

# UNIT 1 - LESSON PLANS

**Class** Geometry    **Topic** U1 – Classifying Polygons

**Lesson** 6    **Of** 8

## Objective

Students will:

- Prompt questions such as: What particular shape makes it concave or convex? What big or small do the angles have to be classified as convex or concave?
- Students should be able to explain their reasoning about their choices with mathematical vocabulary such as reflex, greater than 180 degrees, obtuse angle, and acute angle.
- Relate Algebra equations to the sides and angles of polygons.

## “I Can” Statement

I can verbally describe different concave and convex using the proper vocabulary.

Solve problems related to the sides and angles of polygons.

## Common Core Standards

### [CCSS.MATH.CONTENT.5.G.B.4](#)

Classify two-dimensional figures in a hierarchy based on properties.

### [CCSS.MATH.CONTENT.8.G.A.5](#)

Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*

### [CCSS.MATH.CONTENT.HSG.MG.A.1](#)

Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).\*

## Bell Work

Teacher can introduce Pac Man and explain the shape of his mouth as the concave part of his face. Similarly a picture of a stick man in a cave can be used to illustrate this teaching point. Once understood, Pac Man can be

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used to contrast convex shapes. For convex polygons, the shape of a traditions house rooftop will justify for a visual explanation.

## **Procedures**

1. Start and lead student discussion related to the bell work.
2. Distribute the Guided Notes
3. Present lesson or play a video lesson.
4. Have students work together through Graphic Organizer activity.
5. Distribute Assignment.

## **Assessment**

Assignment 1-6  
Graphic Organizer  
Exit Quiz 1-6

## **Additional Resources**

Khan Academy Quiz