



Lesson Title:	Identifying lines of symmetry
Length of Lesson	1 Days
Created By	Michael Andre Hamilton
Subject	Geometry
Grade Level	10 th -12 th grade
State Standards	Geometry 2a
DOK Level	DOK 2
DOK Application	Graph, Compare, Estimate Infer, Predict, Interpret, Make Observation, Summarize
National Standards	Geometry for 9 – 12 th Math Standards
Graduate Research Element	Human Factors and Work Physiology

Student Learning Goal:

National Standards for Geometry for 9-12th

- A: analyze properties and determine attributes of two- and three-dimensional objects;
- B: explore relationships (including congruence and similarity) among classes of two- and three-dimensional geometric objects, make and test conjectures about them, and solve problems involving them;
- C: establish the validity of geometric conjectures using deduction, prove theorems, and critique arguments made by others;
- D: use trigonometric relationships to determine lengths and angle measures.

State Standards for 9 – 12th Geometry

- A: Apply problem solving skills to solve and verify the solutions for unknown measures in similar polygons.

Materials Needed (supplies, hand-outs, resources):

- color tape
- a worksheet that has the alphabet on it
- print out copies of the American flag, butterfly, foot, house, snowflake, and a animal of your choice
- Pencil

Lesson Performance Task/Assessment:

- The students will be able to identify if an object has symmetry are not. This should help with giving the students an insight of what symmetry is and how to apply it to real world objects

Lesson Relevance to Performance Task and Students:

The relevance of this lesson is to show the students that symmetry is not only in shapes the new real-world objects. Not understanding this phenomenon, they would have a better understanding of symmetry in general and be able to apply to other situations.

Anticipatory Set/Capture Interest:

At the beginning of class, I will call a student to come to the front of the class. Using the color tape, I will create outline of their body and draw a line of symmetry down the



middle. After wards, I would ask the students what symmetry is and to give me examples of symmetry based on the students outlined body on the wall.

Guided Practice:

At the beginning of class, I would give the students a copy of the alphabet worksheet and the shapes listed above. Each student will draw lines of symmetry that they find with the different shapes and hold it up in front of the class. Based on the student answers, with fold the objects to check the symmetry and also check if there is more than one line of symmetry. After checking the symmetry of the shapes, each student will draw symmetrical lines for the entire alphabet in the worksheet. Once they are finish, we will discuss which shapes have one line of symmetry, two lines of symmetry, no symmetry at all. Once this is finish, would discuss and recap what we have done today.

Independent Practice:

The students and the instructor will work together during this process.

Remediation and/or Enrichment:

Remediation

Individual IEP; partner help throughout lesson; shorten parts of assignment; focus on few process

Enrichment:

None

Check(s) for Understanding:

Day 1:

1. What do you notice about the two sides of the body outlined on the wall?
2. Which is symmetry?
3. Name some objects that have multiple lines of symmetry?

Closure:

Have an end of the class discussion

Possible Alternate Subject Integrations:

*None.

Teacher Notes: