

Rock Cycle • Change



Project Essential Questions

- How can dance be used to analyze the rock cycle?
- What are the steps in the rock cycle?

PROJECT DESCRIPTION

In this arts integrated project, third grade students will analyze the rock cycle by composing small group dance compositions. Students will use the dance concepts: body shapes, non-locomotive and locomotive movements to depict how rocks change their form based on physical and chemical changes that naturally occur over time. Groups will observe their peers and evaluate the dance pieces based on their understanding of rocks.

LEARNING TARGETS

“I Can...”

- Use movement to represent the rock cycle
- Identify how the changes in nature result in a new type of rock forming
- Identify all of the steps in the rock cycle

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Units provide differentiated ideas and activities aligned to a sampling of standards.

The units do not necessarily imply mastery of standards, but are intended to inspire and equip educators.

Produced through the U.S. Department of Education: Arts in Education—Model Development and Dissemination Grants Program
Cherokee County (GA) School District and ArtsNow, Inc.

DURATION: 1-2 days

Project Description	Learning Targets
<p>In this arts integrated project, third grade students will analyze the rock cycle by composing small group dance compositions. Students will use the dance concepts: body shapes, non-locomotive and locomotive movements to depict how rocks change their form based on physical and chemical changes that naturally occur over time. Groups will observe their peers and evaluate the dance pieces based on their understanding of rocks.</p>	<p>“I Can...”:</p> <ul style="list-style-type: none"> ● Use movement to represent the rock cycle ● Identify how the changes in nature result in a new type of rock forming ● Identify all of the steps in the rock cycle

ESSENTIAL QUESTIONS

<ul style="list-style-type: none"> ● How can dance be used to analyze the rock cycle? ● What are the steps in the rock cycle?

STANDARDS

Curriculum Standards	Arts Standard
<p>S3E1 Students will investigate the physical attributes of rocks and soils</p>	<p>D3CR.2. Demonstrates an understanding of dance as a way to communicate meaning</p> <ol style="list-style-type: none"> a. Uses a combination of improvisation and choreographic tools to create movement based on one’s own ideas, feelings, concepts, and kinesthetic awareness b. Recognizes and accurately describes movement and movement elements. c. Moves expressively to music or other accompaniment (e.g., sound, text)

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> ● Sedimentary rocks ● Metamorphic rocks ● Magma ● Igneous rocks ● Weathering ● Sediments 	<ul style="list-style-type: none"> ● Body shapes ● Body levels ● Locomotive movement ● Choreography

TECHNOLOGY INTEGRATION

<ul style="list-style-type: none"> ● A video camera could be used to record each group's performance, allowing for deeper reflection for students by being able to go back and review the recorded performances.

ASSESSMENT

Formative	Summative
<ul style="list-style-type: none">• Class discussion, group discussions, reflection questions, anecdotal notes when observing students working in small groups, class reflection/discussion, dances created, and the “Road Maps”.	<ul style="list-style-type: none">• Students could write about the process of creating the rock cycle dance as a reflection writing piece.• They could also critique or evaluate their peers when they performed their dance compositions.

MATERIALS

Video camera, chart paper

Activating Strategy
<ul style="list-style-type: none">• As a whole group/class review the rock cycle together by analyzing a diagram. <p><u>Suggested images of diagrams:</u> http://www.rocksandminerals4u.com/images/rock-cycle-diagram-im.jpg https://s-media-cache-ak0.pinimg.com/236x/ae/9f/e7/ae9fe7b1890fde1b727887c435f5ac26.jpg http://www.cotf.edu/ete/images/modules/msese/earthsysflr/EFCycleP2.gif https://www.learner.org/interactives/rockcycle/images/rockintro_08.gif</p> <p>Dance Warm-Up</p> <ul style="list-style-type: none">• Students will move freely through the space of the classroom while teacher plays instrumental music.• When the music stops they are to make a body shape.• Students will explore creating high, mid, and low body shapes.• Students will create a class list of examples of locomotive movement. (ie. zig-zag, skip, slither, jump)• As the teacher calls out a few of the locomotive movements from the created list, the students will move freely through the the space demonstrating the assigned movements.
Main Activity
<p>Part 1: <u>Expectations:</u></p> <ul style="list-style-type: none">• Place students in small groups and go over the expectations for the dance composition they will create together today.• Stress that each group must have 3 group body shapes that depict the 3 types of rocks and 3 locomotive movements that depict the chemical/ physical changes that occur during the rock cycle that transform the rock into the next type. (ie. weathering, heat & pressure)• Go over the Choreography Planning Document (see Downloads)

Part 2:

Small Group Planning:

- You may need to scaffold the planning of their dances by first having them create 3 body shapes for their 3 different rocks.
- Then have them create the locomotive movements that moves them into each new rock.

Part 3:

Sharing their Dances:

- Allow time for the small groups to create their “dance”.
- Groups will perform their dance pieces for the class.
- The students in the audience will observe and determine which body shapes represented which types of rock and also will look for the locomotive movements that represent the changes in nature.

REFLECTION

Reflective Strategies

Questions for Group Reflection:

- How did you know which body shape represented which rock?
- Did the movement choices that the group selected accurately depict the rock cycle?
- Are there any changes we might suggest these dancers make to their choreography to more effectively show the rock cycle?

OPTIONAL RESOURCES

- The Rock Cycle By Base 12 Innovations, Open iTunes to buy and download apps. Free Category: Education Updated: Apr 03, 2013 Version: 1.3 Size: 28.0 MB Language: English Seller: Sivaraman Sivaswami © 2011 Base 12 Innovations
- Rock Cycle - BrainPOP: <https://www.brainpop.com/science/earthsystem/rockcycle/>

APPENDIX (see Downloads)

- **Choreography Planning Document**

CREDITS

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