



Project Essential Questions

- How can we use theatre to depict the Earth's tilt and rotation and how they impact seasonal changes?
- What is the relative effect of the Earth's gravitational pull and the Sun's virtual position in regards to our seasonal changes?

PROJECT DESCRIPTION

Students will create a theatrical representation of the four season cycle demonstrating their understanding of what causes the four seasons. Students will personify the Sun, Earth and the characteristics of each season. They will apply their knowledge by writing a script that explains and models how the earth's tilt and revolution affects the change in seasons.

LEARNING TARGETS

"I Can..."

- Create a script that models how the tilt and rotation of Earth affect our seasonal changes
- Become a character in a play about seasons
- Create dialogue that personifies the Earth, Sun, and four seasons
- Describe how the rotation and tilt of the earth affect seasons

www.artsnowlearning.org

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.

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Cherokee County (GA) School District and ArtsNow, Inc.

DURATION: 3-5 days

Project Description	Learning Targets
<p>Students will create a theatrical representation of the four season cycle demonstrating their understanding of what causes the four seasons. Students will personify the Sun, Earth and the characteristics of each season. They will apply their knowledge by writing a script that explains and models how the earth’s tilt and revolution affects the change in seasons.</p>	<p>“I can...”</p> <ul style="list-style-type: none"> ● Create a script that models how the tilt and rotation of Earth affect our seasonal changes ● Become a character in a play about seasons ● Create dialogue that personifies the Earth, Sun, and four seasons ● Describe how the rotation and tilt of the earth affect seasons

ESSENTIAL QUESTIONS

<ul style="list-style-type: none"> ● How can we use theatre to depict the Earth’s tilt and rotation and how they impact seasonal changes? ● What is the relative effect of the Earth’s gravitational pull and the Sun’s virtual position in regards to our seasonal changes?
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STANDARDS

Curriculum Standards	Arts Standards
<p>S4E2. Students will model the position and motion of the earth in the solar system. c. Demonstrate the revolution of the earth around the sun and the earth’s tilt to explain the seasonal changes.</p> <p>ELAGSE4RL5 Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.</p> <p>ELAGSE4RI3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>ELAGSE4RI4 Determine the meaning of general academic language and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.</p> <p>MGSE4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Explain informally why the pattern will continue to develop in this way.</p>	<p>D5FD.3 Recognizes the anatomical and kinesiology concepts in movement. d. Understands, explores, and sequences clear movements of body parts, body halves, and the body in planes in space.</p> <p>D5FD.4 Understands and applies music concepts to dance.</p> <p>D5CR.2 Demonstrates an understanding dance as a way to communicate meaning.</p> <p>M4GM.10 Moving, alone and with others, to a varied repertoire of music. d. Perform choreographed and non-choreographed movements.</p>

KEY VOCABULARY**Content Vocabulary**

- Cycle
- motion orbit
- Rotate
- Revolve
- Position
- Traits
- Temperature
- Order
- Rates of change
- Angle (axis angle)
- Properties (of a season)
- Orientation
- Informational text
- Topic sentence
- Main idea
- Key details
- Summary
- Cause/effect

Art Vocabulary

- Locomotor: movement that travels through space; examples of locomotor movements: walk, skip, jog, leap, slide, run, hop, gallop, glide
- Nonlocomotor: stationary movement that does not travel through space; examples of non-locomotor movements: float, melt, push, reach, kick, pull, bend, sink, turn, wiggle, rise, swing, burst, twist, flick, dab, slash, punch
- Soundscaping: sound effects
- Tempo: the speed of the beat
- Dynamics: refers to loud and soft sounds; volume
- Pianissimo: very quiet
- Piano: quiet
- Mezzo piano: medium quiet
- Mezzo forte: medium loud
- Forte: loud
- Fortissimo: very loud
- Crescendo: gradually get louder
- Decrescendo: gradually get quieter
- Largo: very slow and broad
- Adagio: slowly
- Andante: walking speed
- Moderato: medium speed
- Adagio: fast
- Presto: very fast
- Vivace: very, very fast
- Ritardando: gradually slow down

TECHNOLOGY INTEGRATION

Consider encouraging students to select a playlist for underscoring their dramatization. Direct them to consider how the music may change for each season. The process of selecting a playlist can be done using various music apps.

ASSESSMENTS

Formative	Summative
<ul style="list-style-type: none"> • Monitor students working in groups • Feedback during the rehearsal process • Student questioning 	<ul style="list-style-type: none"> • Seasons Rubric (see Downloads)

Activating Strategy (5-10 min)
<ul style="list-style-type: none"> • Facilitate a class discussion about how the seasons change. Fold a piece of paper in fours and create a storyboard that shows how where we live on Earth is impacted in each season based on our proximity to the Sun.

Main Activity
<p>Part 1: Warm-up Our Bodies and Voices</p> <ul style="list-style-type: none"> • Review the elements of drama, (body language, facial expression, locomotor and non-locomotor movement) and how to use sound for effect (called “soundscaping”). Groups will be given time to experiment these expressions. The teacher can give groups topic ideas for their practice: <ul style="list-style-type: none"> ○ Example 1: Happiness at a home run hit during a ballgame. How is this expressed by each character in the event: the batter, the people in the stands, the coach? ○ Example 2: Your dog ate your favorite pair of sneakers. Now you have no shoes to go outside and play. How would you show me with your body that you are angry or frustrated? • Students work in groups experimenting with how to use drama to explain the cause/effect relationship of the earth rotating around Sun. Guide a discussion with the class so that the students understand that the Sun would use non-locomotor movement, the Earth would use locomotor motion to rotate and revolve around the sun. Students need to consider how they might represent the Earth’s tilt on its axis. Other features they might include characters representing the weather, or characters choosing particular clothing to express the weather during these seasons. <p>Part 2: Creating a Script</p> <ul style="list-style-type: none"> • Place students in small groups of 3-5 students. • Students work together to create a script for their Season Play. The play should consist of various characters: Sun, Earth, a person/place on Earth, and seasonal changes (snow, wind, etc.) • Using the rubric as guidance, students will theatrically represent the seasons conceptually in this dramatization by using the literary device personification. <p>Part 3: Performing the Season Play</p> <ul style="list-style-type: none"> • After each presentation, the class will discuss how the presentation represented how seasons change. They may also include peer feedback, such as adding more specific movement, facial expressions, sounds, etc., to help the presentation be more effective.

REFLECTION
Reflection Questions
<ul style="list-style-type: none"> • <i>What might you say about your character’s experience through the four seasons? (Include where you are in position to the sun, and how you feel.)</i> • <i>What adjectives might you use when you are personifying the Earth during a particular season?</i>

- *What colors/types of music would help with the personification?*

DIFFERENTIATION**Accelerated:**

- These students could write a compare/contrast paragraph about how the seasons would be different and the same in the southern hemisphere.

Remedial/EL Students:

- Consider doing the playwriting with a guided small group to help with connecting the science concept to the storytelling of the dramatization.

ADDITIONAL RESOURCES

- www.howstufworks.com
- www.visuallearningsys.com

APPENDIX

- **Seasons Rubric**

CREDITS

U.S. Department of Education

Arts in Education--Model Development and Dissemination Grants Program

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Seasons on Stage Rubric

TASK: Create a dramatization of the seasonal cycle.

Task	4	3	2	1
Use all elements of expression, such as body shape, gestures, movement and facial expressions to describe the seasons.	Student uses all elements of expression to describe the seasonal cycle accurately.	Student uses most elements of expression to describe the seasons accurately.	Student uses some elements of expression to describe the seasons accurately.	Student uses one or less elements to describe the seasons.
Use personification to explain how the seasons change due to the Earth's tilt during its revolution around the Sun.	Student uses personification to clearly explain how the seasons change. The writing stays on topic the entire script.	Student most of the time uses personification to depict how the seasons change. Most of the time the writing stays on topic.	Student uses personification some of the time to depict how the seasons change. Some of the time the writing stays on topic.	Student did not use personification to depict the changes of the seasons. Rarely does the writing explain the concept.
Accuracy of Science Content and Integration of Science Content Vocabulary	All facts presented about the seasonal cycle are complete and correct. A great deal of science vocabulary was integrated effectively.	Most facts presented about the seasonal cycle are complete and correct. Some science vocabulary is integrated.	Most science content is neither complete nor correct. Little science vocabulary is integrated.	None of the science content is complete or correct. No science vocabulary is integrated.

Total Score: _____