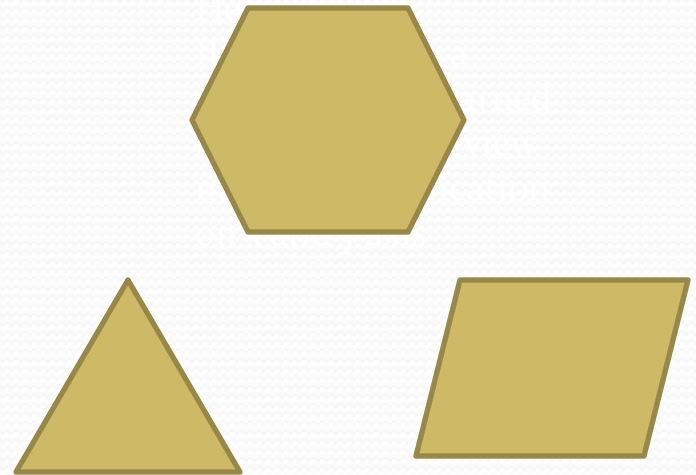


# Properties of Plane Figures

# What is a plane figure?

- Figures that are 2D or can be drawn flat that have no thickness
- These plane figures are called polygons
- Polygons are:
  - Closed plane figures
  - Made up of line segments
  - Two sides meet at each index
  - Sides do not cross each other



# Types of Polygons

- Polygons are named by the number of sides

## Common Polygons:

3 sides- Triangle

4 sides- Quadrilateral

5 sides- Pentagon

6 sides- Hexagon

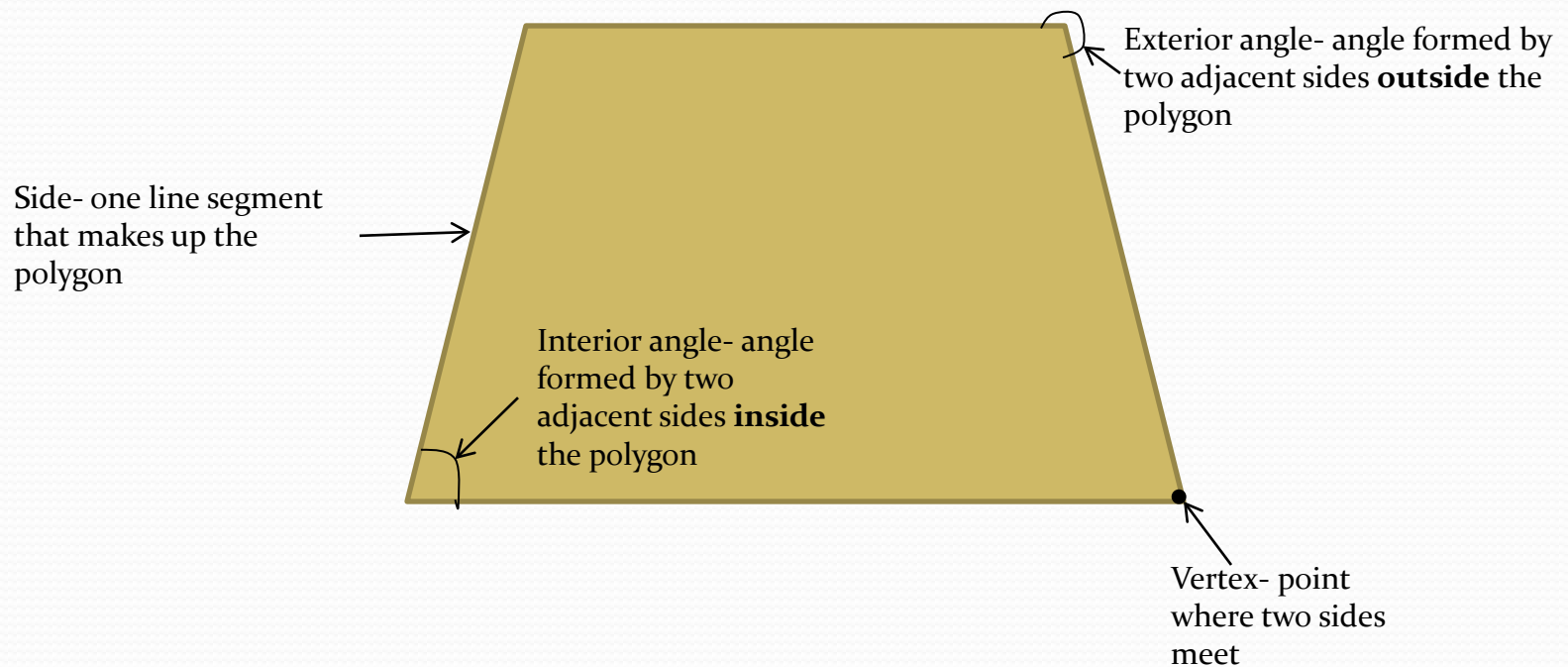
8 sides- Octagon



### Helpful Hints:

If working with a student who can not identify shapes, this is a perfect time to work on this skill while focusing on the properties of the polygon. For example, the square is a quadrilateral. **It has 4 sides**

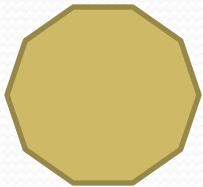
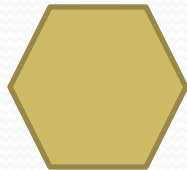
# Parts of a polygon



# Regular or Irregular

## Regular Polygons

- Sides are same length
- Angles are the same
- Examples:



## Irregular Polygons

- If not a regular polygon, then it is irregular
- Examples



# Ideas for application

- Identify common polygons found in the environment
  - Street signs



- Ask students to sort regular and irregular polygons focusing on the concept of “same” pertaining to length of sides

# Making connections

- Identifying properties of plane figures addresses the following 4<sup>th</sup> and 5<sup>th</sup> grade Core Content Connectors
  - 4.GM.1h2 Classify two-dimensional shapes based on attributes
  - 4.GM.1j1 Recognize a point, line, line segments, and rays in two-dimensional figures
  - 4.GM.1j2 Recognize perpendicular and parallel lines in two-dimensional figures
  - 5.GM.1j1 Recognize parallel and perpendicular lines within the context of two-dimensional figures
  - 5.GM.1a1 Recognize properties of simple plane figures
  - 5.GM.1b1 Distinguish plane figures by their properties