A Vanishing Point

Fifth Grade + Math

CORE SUBJECT AREA

Math

ART FORM + ELEMENTS

Visual Arts
Drawing
Lines
Shapes

MSCCR STANDARDS

CCSS.MATH.CONTENT.5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties

MSCCR ARTS STANDARDS

VA:Cr2.1.5a. Experiment and develop skills in multiple art-making techniques and approaches through practice.

DURATION

90 minutes

OBJECTIVES

TSW use properties of two-dimensional objects to create a perspective artwork.

MATERIALS NEEDED

Plain drawing paper
Pencils
Colored Pencils
Rulers

VOCABULARY

Linear perspective
Vanishing point
Two-dimensional
Angle
Leonardo Da Vinci
Perspective
Line
Shape
Three-dimensional
Illusion
Depth
Plane

RECOMMENDED RESOURCES

Art print/digital reproduction of artworks containing vanishing point, particularly Leonardo Da Vinci's "The Last Supper."

LESSON SEQUENCE

Introduction

TTW begin to the lesson by reviewing with the student the properties of two-dimensional figures: they are flat, contain area but not volume, have length and width, and take up flat space known as plane.
TTW review that some shapes, such as rectangles and triangles, contain lines and angles.
TTW explain to the student that the properties of two-dimensional shapes can be used to create the illusion of three-dimensional depth, especially in art.

TTW tell the student that this technique is called linear perspective in art is used to create an illusion of depth in a flat piece of art.
TTW introduce the student to the term vanishing point, one of the parts of linear perspective.
TTW explain to the student that a vanishing point is created on a flat surface using lines and angle.
TTW use the video found at https://www.youtube.com/watch?v=Ltzh6JEp_qQ to define vanishing point and explain how it is used in artworks.

Transition

TTW play the video found at https://www.youtube.com/watch?v=7ZYBWA-ifEs to model drawing with linear perspective using two-dimensional properties such as lines and angles.
TTW tell the student that many famous artists use linear perspective to make their two-dimensional artwork appear three-dimensional.
TTW tell the student Leonardo da Vinci was a famous artist who is well-known for applying the mathematical concept of linear perspective to his artworks.
TTW display "The Last Supper" by da Vinci
The teach and the student will work together to identify the vanishing point in this painting (Christ's head) and will identify the lines and angles that converge to form the vanishing point of this artwork.
TTW explain to the student how linear perspective affects a viewer's perspective by making certain objects in a painting appear three-dimensional.
TTW display the copy of "Bedroom in Arles" by Vincent Van Gogh that already has the vanishing point drawn on it from https://www.studentartguide.com/articles/one-pointperspective-drawing.
The teacher and the student discuss how the objects in the painting line up with the lines that lead to the vanishing point to make them appear three-dimensional.

Description/Procedure

TTW ask the student to think of a room that has personal significance to them that they would like to draw using linear perspective.
TTW allow some students to share with the class what they plan on drawing.
TTW distribute rulers and plain white drawing paper to the students.
TSW lay their drawing paper horizontally on their desks.
TTW model using a ruler to create the vanishing point on her paper using lines and angles as the artist in the video did.
TTW draw one line across the middle of the paper and two intersecting lines that run from each of the opposite corners.
TSW follow along with creating the vanishing point on their paper.
TSW draw their room using the lines and angles they created when making their vanishing point
TSW line up their objects with the lines that lead to the vanishing point and will make their objects smaller the closer they get to their vanishing point.
When the students are done with their drawings, TTW review the important components of the lesson, (properties of two-dimensional shapes, linear perspective, vanishing point, etc.).

EXTENDED LEARNING ACTIVITIES

This lesson could also be applied in a STEM setting in which students are studying architecture.

SOURCES

https://www.studentartguide.com/articles/one-point-perspective-drawing
https://www.deepspacesparkle.com/one-point-perspective-art-lesson/
https://mathematica.ludibunda.ch/mathematicians6.html.
https://deppspacesparkle.com/how-to-draw-a-perspective-landscape/
https://www.tes.com/lessons/xSViQfd2Awcg-A/one-point-perspective

TIPS + FREQUENTLY ASKED QUESTIONS

12 x 18 inch paper is recommended