

Objective

By the end of this lesson, you will be able to apply geometric concepts to create artistic designs.

Materials and Prep

- Paper
- Pencil
- Ruler
- Compass
- Coloring materials (colored pencils, markers, etc.)

No prior knowledge is required for this lesson.

Activities

1. Activity 1: Introduction to Geometric Shapes

Start by discussing different geometric shapes such as circles, squares, triangles, and rectangles. Explain their properties and characteristics.

Then, ask the student to draw and label examples of each shape on their paper.

2. Activity 2: Creating Symmetrical Designs

Show the student how to create symmetrical designs using a compass. Demonstrate drawing a circle and dividing it into equal parts using a ruler.

Ask the student to create their own symmetrical design using circles and lines. Encourage them to experiment with different sizes and arrangements of circles.

3. Activity 3: Exploring Tessellations

Introduce the concept of tessellations, which are repeating patterns made with geometric shapes without any gaps or overlaps.

Ask the student to create a tessellation by tracing a shape multiple times and arranging them to fill their paper. They can use squares, triangles, or any other geometric shape they prefer.

4. Activity 4: Adding Color and Detail

Encourage the student to add color and additional details to their geometric designs using coloring materials. They can experiment with different color combinations and shading techniques.

Seventh Grade Talking Points

- "Geometry is a branch of mathematics that deals with shapes, sizes, and properties of figures."
- "Symmetry is an important concept in art and design. It refers to a balanced arrangement of elements on either side of a central line or point."
- "Tessellations are repeating patterns made with geometric shapes. They can be found in nature, architecture, and art."
- "By understanding geometric concepts, artists and designers can create visually appealing and harmonious compositions."