

## STEAM—Angle Animals

**Instructor:** Carly Burton

**Lesson Title:** Angle Animals

**Grade Level:** 7<sup>th</sup>

**Time Allotment:** 5 45min classes

### **Lesson Description:**

Students will learn about geometric shapes and angles. They will then create an animal of their choice using only geometric shapes. Each student will complete this assignment by filling in their geometric shape animal with paint in a color scheme.

### **Background:**

Geometry is the branch of mathematics concerned with the properties and relations of points, lines, surfaces, solids, and higher dimensional analogs. We can find geometry all around us. Many professions use geometry to help them come up with solutions to problems. Some careers that use geometry are architecture, engineering, jewelers, astronomers, and medical researchers. Geometry is an important skill to know for your future. While geometry can look scary it can also be fun. Geometry is also used by artists to make art, like we will be doing today. By using geometry and angles you can create all sorts of 2D and 3D art. Today we will be making animals out of geometric shapes.

Color is an important part of life and art. Color can help us identify objects and in art it can create an atmosphere. Much thought goes into choosing colors in all facets of art and Design. Think about the clothing you are wearing and how that color was chosen. When we look at the color wheel we can see how color can be categorized in groups, such as primary colors, secondary colors, analogous colors and so on. Colors can also be categorized as monochromatic which means one color in many shades, there are also cool and warm colors. In addition to making a geometric animal you will think about color and choose a color group to paint your animal.

### **Objectives:**

- Identify what geometric shapes are
- Discuss how angles create most geometric shapes
- Identify what an angle is
- Demonstrate understanding of angles by creating an animal out of geometric shapes that fit together
- Discuss color and color groups
- Identify colors in specific color groups
- Demonstrate understanding of color and color groups through color choices in the artwork

### **PA State Standards:**

- **9.1.8.A.** Know and use the elements and principles of each art form to create works in the arts and humanities.
- **9.1.8.B.** Recognize, know, use and demonstrate a variety of appropriate arts elements and principles to produce, review and revise original works in the arts.
- **9.3.8.A.** Know and use the critical process of the examination of works in the arts and humanities.
- **9.3.8.E.** Interpret and use various types of critical analysis in the arts and humanities.

**Vocabulary:**

**Geometric:** using straight or curved lines in designs or outlines

**Angle:** a corner whether constituting a projecting part or a partially enclosed space

**Geometry:** the branch of mathematics concerned with the properties and relations of points, lines, surfaces, solids, and higher dimensional analogs.

**Color: a:** a phenomenon of light (such as red, brown, pink, or gray) or visual perception that enables one to differentiate otherwise identical objects

**b (1):** the aspect of the appearance of objects and light sources that may be described in terms of hue, lightness, and saturation for objects and hue, brightness, and saturation for light source

**Resources:**

- Worksheet on Geometric shapes
- PowerPoint on geometric shapes and how to translate your drawing into geometric shapes
- <https://www.pinterest.com/explore/geometric-drawing/>

**Supplies / Materials:** Construction paper/Bristol board, pencil, Sharpies, Paint, Paint Brushes, Rulers, Masking tape, protractors

**Procedures:**

Class 1: 55min class

-PowerPoint on Geometry, Angles and Geometric animal studio-20 mins (intro)

-Choose animal and start to create sketch of animal – 30 mins (production)

-Clean-up- 5 mins (closure)

Class 2: 55min class

-Reminder of instructions and handout animal images-10 mins (intro)

-Draw on top of image to create geometric shapes within animal-25 mins (production)

-Start to draw final geometric animal-15 mins (production)

-Clean-up- 5 mins (closure)

Class 3: 55min class

-Complete drawing of geometric animal/ Pick paint colors to use to complete artwork- 45 mins (production)

-Clean-up- 10 mins (closure)

Class 4: 55min class

-Demo on how to paint in geometric shapes (demo with taped edges to help students get crisp lines)- 10 mins (intro)

-Paint animal- 35 mins (production)

-Clean-up- 10 mins (closure)

Class 5: 55min class

-Finish painting animal- 45 mins (production)

-Clean-up- 10 mins (closure)

**Evaluation / Assessment / Critique:**

- Informal: Students will be observed in the classroom on their proper use of the internet, their behavior with materials, and their time management.
- Formal assessment: Rubric

**Enrichment / Adaptations:**

Enrichment: Turn your 2D geometric animal into a 3d animal by creating 3D forms out of colored paper by folding them into cubes. Then glue together to create your animal. (see handout on how to create 3D Cubes)

Adaptations: Teacher will provide shapes to trace or a premade geometric animal for students to paint them to paint.

**Exemplar:**

