artsNOW
Integrated learning solutions

UNIT: ARTFUL EARTH–EXPLORING ROCKS AND SOILS
WORD ART AND ROCK RIDDLES (Lesson 2 of 3)
Grade Band: 3, 4
Content Focus: Theatre & Science



LEARNING DESCRIPTION

In this arts integrated lesson, students will use visual arts and theatre to demonstrate their understanding of rocks. Students will create a Word Art illustration focusing on one of the three types of rocks. Students will then create and perform a riddle and or monologue in which the class (audience) tries to guess which rock it represents. Students will compare and contrast the attributes/characteristics of igneous, sedimentary, and metamorphic rocks.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How are the three types of rocks formed? How are the three types of rocks alike and different? What is the difference between the three types of rocks?	I can identify the three types of rocks: Igneous, sedimentary, and metamorphic. I can create and perform a monologue/riddle describing the three types of rocks: Igneous, sedimentary, and metamorphic.

	I can compare and contrast the three types of rocks: Igneous, sedimentary, and metamorphic.

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
Grade 3: S3E1 Obtain, evaluate, and communicate information about the physical attributes of rocks and soils. S3E1.a Ask questions and analyze data to classify rocks by their physical attributes (color, texture, luster, and hardness) using simple tests. S3E1.b Plan and carry out investigations to describe properties (color, texture, capacity to retain water, and ability to support growth of plants) of soils and soil types (sand, clay, loam). S3E1.c Make observations of the local environment to construct an explanation of how water and/or wind have made changes to soil and/or rocks over time.	**Grade 3:** **THEATRE:** TA3.PR.1 Act by communicating and sustaining roles in formal and informal environments. **VISUAL ARTS:** VA3.RE.1 Use a variety of approaches for art criticism and to critique personal works of art and the artwork of others to enhance visual literacy. VA3.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
Grade 4: 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	**THEATRE:** **Anchor Standard 3:** I can act in improvised scenes and written scripts. **Anchor Standard 8:** I can relate theatre to other content areas, arts disciplines, and careers. **VISUAL ARTS:** **Anchor Standard 5:** I can interpret and evaluate the meaning of an artwork. **Anchor Standard 7:** I can relate visual arts ideas to other arts disciplines, content areas, and careers.

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
• Rock - A naturally occurring solid substance composed of one or more minerals, mineraloids, or organic materials • Sedimentary rocks - A type of rock that forms from the accumulation, compaction, and cementation of sediments over time • Metamorphic rocks - A type of rock that forms when existing rocks—either igneous, sedimentary, or other metamorphic rocks—are subjected to high heat, pressure, and/or chemically active fluids over long periods of time • Igneous rocks - A type of rock that is formed from the cooling and solidification of molten rock (magma or lava) • Magma - Molten rock that is found beneath the Earth's surface • Weathering - The process by which rocks and minerals break down into smaller pieces or change chemically due to exposure to environmental conditions such as wind, water, temperature changes, and biological activity • Sediments - Small particles of rock, minerals, organic materials, or other substances that have been broken down or weathered from larger rocks over time	• Voice - Actors use their voice to be heard by the audience clearly. Actors must also apply vocal choices such as pitch, tempo, and volume to the character they are dramatizing. • Pitch - The highness or lowness of sound • Body - Actors use their bodies to become a character through body posture and movement. What your mind thinks, what your emotions feel, all of this is supposed to show up in your body. • Texture - When referring to an actor's voice, texture describes the unique quality, feel, or timbre of the voice. Just as texture in visual art or touch refers to the surface characteristics (smooth, rough, gritty, etc.), vocal texture relates to the way the voice sounds and the impressions it conveys. • Word art - A form of visual art that uses words, letters, or text as the main medium to create an artistic representation • Color - An element of art with three properties: 1) Hue: The name of the color, e.g. red, yellow, etc., 2) Intensity: The purity and strength of the color (brightness or dullness), 3) Value: The lightness or darkness of the color (shades and tints) • Texture - The surface quality, or "feel" of an object, such as roughness, smoothness, or softness. Actual texture can be felt while simulated textures are implied by the way the artist renders areas of the picture.

MATERIALS

- Chart paper
- Samples of igneous, sedimentary, and metamorphic rocks
- Markers
- White mixed media paper
- Pencils
- Magnifiers (optional)
- Document camera (optional)
- Three-Column Blank Chart (one per group)
- Word Art Examples
- Informational Writing Rubric (extension)

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

- Each table/group will be given three samples/examples of rocks.
- Using a Three-Column Blank Chart, the groups will discuss and fill in their chart writing down their observations.
    - Students should note the attributes in size, texture, color, hardness, softness, etc.
    - They should be able to identify all three rocks: Igneous, sedimentary, and metamorphic.
    - The students should also explain how each rock is created in a different manner than the others.
- Each group will share their observations with the rest of the class. The teacher will compile the group observations into one large three column chart paper.

Work Session

Part 1:

- Ask each small group to create a riddle for an assigned rock (igneous, sedimentary, metamorphic).
    - The riddle must be written in first person.
    - Students must decide what kind of voice they think that rock would have and how they think that rock would move if it came to life.
        - Ask students to think about the pitch (how high or low) and texture (rough, smooth, etc.) of their rock's voice.
- Teacher will demonstrate and share an example of a rock riddle: I am smooth to the touch. I am round in size and gray in color. Where you may find me is in the river. What type of rock am I?

Part 2:

- Each group will perform their riddle for the class in character using their voices and bodies.
- The class will then try to guess which type of rock is being demonstrated by the words given in the riddles along with any movement that may assist in better understanding.

Part 3:

- Give students a piece of blank paper.
- Students should create Word Art to express the type of rock that they wrote the riddle about: Igneous, sedimentary, metamorphic.
    - Students should consider the color and texture of the rock and include this in their lettering.
    - Students should consider the type of chemical/physical change that takes place in order for nature to create the rock.
        - As part of their Word Art, they should illustrate this change in a way that demonstrates the type of new rock that forms. This may look like the letters changing from the beginning of the word to the end of the word.
    - Project Word Art Examples to help students understand the expectations of the artwork.

Closing/Reflection

- Students should create a written reflection explaining the type of rock they chose, how it is formed, how they used their voices and body movements when performing their riddle to describe the rock, and how they used color and texture to demonstrate characteristics of their rock and how it's formed in their Word Art.

ASSESSMENTS

Formative

- Teacher observation of students while writing their riddles and creating their rock characters to assess their knowledge of the three different types of rocks

Summative

- Students' rock riddles contain accurate information about the attributes of their type of rock.
- Students' use their voices and bodies to embody the attributes of their rocks.
- Students use color and texture to communicate the attributes of their rocks and how they are formed in their Word Art.

DIFFERENTIATION

Accelerated:

- Allow your higher-level learners as well as gifted students an extension research activity. Put these students in pairs. The small groups will be given a mineral. They should identify the attributes of their mineral, where their mineral is found, and what the mineral is used for or its purpose.
    - They can then write a short informational essay using the above information. Then they can create a "Who Am I" riddle for their assigned mineral. They can then teach this new information to other students.
        - Example of a "Who Am I" mineral riddle: I am yellow and soft. I smell really bad. I leave a yellow stain. I am a mineral. Who am I? Answer = sulfur

- Students can write an informational piece demonstrating their knowledge of the following: the three different types of rocks, their attributes, as well as how each type of rock is created. Informational Writing Rubric

Remedial:

- Provide these students with photographs/pictures of the three types of rocks so they are able to refer back to the three different types of rocks and are using the correct terminology as much as possible while working on the project. These photographs/pictures could be of the three types of rocks in their natural settings so these learners are able to make better connections.
- Allow students to orally present their reflection rather than writing it.
- Format the written reflections as a question and answer.

ADDITIONAL RESOURCES

CREDITS

U.S. Department of Education- STEM + the Art of Integrated Learning
U.S. Department of Education Arts in Education--Model Development and Dissemination Grants Program
Cherokee County (GA) School District and ArtsNOW, Inc.
Ideas contributed and edited by: Diane McMullen, Edith Alexander, Liz Pendlington, Jessica Espinoza, Richard Benjamin Ph.D., Michele McClelland, Mary Ellen Johnson, Jane Gill

**This integrated lesson provides differentiated ideas and activities for educators that are aligned to a sampling of standards. Standards referenced at the time of publishing may differ based on each state's adoption of new standards.*

Revised and copyright: June 2025 @ ArtsNOW