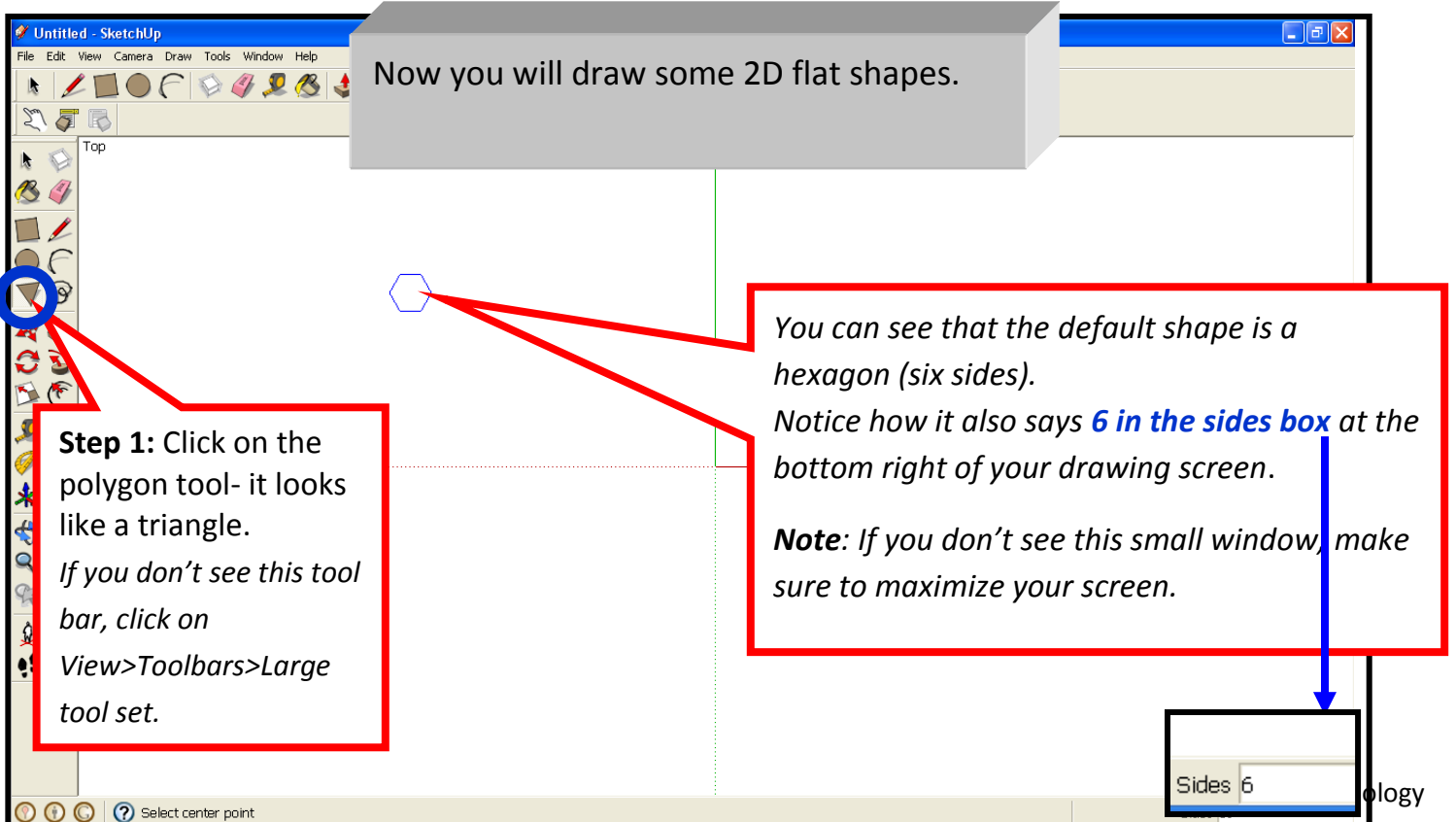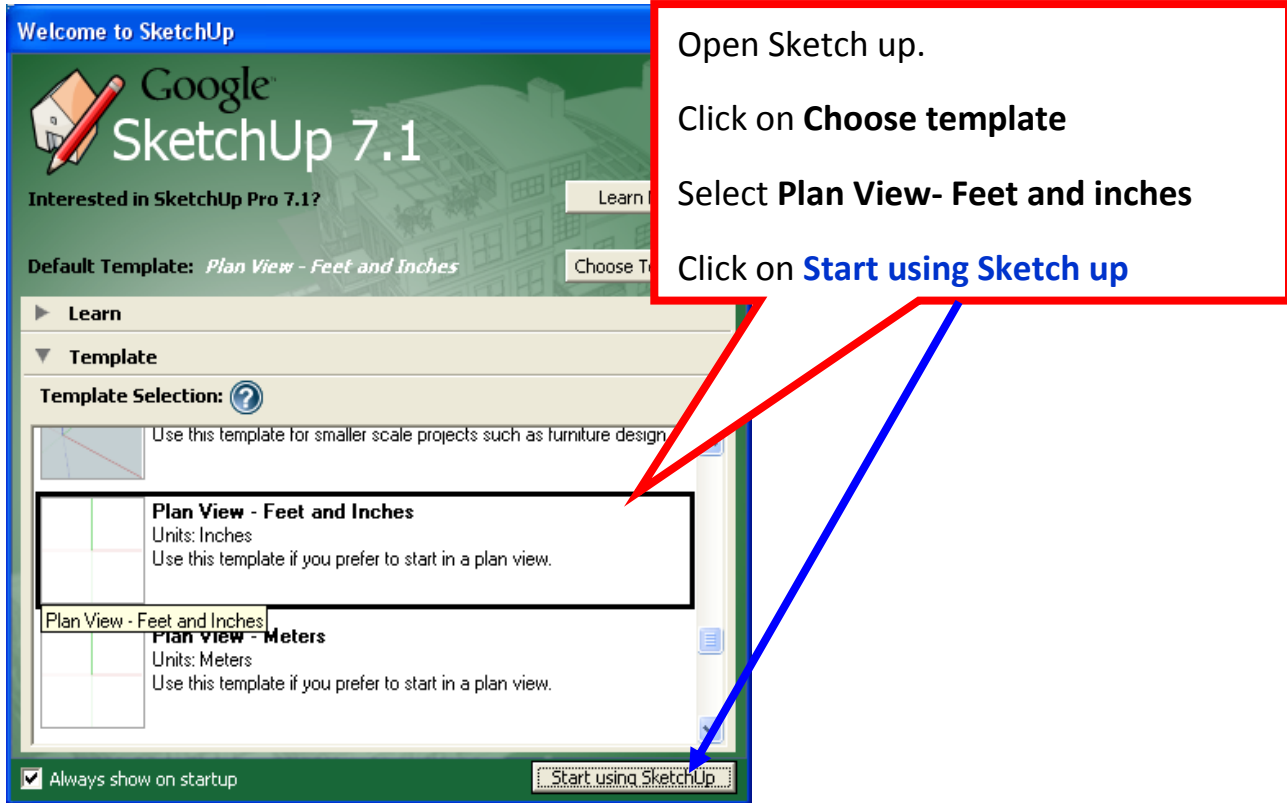# Draw and Identify Attributes of Two Dimensional Shapes

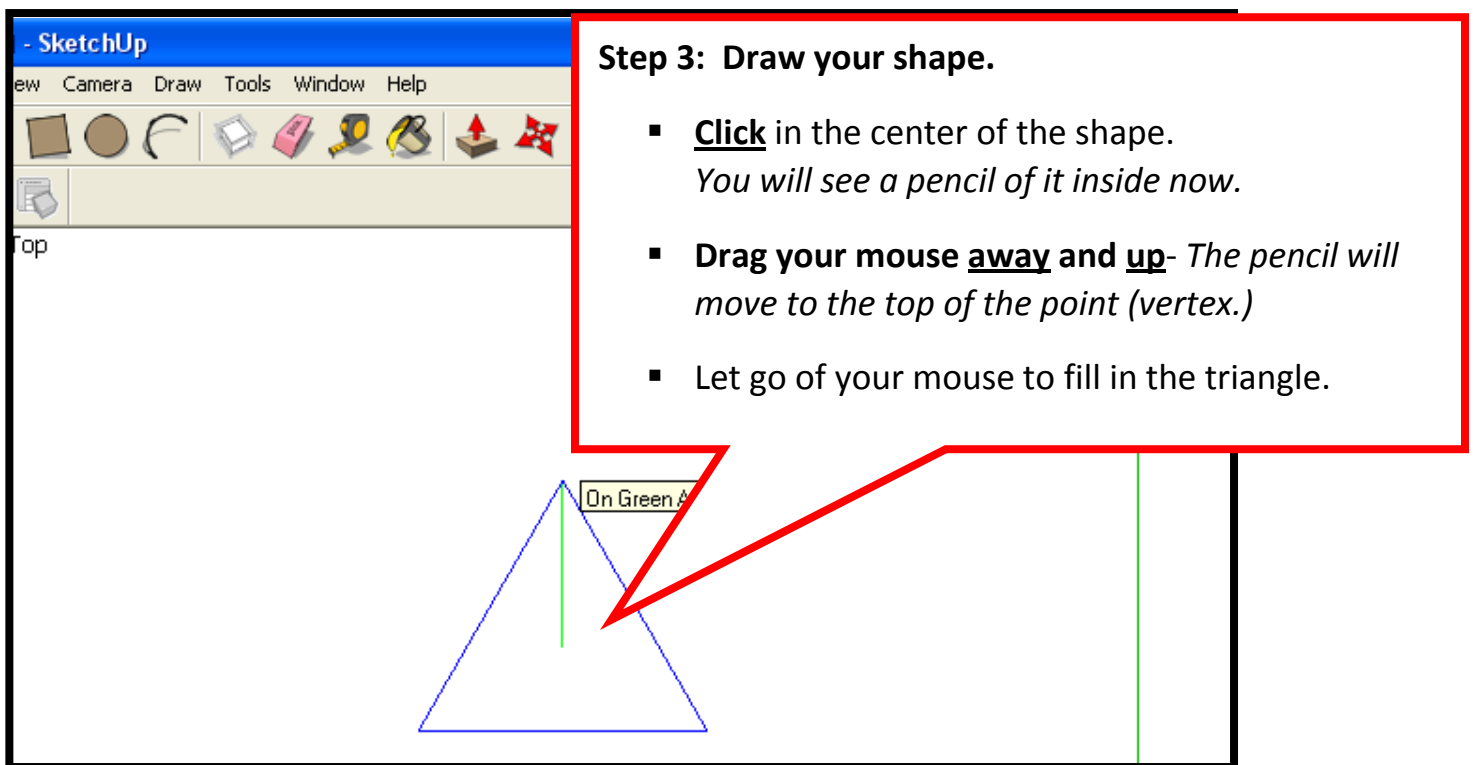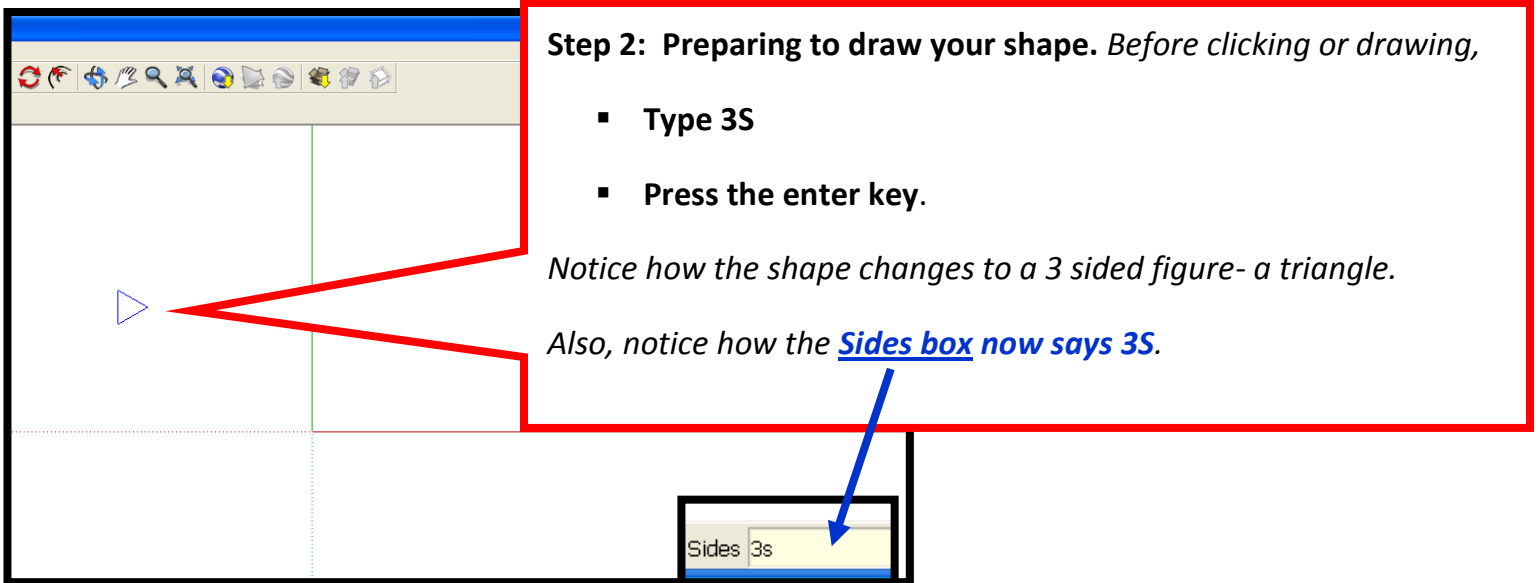**2.7A** Describe attributes (the number of vertices, faces, edges, sides) of <u>two</u>- and three-<u>**dimensional geometric figures**</u> such as circles, <u>**polygons**</u>, spheres, cones, cylinders, prisms, and pyramids, etc.;

3rd grade Use for Review before drawing congruent 2D figures. **3.9A- Identify congruent <u>two-dimensional figures</u>;**

Open Sketch up.

Click on **Choose template**

Select **Plan View- Feet and inches**

Click on **Start using Sketch up**

Now you will draw some 2D flat shapes.

Step 1: Click on the polygon tool- it looks like a triangle.
If you don't see this tool bar, click on View>Toolbars>Large tool set.

You can see that the default shape is a hexagon (six sides).
*Notice how it also says **6 in the sides box** at the bottom right of your drawing screen.*

Note: *If you don't see this small window, make sure to maximize your screen.*
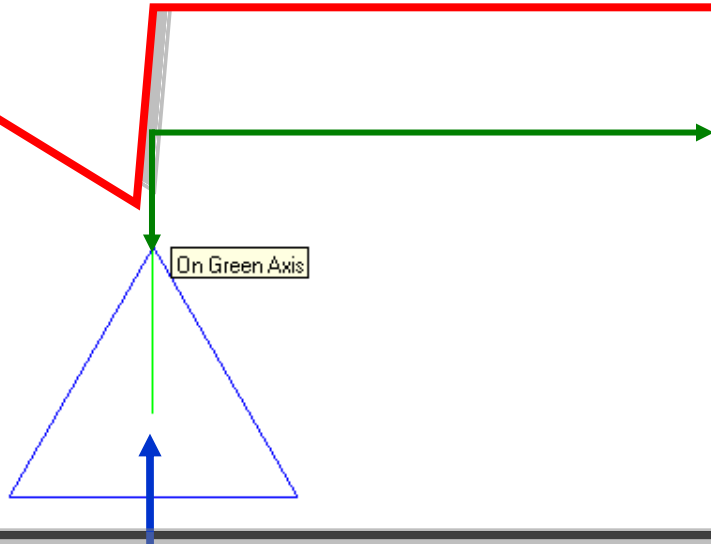
How to change the number of sides:

Important: To change sides- **first take your hands OFF of the mouse-** and do **NOT** click in the Sides box. You will just type and press the enter key- it will replace the 6 automatically.

Step 2: Preparing to draw your shape. *Before clicking or drawing,*

- **Type 3S**

- **Press the enter key**.

Notice how the shape changes to a 3 sided figure- a triangle.

*Also, notice how the **Sides box now says 3S**.*

Sides 3s

Step 3: Draw your shape.

- **Click** in the center of the shape.
  You will see a pencil of it inside now.

- **Drag your mouse away and up**- *The pencil will move to the top of the point (vertex.)*

- Let go of your mouse to fill in the triangle.

On Green A

Enrichment Note for Students: Before they let go of the mouse they may have noticed…
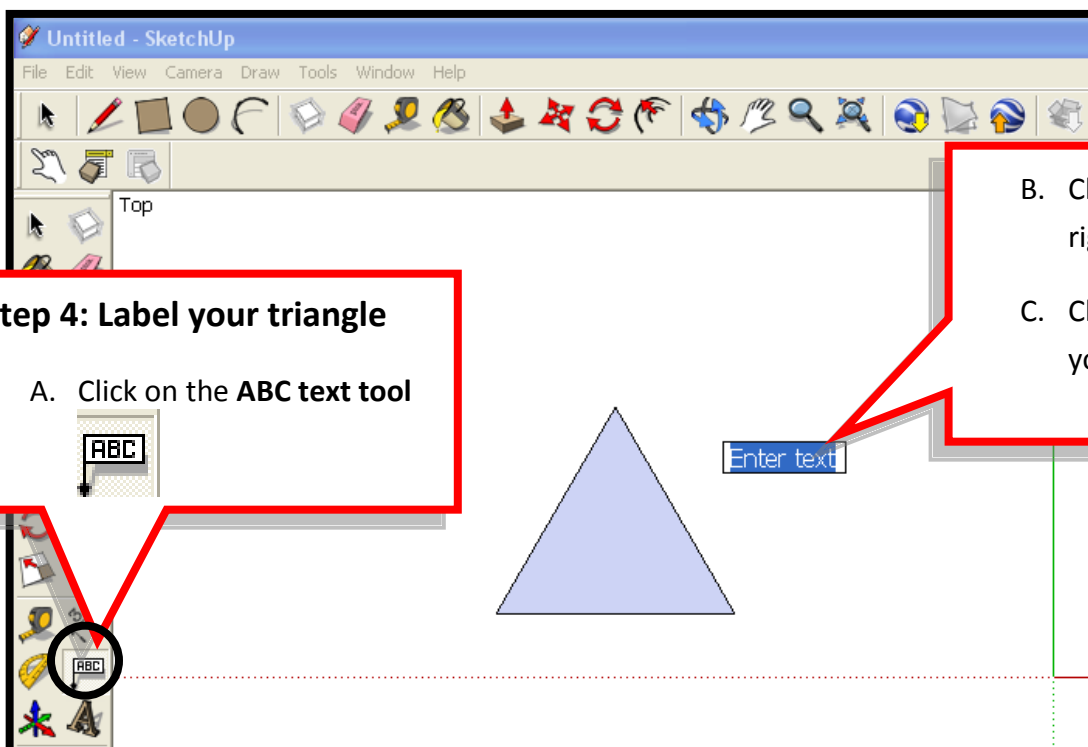
Point out to students:

*The green line means it is drawing the center of the triangle parallel with the **green axis line** on the right. Parallel means these two lines will never meet or intersect.*

On Green Axis

Also notice how the triangle has a vertical line of symmetry because the left and right sides are exactly the same.

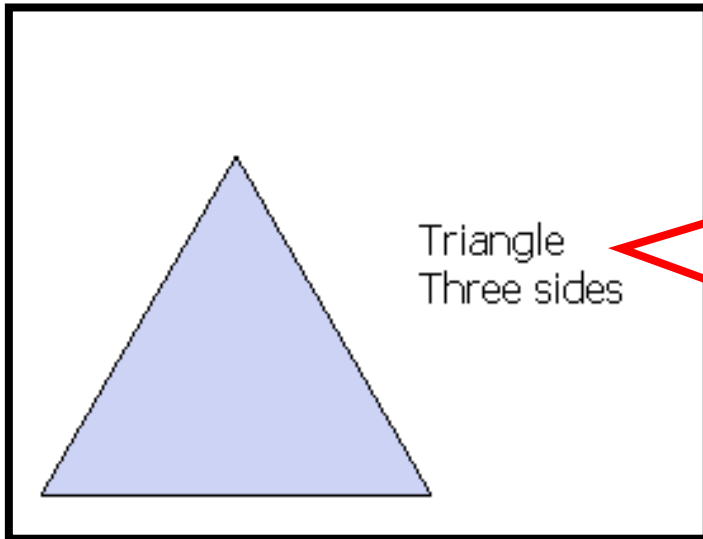Once you let go of the mouse your triangle will be filled in like shown below.

Untitled - SketchUp

File   Edit   View   Camera   Draw   Tools   Window   Help

Top

Step 4: Label your triangle

A.   Click on the **ABC text tool**

ABC

B.   Click in the white space right next to your triangle.

C.   Click inside and it will give you a text box.

Enter text

- Instructional Technology

- Type Triangle
- Press the Enter Key.
- Type Three sides.
- Click outside the triangle.

Now follow Steps 1- 4 to draw and label the attributes of the follow shapes:

- Square: Four (4) equal sides
- Rectangle: Four (4) sides
- Pentagon: Five (5) sides
- Hexagon: Six (6) sides
- Octagon: Eight (8) sides