

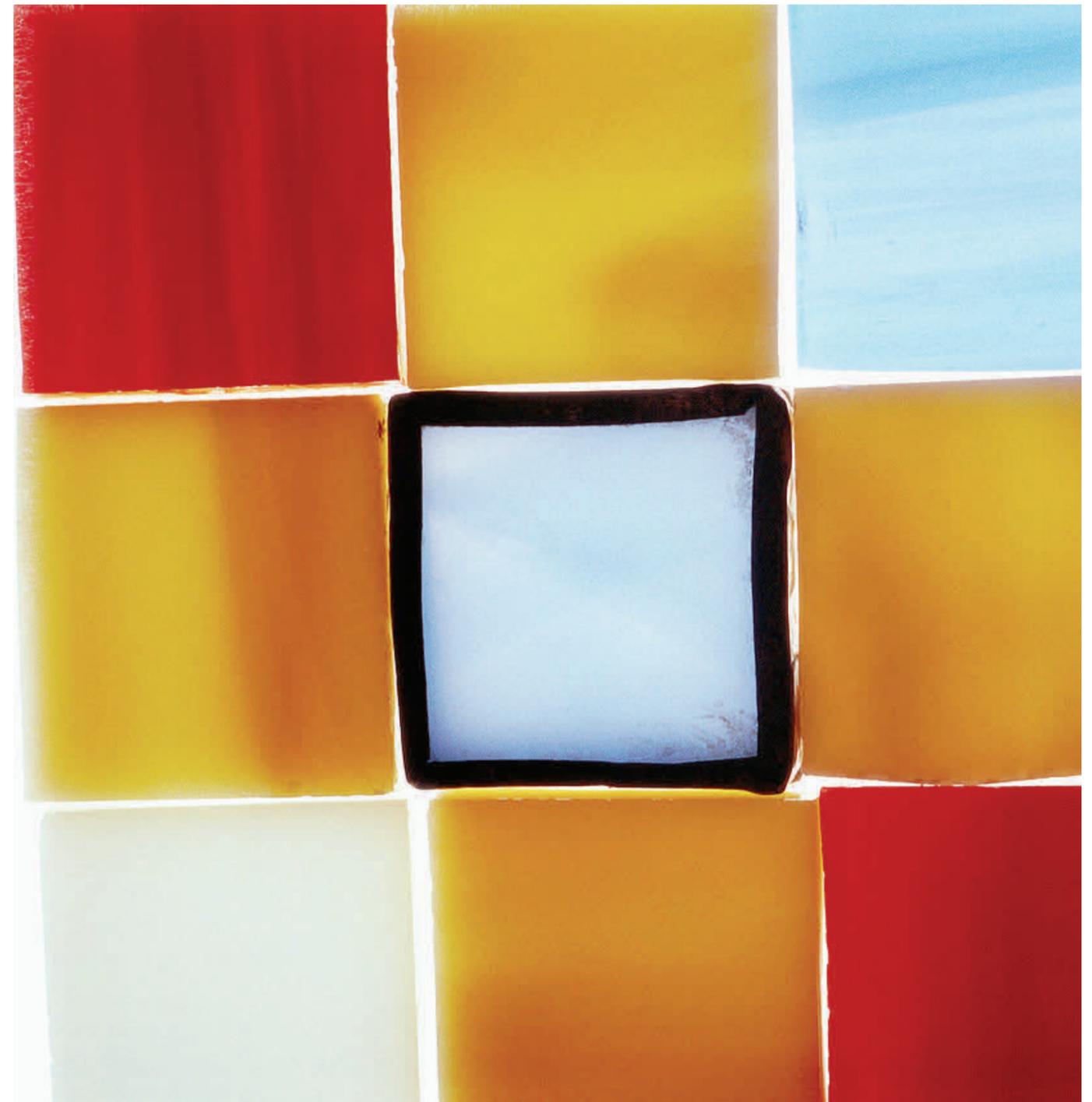
Notes/Reflections:

ATLANTA BALLET

Centre for Dance Education

Idea Contributed by Melissa Dittmar-Joy

Embodying Math Concepts • Angles • Plane Shapes •
Geometric Solids • Classification



Explore math themes and concepts with your students
through the process of movement!

Use movement and the creation of human structures to aid in comprehension of angles, plane shapes and geometric solids.

Essential Question:

How can dance/movement aid in comprehension of geometry concepts?

Process

- Basic movement warm-up
- Explore (with bodies) ways to create angles (right, acute, obtuse), plane shapes and geometric shapes.
- View dance photography
- Identify angles, plane shapes and geometric shapes found in photos. Outline each type in a different color crayon/marker. Discuss the attributes and classification of the shapes as appropriate for grade level.
- Break class into groups
- Students will select or be assigned one type of: angle, plane shape and/or geometric shape (as appropriate for grade level) and create human structures utilizing selection.
- Perform to whole group.
- Audience will identify shapes and angles within structure.

Assessment

- Students should correctly create given shape/angle.
- Students should correctly identify performed shape/angle.

Materials

- Music
- CD player
- Markers or crayons
- Dance photography
- Colored tape

Vocabulary

Pathway

The designs traced on the floor as a dancer travels across space; the designs traced in the air as a dancer moves various body parts

Space

An element of movement involving direction, level, size, focus, and pathway

Formation

The placement of dancers in a performance space

Choreography

The art of composing dances and planning and arranging the movements, steps, and patterns of dancers

Choreographer

A person who creates dances

Acute Angle

an angle less than 90 degrees but more than 0 degrees

Obtuse Angle

an angle between 90 and 180 degrees

Right Angle

An angle of 90°, as in a corner of a square

Plane Shape

A plane shape is a flat, 2-dimensional shape. Example: circle, triangle, square, etc.

Curved Shape

the trace of a point whose direction of motion changes

Angular Shape

a shape having one or more sharp angles

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.

Common Core Georgia Performance Standards

MATHEMATICS

GRADE K

MCCK.G.2: Correctly name shapes regardless of their orientations or overall size.

MCCK.G. 4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

MCCK.G. 5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

MCCK.G. 6: Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"

GRADE 1

MCC1.G.1: Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

MCC1.G.2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

GRADE 2

MCC2.G.1: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Georgia Performance Standards

DANCE

GRADE K

DKFD.1: Identifies and demonstrates movement elements, skills, and terminology in dance

DKFD.2: Understands and models dance etiquette as a classroom participant, performer, and observer

DKCR.1: Demonstrates an understanding of creative and choreographic principles, processes, and structures

DKCO.4: Demonstrates an understanding of dance as it relates to other areas of knowledge

GRADE 1

D1FD.1: Identifies and demonstrates movement elements, skills, and terminology in dance

D1FD.2: Understands and models dance etiquette as a classroom participant, performer, and observer

D1CR.1: Demonstrates an understanding of creative and choreographic principles, processes, and structures

D1CO.4: Demonstrates an understanding of dance as it relates to other areas of knowledge

GRADE 2

D2FD.1: Identifies and demonstrates movement elements, skills, and terminology in dance

D2FD.2: Understands and models dance etiquette as a classroom participant, performer, and observer

D2CR.1: Demonstrates an understanding of creative and choreographic principles, processes, and structures

D2CO.4: Demonstrates an understanding of dance as it relates to other areas of knowledge

National Standards

DANCE

Standard 1: Identifying and demonstrating movement elements and skills in performing dance

Standard 2: Understanding choreographic principles, processes and structures

Standard 4: Applying and demonstrating critical and creative thinking skills in dance

Standard 7: Making connections between dance and other disciplines