enterprise that continually extends, refines, and revises knowledge. The four Science Practices strands encompass the knowledge and reasoning skills that students must acquire to be proficient in science.
 - **Range/Grade Level** : By the end of grade 8
 - **Strand** : A. Understand Scientific Explanations: Students understand core concepts and principles of science and use measurement and observation tools to assist in categorizing, representing, and interpreting the natural and designed world.
 - **Cumulative Progress Indicator** : 5.1.8.A.1 Demonstrate understanding and use interrelationships among central scientific concepts to revise explanations and to consider alternative explanations.
 - **Standard** : 5.2 Physical Science: Physical science principles, including fundamental ideas about matter, energy, and motion, are powerful conceptual tools for making sense of phenomena in physical, living, and Earth systems science.
 - **Range/Grade Level** : By the end of grade 6
 - **Strand** : A. Properties of Matter: All objects and substances in the natural world are composed of matter. Matter has two fundamental properties: matter takes up space, and matter has inertia.
 - **Cumulative Progress Indicator** : 5.2.6.A.3 Determine the identity of an unknown substance using data about intrinsic properties.
 - **Standard** : 5.4 Earth Systems Science: Earth operates as a set of complex, dynamic, and interconnected systems, and is a part of the all-encompassing system of the universe.
 - **Range/Grade Level** : By the end of grade 6
 - **Strand** : C. Properties of Earth Materials: Earth's composition is unique, is related to the origin of our solar system, and provides us with the raw resources needed to sustain life.
 - **Cumulative Progress Indicator** : 5.4.6.C.2 Distinguish physical properties of sedimentary, igneous, or metamorphic rocks and explain how one kind of rock could eventually become a different kind of rock.

Assessment Plan:

Pre-Assessment: I will pre-assess student knowledge of Earth Science Unit C, Chapter 1 - The Changing Earth by first using the "Clever Catch Ball" Assessment Tool. I will question students on Earth Science material using this tool. I will then have students play the Teacher-Generated whiteboard game "Jeopardy!" to gauge responses .

Responses of students will guide length of time spent "questioning" them by playing computer Q&A Jeopardy!-style game that measures their knowledge of Lesson 1: Earth's Layers, Lesson 2: How the Crust Moves, Lesson 3: Forces that Change Earth's Surface, and Lesson 4: Rocks Revealing Changes on Earth.

Formative Assessment: I will check for understanding during the lesson by circulating through the classroom to observe and question students as they complete a chapter review concept reinforcement skills worksheet packet for Unit C, Chapter 1. When students complete packets, I will assess student knowledge and comprehension by having individual students come up to document camera to record responses on the packets and project image of page on whiteboard. I will have students complete an exit card at the end of the lesson.

Assessment/Rubrics: The students will work in small groups of 2 to complete review packet. They will document their responses on individual packets to create a study guide. Student groups will then present their group responses by using the overhead document camera to self-correct/edit responses.

IMPLEMENTATION

Goal(s): The students will be able to identify and define key science terminology from Earth Science lessons on "The Changing Earth" (Earth's layers, plate tectonics, forces that change Earth's surface, rocks and fossils). The students will be able to identify and explain the science concepts of convection currents, plate movements, weathering/erosion/deposition, and the rock cycle.

Objective: The students will be able to list examples of Earth's layers, how the Earth's crust move, what changes the Earth's surface, and how rocks reveal changes on Earth.

Purpose: The purpose is to have students understand the concepts that Earth is composed of three layers, that the layers move, that forces are constantly changing the face of the Earth, that rocks and minerals reveal these changes, and that together all of these processes are

continually effecting their lives.

Procedure:**Anticipatory Set:**

I will have the Clever Catch Ball available to allow students to pass it around room while each student answers one-question based on thumb placement on the ball. I will begin the the lesson by by telling the students that we will be reviewing the key vocabulary terms and concepts from Chapter 1- The Changing Earth. I will ask the questions, "What Are the Earth's Layers?", followed by "How Does the Earth's Crust Move?" then " What Forces Change the Earth's Surface?", and finally "How Do Rocks Reveal Changes on the Earth?" (allow 10 minutes)

Think-Pair-Share:

I will have the students think about their responses to my anticipatory set questions. The students will then divide into teams to play the "Jeopardy!" Game. I will serve as the Emcee and operate the computer game. (allow 15 minutes)

The students will then pair into groups of 2 to complete the review worksheet packet as a group. They will record responses on the packet to prepare study guides. I will individually conference with each group to observe and assess their progress. (allow 15 minutes)

The students will remain in their small groups to share their packet responses. Groups of students will use the overhead projector and document camera to project their responses to the other student groups. (allow 10 minutes)

Closure:

The students will complete an exit card/diagram to end the lesson. They will have their choice of identifying the layers of the Earth, identifying the steps of the rock cycle, or listing the order of the processes of weather, erosion and deposition.

Special Needs Component [modification(s)]: Identified student modification(s) would include: BSI student partnered with a buddy to complete activity together; questions read-aloud to identified student; and extra-time provided to identified student for completion of activity.

Sample Student Products:

Model(s) of Instruction: Cooperative learning.

Time Allotment: 1 class period. 50 Min. per class.

Author's Reflection (s)/Critical Analysis:

MATERIALS AND RESOURCES

Instructional Materials: Teacher and commercially prepared activity review packet.
Student maintained notebook.
Exit Card.
Teacher-prepared Study Guide.

Attachments

1. <u>Teacher Prepared Study Guide</u>
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Resources:

- Materials and resources:
Textbook (Scott Foresman)
Microsoft Word