

USING MOVEMENT & DANCE TO EXPLORE SYMMETRY Grade Band: 2-4 Content Focus: Dance & Math



LEARNING DESCRIPTION

In this lesson, students will explore symmetry using movement and dance. They will begin this exploration by examining images and determining whether or not they are symmetrical, recognizing the defining attributes that make a shape symmetrical. Students will then create symmetrical formations with their bodies and identify the line of symmetry present during these formations. Finally, students will collaborate to combine what they learned about dance and symmetry to choreograph a final dance performance.

LEARNING TARGETS

| Essential Questions | "I Can" Statements |
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| How can symmetry be used in choreography? What are the attributes of a symmetrical shape? | I can identify symmetrical and asymmetrical shapes as well as a line of symmetry. |
| | I can use my body to create symmetrical shapes. |



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| I can create movements and choreograph dances that use symmetry, levels, and locomotor movements. |
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GEORGIA STANDARDS

| Curriculum Standards | Arts Standards | |
|---|---|--|
| Grade 2: 2.GSR.7: Draw and partition shapes and other objects with specific attributes and conduct observations of everyday items and structures to identify how shapes exist in the world. 2.GSR.7.2 Identify at least one line of symmetry in everyday objects to describe each object as a whole. Grade 3: 3.GSR.6: Identify the attributes of polygons, including parallel segments, perpendicular segments, right angles, and symmetry. 3.GSR.6.3 Identify lines of symmetry in polygons. | Grade 2: ESD2.CR.1 Demonstrate an understanding of the choreographic process. ESD2.CR.2 Demonstrate an understanding of dance as a form of communication. ESD2.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance ESD2.RE.1 Demonstrate critical and creative thinking in dance. Grade 3: 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.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance ESD3.RE.1 Demonstrate critical and creative thinking in dance | |

SOUTH CAROLINA STANDARDS

| Curriculum Standards | Arts Standards |
|---|--|
| Grade 4 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 use movement exploration to discover and create artistic ideas and works. |
| | Anchor Standard 2: I can choreograph a dance. |
| | Anchor Standard 3: I can perform movements using the dance elements. |

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| Anchor Standard 7: I can relate dance to other arts disciplines, content areas, and careers. |
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KEY VOCABULARY

| Content Vocabulary | | Arts Vocabulary | |
|--------------------|--|-----------------|---|
| ٠ | <u>Symmetry</u> - When one half of an object is a mirror image of the other half | ٠ | Movement phrase - A series of movements linked together to make a distinctive pattern |
| • | Asymmetry - When one half of an object is not a mirror image of the other half | ٠ | Non-locomotor - This refers to a movement that does not travel through space |
| ٠ | Line of Symmetry - An imaginary line where you can fold the image so that both halves are exactly the same | • | Locomotor - This refers to a movement that travels through space |
| ٠ | Reflection - An image or shape as it would be seen in a mirror | ٠ | <u>Steady beat</u> - An unchanging, continuous pulse |
| | | • | <u>Space</u> - An element of movement involving direction, level, size, focus, and pathway |
| | | ٠ | <u>Level</u> - One of the aspects of the movement element space; in dance, there are three basic levels: high, middle, and low |
| | | ٠ | <u>Choreography</u> - The art of composing dances and planning and arranging the movements, steps, and patterns of dancers |
| | | ٠ | Choreographer - A person who creates dances |
| | | ٠ | Shape - 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 dancers |
| | | ٠ | Formation - The arrangement or positioning of dancers in a performance area |



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MATERIALS

- Sound source and music with a steady beat
- Jump ropes
- Anchor chart/poster paper
- Markers
- Pencils
- Masking tape

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

Classroom Tips: Use cueing methods when directing in your classroom, such as "3-2-1- Freeze" and the term "Actor's Neutral". Make your expectations for the group dance task explicit and go over these before the group work begins. Display them so that students can refer back to them if they need to during their group working time.

Teacher prework: Post images of dancers in symmetrical and asymmetrical poses throughout the room. Post large chart paper next to each image.

- Conduct a Gallery Walk with students of images of dancers in symmetrical and asymmetrical shapes.
- Students will circulate the room observing the images of dancers.
- Students will write on the chart paper next to each image what they notice about the dancer's shape.
- Come back together as a whole class. Look at each image together as a class reading the comments and asking students to share their comments.

Work Session

- Review or teach about symmetry and the attributes that shapes must have in order to be symmetrical.
- Tell students that they will be using movement to demonstrate their understanding of symmetry.
- Begin by engaging students in a physical warm-up.
 - 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.).
 - Bring students' attention to levels (high, middle, low) with movements such as stretching up high and moving on tiptoes, crouching in a small ball close to the floor, and bouncing in place at a middle level.
 - Next, tell students to create shapes with their bodies at the level the teacher calls out (high, mid, or low).



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- Next, incorporate symmetry to the prompt, such as, a low level symmetrical shape and high level asymmetrical shape.
- Next, students will have the opportunity to create symmetrical formations with a partner (this can also be done individually).
 - Divide the class in half.
 - Group A will move to music. When the music stops, the partners will freeze in a formation that shows symmetry.
 - Group B (observers) will use a jump rope to create a "line of symmetry" on selected partners to check if their formation is symmetrical. Demonstrate how to do this before having students do it. If it is not, give students an opportunity to problem solve and revise their formation so that it is symmetrical.
 - Tell students that they will now incorporate levels: Low, mid and high to make symmetrical shapes.
 - Periodically pause the music to allow dancers to reflect on the prompt given: "What did we like about what we saw? What do we have to remember to do in order to remain symmetrical?"
 - Group A will switch roles with Group B so that Group B performs while Group A acts observes.
- Tell students that they will now explore partner mirroring.
 - Each pair should select their three favorite moves or shapes from the previous exercise. The movements will be performed as locomotor movements (traveling from one place to another, such as one wall of the room to the opposite wall). Tell students that the path made by a dancer is called a pathway.
 - Tape a "line of symmetry" down the middle of the floor. Tell students that one partner will stand on either side of the line of symmetry to perform their dance.
 - Students will work with their partner to choreograph a short locomotive movement phrase using their three chosen movements.
 - Students will perform their movement phrases using the line of symmetry taped on the floor.
- Bring the lesson to a close in a final group dance.
 - Divide students into small groups of four students.
 - Set criteria for group dances. An example of requirements is as follows; simplify requirements as needed.
 - Beginning pose/shape
 - Symmetrical shapes (three different shapes using different levels)
 - Partner mirroring (using upper and lower body)
 - Locomotor movement on the line of symmetry
 - Ending pose/shape

Closing/Reflection

- Students will perform their dances for their classmates. Discuss appropriate audience participation and etiquette prior to performances.
- Turn up the volume of the music and help students find the steady beat by tapping their toes on the floor.
- After each performance, the audience will discuss where they saw examples of symmetry in each dance and how the groups used locomotor movement, levels and mirroring in their choreography.



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ASSESSMENTS

Formative

Teachers will assess students' understanding of the content throughout the lesson by observing students' participation in the activator, identification of symmetrical and asymmetrical shapes, ability to use levels and body shapes to create symmetry, and collaboration with their groups to create choreography.

Summative

CHECKLIST

- Students can identify symmetrical and asymmetrical shapes as well as a line of symmetry.
- Students can use their bodies to create symmetrical shapes.
- Students can create movements and choreograph dances that use symmetry, levels, and locomotor movements.

DIFFERENTIATION

Acceleration: Challenge students to create their own criteria for their group choreography using symmetry and the dance concepts that they learned in class. Students should be able to articulate how they used dance concepts and symmetry in their choreography.

Remediation:

- Reduce the number of movements students are required to include in their choreography.
- Scaffold this lesson by leading the class in whole class choreography before students choreograph in their groups.
- Chunk each activity, gradually adding in steps.
- Rather than requiring students to complete all dances, allow students to choose which activity they want to use to demonstrate their understanding of symmetry (alternately, assign different tasks based on students' levels-more advanced students can create the small group dance with a partner, and students performing at a lower level can explore creating a symmetrical formation with a partner).

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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