

Mondrian Math

Connecting Art and Math through the Art of Piet Mondrian

Grade Level: Kindergarten

Summary:

Using the art of Piet Mondrian, students will learn about the primary colors and basic art vocabulary and analysis. They will then create their own works of art, based on Mondrian's, which will allow them to practice measuring, counting, and identifying shapes and orientation of shapes in space.

Learning Objectives:

Students will...

- be able to name the primary colors.
- use a variety of basic materials and art media to produce works of art.
- create original works of art using different colors, shapes, and lines.
- utilize basic art vocabulary in describing student's own work and others.
- respond to different works of art through oral description.
- recognize that people value art.
- identify a connection between the visual arts and math.
- identify and describe shapes that appear in works of art and in the environment.
- know number names and the count sequence.
- identify shapes as two-dimensional or three-dimensional.
- analyze, compare, create, and compose shapes.
- measure different attributes in a work of art.
- measure different attributes in the student's own work.

INTRODUCTION

Part 1:

Color Magic!

This is a fun exercise to help students learn about primary colors and their complimentary colors. Start with a large white poster board and tape it to the wall. You will also need sheets of red, blue, and yellow paper. Start with the color red. Tape the red sheet of paper to the left side of the poster board. Instruct the students to stare at the center of the red sheet of paper for 30 seconds. After 30 seconds, have them look over to the right at the plain white part of the poster board. Ask them what they see. Tell them that they should be seeing a green shape that is the same shape as the red sheet of paper. Explain that green is complimentary to red, or opposite of red on the color wheel. Follow the same steps with blue, and yellow. With the blue, they should see orange. With the yellow, they should see purple. It may also be fun to have secondary colors, green, orange, and purple sheets of paper, so that they will see the primary colors in the optical illusion.

Part 2:

Introduce the class to artist Piet Mondrian by displaying a large print or poster of his work “Composition II in Red, Blue, and Yellow.” If you do not have this available, provide each student with a copy of an image of the piece, or you can use a computer and projector to display the image. Lead an initial inquiry set based on this painting. Let the students take turns answering questions such as:

1. “What is the first thing you notice when you look at this picture?”
2. “What do you think this is a picture of? What does this artwork represent?”
3. “What shapes do you see in this painting?”
4. “Who do you think created this painting?”
5. “What do you think this artwork is made up of?”
6. “When do you think the artist created this? Why do you think that?”
7. “Where do you think the artist lives? Why do you think that?”
8. “How do you think the artist produced this? What tools and materials do you think he or she used?”
9. “Why do you think the artist created this piece of artwork?”
10. “How do you feel when you look at this painting?”

Repeat the same process using different examples of Mondrian’s works. Ask the students to identify differences between the different artworks.

DIRECT INSTRUCTION

Materials needed:

1. Construction paper: Red, blue, yellow, black, and white
2. Poster board or something firm to mount the collage on
3. Pencils
4. Rulers
5. Scissors
6. Glue

Vocabulary words:

1. Collage – a picture that is created by gluing items to a surface.
2. Primary colors – Red, blue, and yellow. Primary colors cannot be made from other colors. Artists create all the other colors of the rainbow by mixing together the primary colors.
3. Abstract art – can be a painting or sculpture (including assemblage) that does not depict a person, place or thing in the natural world.
4. Representational art – art that seeks to depict the physical appearance of reality; also called objective art and figurative art.
5. Two-dimensional shape – a shape that only has two dimensions (such as width and height) and no thickness (depth).
6. Three-dimensional – an object that has height, width and depth, like any object in the real world.
7. Vertical line – in geometry, a vertical line is one which runs from up and down the page.
8. Horizontal line – in geometry, a horizontal line is one which runs from left to right across the page.
9. Cubism – a style of painting and sculpture developed in the early 20th century, characterized chiefly by an emphasis on formal structure, the reduction of natural forms to their geometrical equivalents, and the organization of the planes of a represented object independently of representational requirements.

Explain to the students that the paintings are oil paintings produced by the artist Piet Mondrian. Use a projector and the internet or printed full color examples to show some of Mondrian's work. Take your time showing them different examples of his paintings that are in his famous style. Explain a few facts about Piet Mondrian. He was born in the Netherlands in 1872 and died in New York City in 1944. His early works consisted mainly of representational landscapes but then evolved into the simple abstracts that he is well known for.

Next, explain to the students that they will be producing their own works of art based on Piet Mondrian's most famous style. The project will consist only of horizontal and vertical black lines, and white, red, blue, and yellow rectangles.

1. Start with white paper. Glue the whole sheet of white paper onto the poster board. This will be the base of the art work.
2. Next, you will use the black construction paper to form the horizontal and vertical lines. Instruct the students to use their rulers to measure straight lines that are $\frac{1}{2}$ to 1 inch thick. Make sure all of the lines are long enough to reach all the way from one end of the paper to the other end. Explain that if some lines are too long, they can be trimmed after being glued on to the project. Each student will need to have at least 3 of these lines and 10 at the most.
3. Before gluing, have the students arrange the lines on the paper. Tell them to experiment with moving the lines around to see different ways that they can be arranged. Explain to the students that the lines can only be positioned horizontally and vertically.
4. Once they are satisfied with the arrangements, have them glue the lines on.
5. After the black lines are in place, they will have to decide where they will want the colored rectangles to be. Tell them that they must use at least 2 primary colors at least once. Also, they must leave some white spaces.
6. Once the students decide where the colored rectangles should go, they must use a ruler to measure the spaces that the shapes will be placed in. The rectangles must fit the spaces.
7. Next, cut the shapes out.
8. Finally, glue the rectangles into their spaces. This completes the project.