



# NCEA Math Lesson Plan

**Grade:** K

**Subject:** Mathematics

<b>Domain:</b> Geometry
<b>Standard Number(s) and Description:</b> K.G.1 Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind and next to.
<b>Vocabulary to be Highlighted:</b> Triangle, square, circle, rectangle, hexagon, cube, cone, vertex
<b>Mathematical Practices (#):</b> 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure.
<b>Essential Questions:</b> What attributes are important for naming shapes?
<b>Materials/Tools (include technology):</b> ReadWriteThink App YouTube - "The Greedy Triangle" iPad Tangrams Geoboards Access to a church
<b>Connections to Other Math Domains:</b> Counting and cardinality
<b>Connections to Other Subject Areas:</b> Religion Technology Language Arts
<b>Catholic Identity Component:</b> Identifying triangles, squares, and circles in church.
<b>Resources (attachments):</b> "The Greedy Triangle" by Marilyn Burns  <i>150+ Essential Questions for Math.</i> - Derry Village School

**Activities/Timeline:**

1. Introduce vocabulary -triangle, square, and circle- and show “The Greedy Triangle” on YouTube. (Whole group)
2. Teacher will trace triangles, squares, and circles on board. Students will build those shapes with geoboards and tangrams (With partner)
3. Discuss concept of side and vertex. How many of each does triangle, square, and circle have? (Whole group)
4. On paper, students trace triangles and squares and label sides and vertices. (With partner)
5. Take pictures in school of real-life objects that resemble triangles, squares, and circles with iPad. Teacher should know, in advance, where students can find these and lend guidance. (With partner). Teacher can put all pictures in a PowerPoint.
6. Discuss school pictures at a later date or next lesson. (Whole group )
7. Take pictures of real life triangular, square, and circular objects in the church. (With partner). Teacher should know, in advance, where students can find these and lend guidance. Teacher can put all pictures in a PowerPoint.
8. Discuss pictures from church at a later date or next lesson. Use names of available objects/structures in and around church to describe shapes (ex: altar is a rectangle, stained glass window is a circle) (Whole group)

**Formative Assessment (what to look for, how/when to look):**

Formative on #2,4,5,7 from above. Check to make sure students can perform the task.

**Summative Assessment:**

Student will demonstrate mastery in constructing a triangle, square, and circle.

Student will demonstrate mastery in labeling sides and vertices.

Student will create a trading card (in small grp.) using the ReadWriteThink App. Card should contain the student's name and show a triangle, square, and circle. Card should show a real-world object for each of the three shapes.

Student will draw a picture of one real-world triangular, square, and circular object from the school PowerPoint.

Student will draw a picture of one real-world triangular, square, and circular object from the church PowerPoint.

Student will self-assess their work by drawing an ice cream cone with cherry on top and sprinkles if they feel they were successful and understood the concepts. If they didn't understand everything, they should draw an ice cream cone with a cherry. If it was hard for them, drawing should be an ice cream cone only.