

MINIMALISM THROUGH MATH AND ART

Overview

In this activity, students will examine minimalist abstract paintings and create their own minimalist geometric compositions using mathematical concepts.

National Standards

- VA:Cr2.1.7a - Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.
- VA:Cr1.2.7a- Develop criteria to guide making a work of art or design to meet an identified goal.
- CCSS.MATH.CONTENT.7.G.A.2- Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions.

Materials/Works of Art

- Pencils and erasers, graph paper, ruler, crayons, markers, or colored pencils
- Images and video of Seonglan Kim Boyce

Discussion

Minimal abstract paintings are works of art that aim to capture the essence of a subject using only essential forms. Minimalist artists often use simplified geometric forms along with mathematical systems to develop the composition of a work of art. Seonglan Kim Boyce's minimalist paintings are inspired by open and unoccupied spaces and explore "the intrinsic qualities of space including its expanse, its unspecified dimensions, and the intangible presence within it." Use the following questions to discuss the minimalist abstract paintings of Seonglan Kim Boyce with students.

- What geometric shapes do you recognize in the works of art?
- Describe and discuss the role of vertical and horizontal elements in the composition.
- How does the placement of lines and shapes or the use of color in the composition create the illusion of landscape space?
- How is the canvas similar to a coordinate plane? How is it different? Imagine the possible locations of the X and Y axis.



Activities

- Create a list of artistic and mathematical vocabulary to use as you describe and discuss the visual and mathematical elements (ex. symmetry, congruent figures, positive and negative space, etc.) you can identify in the work of art.
- Develop your own relation, or set of ordered pairs, and use pencils and graph paper to create a minimalist composition by plotting points on a coordinate plane to create geometric shapes. Use a ruler to connect the points after plotting and complete the composition by coloring in the shapes and background with pencils, markers, or crayons.
- Explore the landscape outside of your school or in your neighborhood. Ask students to reduce the landscape to simpler forms by choosing geometric shapes to represent environmental elements and landforms.

Reflection

- How do abstract artists reduce natural or organic elements to their most basic forms?
- What artistic and mathematical concepts are shared in creating a minimal abstract composition?

Extension

Ask students to exchange their original compositions created by plotting points on the plane and instruct them to translate the shapes to create a new composition.

Print images of minimalist abstract paintings on graph paper or layer graph transparency or tracing paper on top of printed images of works of art. Draw the X and Y axis on the graph to create a coordinate plane and identify the ordered pairs for the points creating the shapes in the plane.

Describe and discuss the use of minimalist concepts in other fields and mediums.
Ex. sculpture, fashion, or architecture.

Explore the work of other minimalist abstract painters including Agnes Martin, Donald Judd, and Frank Stella.

