



# artsNOW

Integrated learning solutions

## GEOMETRY GROOVE Grade Band: 2-3 Content Focus: Dance & Math



### LEARNING DESCRIPTION

In this lesson, students will use movement and shape to understand types of angles and composition of polygons.

### LEARNING TARGETS

Essential Questions	"I Can" Statements
How can dance/movement aid in comprehension of angles and polygons?	<p>I can identify and create different types of angles.</p> <p>I can create a movement for a polygon that shows different types of angles.</p>

### GEORGIA STANDARDS

Curriculum Standards	Arts Standards
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<p><b>Grade 3:</b>  3.GSR.6: Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry.  3.GSR.6.1 Identify perpendicular line segments, parallel line segments, and right angles, identify these in polygons, and solve problems involving parallel line segments, perpendicular line segments, and right angles  3.GSR.6.2 Classify, compare, and contrast polygons, with a focus on quadrilaterals, based on properties. Analyze specific 3- dimensional figures to identify and describe quadrilaterals as faces of these figures.</p>	<p><b>Grade 3:</b>  ESD3.CR.1 Demonstrate an understanding of the choreographic process.  ESD3.CR.2 Demonstrate an understanding of dance as a form of communication.  ESD3.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance  ESD3.RE.1 Demonstrate critical and creative thinking in dance.</p>
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## SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
<p><b>Grade 3:</b>  3.G.3 Use a right angle as a benchmark to identify and sketch acute and obtuse angles.</p>	<p><b>Anchor Standard 1:</b> I can use movement exploration to discover and create artistic ideas and works.  <b>Anchor Standard 2:</b> I can choreograph a dance.  <b>Anchor Standard 3:</b> I can perform movements using the dance elements.  <b>Anchor Standard 7:</b> I can relate dance to other arts disciplines, content areas, and careers.</p>

## KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> <li>● <u>Acute angle</u> - An angle less than 90 degrees but more than 0 degrees</li> <li>● <u>Obtuse angle</u> - An angle between 90 and 180 degrees</li> <li>● <u>Right angle</u> - An angle of 90°, as in a corner of a square</li> <li>● <u>Polygon</u> - A two-dimensional enclosed figure with at least three sides</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Choreography</u> - The art of composing dances and planning and arranging the movements, steps, and patterns of dancers</li> <li>● <u>Choreographer</u> - A person who creates dances</li> <li>● <u>Shape</u> - This refers to an interesting and interrelated arrangement of body parts of one dance; the visual makeup or molding of the body parts of a single dancer; the overall visible appearance of a group of</li> </ul>



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	<p>dancers</p> <ul style="list-style-type: none"> <li>● <u>Space</u> - An element of movement involving direction, level, size, focus, and pathway</li> <li>● <u>Formation</u> - The placement of dancers in a performance space</li> </ul>
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## MATERIALS

- Sound source and music with a steady beat
- Markers or crayons
- Printed copies of dance photography

## INSTRUCTIONAL DESIGN

**Opening/Activating Strategy**

*Classroom Tips: Set up chairs and tables in a circular format to maximize students' engagement and ability to see their peers during the activity and performance. Also establish parameters for acceptable movement choices and discuss audience behavior/etiquette with students.*

- Begin the lesson by engaging students in movement that introduces students to a few of the Elements of Dance: Body, space and time.
  - Have students arrange themselves in the classroom with enough personal space to move freely without touching a neighbor.
  - Turn on instrumental music with a steady beat.
  - First, have students bring awareness to their bodies by leading them through gentle stretches starting from the head and moving to the toes (e.g., head circles, shoulder shrugs, toe touches, etc.).
  - Next, bring students' awareness to the rhythm of the music by having them walk in place to the beat with high knees, swinging their arms side to side.
  - Now, direct students create shapes with their bodies; use geometric language such as curved shapes or sharp angles to direct students.
  - Ask students to volunteer to be the leader by demonstrating a shape for students to copy.
  - This could lead into a game of Pass the Movement if time permits.
    - The objective of the game is to create a sequence of movements by passing a dance move around the circle or group, with each student adding their unique twist.
    - Each student will create a simple movement and "pass" it to the next student, who will then repeat the movement and add their own.
    - Choose one student to start the game. This student will perform a simple movement, such as a clap, a jump, a spin, or a wave. Encourage students to focus on creating shapes and angles with their bodies.



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- The starting student then "passes" this movement to the next student by making eye contact and gesturing towards them.
  - The next student repeats the initial movement and then adds their own unique movement.
  - This student then "passes" the combined movements to the next student.
  - Each subsequent student repeats the previous movements in the correct order and adds their own new movement.
  - Continue passing the movement around the circle or along the line until all students have had a turn.
  - Once the movement has gone all the way around, have the group perform the entire sequence together from start to finish.
- Have students return to their seats.

### Work Session

- Discuss with students how they used their bodies to create angles and shapes.
- Divide the class into small groups.
  - Ask students if they can create an obtuse angle with their bodies? Acute? Right?
  - Provide time for groups to share.
- Pass out printed copies of dance photography to students.
  - Ask students to identify the types of angles, shapes, and polygons that they see in the photos.
  - Students should outline and label each type in a different color crayon/marker.
  - Project images of the photography on the board and allow time for students to share what they identified in the photos.
- Next, randomly pass out note cards with a type of angle written on it.
- Students must create a shape with their bodies that demonstrates a polygon with that type of angle (i.e., acute angle in a rhombus).
  - Students can choose to each make the movement with their bodies individually, or can combine to make one large formation together.
- Now, tell students that dancers move to the beat of music. Students will have four beats to perform their movement. Tell students that by the count of four, they should be showing their polygon with their bodies and should freeze in the shape.
  - Practice a four count to the beat of the music with students.
  - Allow time for students to practice using a four count to perform their movement.

### Closing/Reflection

- The students will perform their movements for their classmates. Discuss appropriate audience participation and etiquette prior to performances.
- After each performance, the audience should be able to identify the polygon and the types of angles represented.

## ASSESSMENTS

### Formative

Teachers will assess students' understanding of the content throughout the lesson by observing students' participation in the activator; ability to identify types of shapes, polygons and angles in dance photography; and collaborative choreography.



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## Summative

### CHECKLIST

- Students can identify and create different types of angles.
- Students can create a movement for a type polygon with the type of angle assigned.

### DIFFERENTIATION

**Acceleration:** Challenge students to create a three movement phrase that includes three types of polygons that have the type of angle assigned. Students must create transitions between the movements to create smooth choreography.

**Remediation:** Scaffold the lesson by choosing a type of angle and polygon to create a movement for as a class. Then, have students create a new movement in their groups for a polygon using that same type of angle. Finally, groups will create a movement for a polygon that uses a new angle.

### ADDITIONAL RESOURCES

NA

*\*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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## ATLANTA BALLET

Centre for Dance Education

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