artsNOW
Integrated learning solutions

UNIT: GEOMETRY
CHARACTERIZATION & GEOMETRY (Lesson 4 of 5)
Grade Band: 4
Content Focus: Theatre & Math



LEARNING DESCRIPTION

In this lesson, students will use their voices and bodies to create the characters of an artist and museum curator. Students will collaborate with each other to write and perform a script where one student playing the role of artist will pitch their geometric Stabile sculpture (from lesson two in this unit) to the other student playing the museum curator. Students will demonstrate understanding of geometric concepts through their scripts.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How do actors use their voices and bodies to create characters? What are the different types of polygons and what are their defining characteristics?	I can use my voice and body to create a character. I can explain my artwork using mathematical concepts.

What are the different types of angles and what are their defining characteristics?	

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
4.GSR.7.1 Recognize angles as geometric shapes formed when two rays share a common endpoint. Draw right, acute, and obtuse angles based on the relationship of the angle measure to 90 degrees 4.GSR.8.1 Explore, investigate, and draw points, lines, line segments, rays, angles (right, acute, obtuse), perpendicular lines, parallel lines, and lines of symmetry. Identify these in two-dimensional figures. 4.GSR.8.2 Classify, compare, and contrast polygons based on lines of symmetry, the presence or absence of parallel or perpendicular line segments, or the presence or absence of angles of a specified size and based on side lengths.	TA4.CR.1 Organize, design, and refine theatrical work. TA4.CR.2 Develop scripts through theatrical techniques. TA4.PR.1 Act by communicating and sustaining roles in formal and informal environments.

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
4.G.1 Draw points, lines, line segments, rays, angles (i.e., right, acute, obtuse), and parallel and perpendicular lines. Identify these in two-dimensional figures. 4.G.2 Classify quadrilaterals based on the presence or absence of parallel or perpendicular lines. 4.G.3 Recognize right triangles as a category, and identify right triangles. 4.G.4 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line symmetric figures and draw lines of symmetry.	**Anchor Standard 1:** I can create scenes and write scripts using story elements and structure. **Anchor Standard 3:** I can act in improvised scenes and written scripts

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
• Right angle - An angle whose measure is exactly 90° • Acute angle - An angle whose measure is between 0° and 90° • Obtuse angle - An angle whose measure is between 91° and 180° • Equilateral triangle - A three-sided figure with sides of equal length • Isosceles triangle - A three-sided figure with two sides of equal length • Scalene triangle - A three-sided figure with no sides equal in length • Parallelogram - A quadrilateral with both pairs of opposite sides parallel • Pentagon - A five-sided polygon • Rectangle - A parallelogram with four right angles • Rhombus - A parallelogram with four sides of equal length • Square - A plane figure with four equal straight sides and four equal angles • Trapezoid - A quadrilateral with at least one pair of parallel sides	• Body – An actor's tool, which we shape and change to portray the way a character looks, walks, or moves • Posture – Body position; how a character sits or stands • Pose - A deliberate and often stationary position or posture that an actor assumes on stage • Voice - An actor's tool, which we shape and change to portray the way a character speaks or sounds • Pitch – How high or low a voice is • Volume – How loud or quiet a voice is • Improvisation - A creation that is spoken or written without prior preparation • Scene – The dialogue and action between characters in one place for one continuous period of time • Script - The written text that provides the blueprint for a performance including dialogue between the characters • Dialogue - A conversation between two or more persons • Art curator - A professional responsible for managing, organizing, and overseeing collections of artwork a museum, gallery, or other institutions • Exhibit - A public display of artwork, typically held in galleries, museums, or other cultural venues

MATERIALS

- Paper and writing utensils (or student devices)

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

- Start with a general physical warm-up to get the students' bodies ready. Use exercises such as:
    - Stretching: Stretch all major muscle groups.
    - Shaking out limbs: Shake out arms, legs, and the whole body.
    - Energy Passes: Stand in a circle and pass a clap or a simple motion around to build group focus and energy.
- Breathing and voice exercises: Have students stand in a circle and practice breathing from the diaphragm to project their voices. Have them say a simple sentence like, “I have an amazing idea!” and project it to the back of the room.
- Body language practice: Have students walk around the room, alternating between different emotional states (confident, shy, excited, nervous). Then, discuss how body language changes depending on their state.

Work Session

- Explain to students that just like actors perform in character, business professionals also perform when pitching ideas. They must engage, persuade, and leave a lasting impression on their audience
    - Briefly discuss:
        - The importance of body language: Gestures, posture, and eye contact to convey confidence and clarity
        - Voice projection and tone: Varying the voice to emphasize key points and using projection to ensure clarity
        - Character in business: Presenting as a confident, knowledgeable expert in the subject matter
- Have students partner with the student with whom they made their Stabile sculptures.
- Tell students that one partner will imagine that they want their Stabile sculpture to be displayed in a new art exhibit in a famous art museum. The focus of the exhibit is how artists use math to create artwork. The other partner will be the museum’s curator.
    - Students must write and present a short pitch to try to convince the museum curator to feature their artwork in the exhibit. Because the focus of the exhibit is how artists use math to create their artwork, students must be able to explain what mathematical concepts are used in their artwork. *Students should work together on the script regardless of which role they play.*
    - The museum curator must ask relevant questions of the artist about how math is used in the design of their artwork.
    - Students will write a script and will practice performing it using their voices and bodies to embody each character.
    - As students develop each of their characters, as them to consider:
        - How does your character stand? Sit? Walk?
        - What is their speaking style: Authoritative, friendly, enthusiastic?
        - What are their facial expressions and gestures while speaking?
    - Remind students to write the script as their characters, which means that they should use first person and dialogue.

Closing/Reflection

- Students will perform their scenes for the class. Discuss appropriate audience participation and etiquette prior to performances.
- After each performance, have the audience discuss how the actors used their voices and bodies to demonstrate their characters.

ASSESSMENTS

Formative

- Teachers will assess understanding throughout the lesson by:
  - Observing whether students can use their voices and bodies to act out a character
  - Explain their artwork using mathematical concepts
  - Collaborate with their group to write a script

Summative

CHECKLIST:

- Students can use their voices and bodies to create a character.
- Students can explain their artwork using mathematical concepts.

DIFFERENTIATION

Accelerated:

- After students have performed their scenes, have them create characters using their voices and bodies for the actual polygons represented in their artwork.
- Have students create props and incorporate them in their performances.

Remedial:

- Scaffold the lesson by providing a graphic organizer and/or sentence starters to help students write their scenes.

ADDITIONAL RESOURCES

CREDITS

U.S. Department of Education- STEM + the Art of Integrated Learning
Ideas contributed by: Katy Betts

**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.*

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