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Integrated learning solutions

EXPLORE GEOMETRY WITH ABSTRACT IMAGERY

Grade Band: Kindergarten - Grade 1

Content Focus: Visual Arts & Math



LEARNING DESCRIPTION

Delve into the abstract world of Wassily Kandinsky! Allow your imagination to soar as you discover mathematical connections within Kandinsky images that explore the relationships between geometric shapes and polygons.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How can you utilize visual images to learn about shapes?	I can use geometry to create original artwork inspired by Wassily Kandinsky.



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GEORGIA STANDARDS

Curriculum Standards	Arts Standards
<p>Kindergarten: K.GSR.8 Identify, describe, and compare basic shapes encountered in the environment, and form two-dimensional shapes and three-dimensional figures.</p> <p>Grade 1: 1.GSR.4 Compose shapes, analyze the attributes of shapes, and relate their parts to the whole.</p> <p>1.GSR.4.1 Identify common two dimensional shapes and three dimensional figures, sort and classify them by their attributes and build and draw shapes that possess defining attributes.</p> <p>1.GSR.4.2 Compose two-dimensional shapes (rectangles, squares, triangles, half-circles, and quarter-circles) and three dimensional figures (cubes, rectangular prisms, cones, and cylinders) to create a shape formed of two or more common shapes and compose new shapes from the composite shape.</p>	<p>Kindergarten: VAK.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning</p> <p>VAK.CR.2 Create works of art based on selected themes.</p> <p>VAK.CR.3 Understand and apply media, techniques, and processes of two-dimensional art.</p> <p>VAK.RE.1 Discuss personal works of art and the artwork of others to enhance visual literacy.</p> <p>VAK.CN.2 Integrate information from other disciplines to enhance the understanding and production of works of art.</p> <p>VAK.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).</p> <p>Grade 1: VA1.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning</p> <p>VA1.CR.2 Create works of art based on selected themes.</p> <p>VA1.CR.3 Understand and apply media, techniques, and processes of two-dimensional art.</p> <p>VA1.RE.1 Discuss personal works of art and the artwork of others to enhance visual literacy.</p> <p>VA1.CN.2 Integrate information from other disciplines to enhance the understanding and production of works of art.</p> <p>VA1.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).</p>



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SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
<p>Kindergarten: K.G.4 Analyze and compare two- and three-dimensional shapes of different sizes and orientations using informal language.</p> <p>K.G.5 Draw two-dimensional shapes (i.e., square, rectangle, triangle, hexagon, and circle)</p> <p>Grade 1: 1.G.4 Identify and name two-dimensional shapes (i.e., square, rectangle, triangle, hexagon, rhombus, trapezoid, and circle)</p> <p>1.G.2 Combine two-dimensional shapes (i.e., square, rectangle, triangle, hexagon, rhombus, and trapezoid) or three-dimensional shapes (i.e., cube, rectangular prism, cone, and cylinder) in more than one way to form a composite shape.</p>	<p>Anchor Standard 1: I can use the elements and principles of art to create artwork.</p> <p>Anchor Standard 2: I can use different materials, techniques, and processes to make art.</p> <p>Anchor Standard 4: I can organize work for presentation and documentation to reflect specific content, ideas, skills, and or media</p> <p>Anchor Standard 5: I can interpret and evaluate the meaning of an artwork.</p>

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
<p><u>Geometry</u> - Branch of mathematics that deals with deduction of the properties, measurement, and relationships of points, lines, angles, and figures in space from their defining conditions by means of certain assumed properties of space.</p> <p><u>Polygon</u> - A closed plane figure with at least three straight sides and angles, and typically five or more.</p>	<p><u>Abstract</u> - Process of art-making that has reference to the real world but is distorted or manipulated in some way.</p> <p><u>Non-objective</u> - Process of art-making that has no reference to the real world; strictly composed of design elements.</p> <p><u>Contrast</u> - Exhibiting unlikeness in comparison to something else.</p> <p><u>Line</u> – One of the seven elements of art; a mark made by a pointed tool such as a brush pen or stick; a moving point</p> <p><u>Shape</u> (Geometric and Organic) – One of the seven elements of art; a flat, enclosed area that has two dimensions, length and width</p>



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MATERIALS

- Kandinsky prints of your choice
- Tag board (9" x 12" sheets) or drawing paper
- Pencils
- Pastels, colored pencils, and/or tempera paint
- [Wassily Kandinsky images](#)

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

- Introduce this activity by having students look at an image of "[Color Study: Squares with Concentric Circles](#)" by Russian artist, Wassily Kandinsky.
- Have students draw or write down as many shapes as they see in the artwork.
- Students should turn to a partner and compare answers.

Work Session

Process

- Project Kandinsky's *Composition VIII* and *Red, Blue and Yellow* (linked above in materials). Direct students to use math vocabulary and concepts to describe the shapes and polygons found within these abstract and non-objective masterpieces. Students should draw these images on sticky notes.
- Using the sticky notes, direct students to identify shapes within these images according to size, shape, and color and sort according to the number of sides and angles.
- Students will then create Venn diagrams that compare and contrast the two different Kandinsky prints.
- Next, direct students to generate their own abstract or non-objective design in the style of Kandinsky according to criteria set by the teacher. (For example, criteria might include designs housing a minimum of 10 circles that overlap, 5 straight lines, number of corners and sides, etc.)
- Students will then draw their shapes lightly on a tag board in pencil and embellish with bright contrasting colors using colored pencils, pastels, or tempera paint.
- Upon completion of these designs, ask students to identify shapes according to the number of sides, faces, and vertices within their compositions.

Closing/Reflection

Display students' artwork on walls or place on tables/desks. Give students a "scavenger hunt" to find objects in each other's artwork. Objects could include different types of shapes, lines, and angles.



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ASSESSMENTS

Formative

- Students will recognize and identify two-dimensional shapes and figures within a given art piece.
- Students will sort objects within an art piece according to size, shape, and color.
- Students will identify shapes according to the number of sides, faces, and vertices.
- Students will discover the way artists compose abstract imagery.

Summative

- Students will create an artwork inspired by Wassily Kandinsky that demonstrates their mastery of mathematical concepts including geometry, line, and angle.
- Students will be able to identify types of shapes, lines, and angles in each other's artwork.

DIFFERENTIATION

Acceleration: Instead of using basic geometric shapes, artwork requirements should include students dividing and combining shapes to create new shapes (i.e. - circle into semicircle; two triangles into rectangle, etc.).

Remediation:

- Provide students with specific objects to look for in Kandinsky's artwork. Partner students will identify shapes, lines, and angles.
- Reduce criteria in artwork to focus on fewer shapes at a time.
- Provide visuals with examples of each shape and its attributes for supporting students.

ADDITIONAL RESOURCES

[Wassily Kandinsky images](#)
[Types of shapes handout](#)

**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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