Group Members: KP Preut, Monique Vieux, Taylor McLean   Lesson #: 2   Draft #: 1

Date Lesson will be Taught: 11/30/22 at 8:40am   Host Teacher: Ms. Edmonds

Length of Lesson: 45 minutes   Grade Level: 4th/5th   School: New York Elementary

LESSON OBJECTIVES (Write in SWBAT format)
Students will be able to classify triangles into obtuse, right, acute, equiangular triangles.

ALIGNED STANDARDS (Provide both abbreviation and text of standard)
4.G.2. "Recognize and categorize triangle based on angles (right, acute, obtuse, and equiangular)"

NECESSARY MATERIALS (Attach any handouts to the end of this lesson plan)
● 36 obtuse triangles ● 36 right triangles ● 36 acute triangles ● 144 straws (12 in each bag) ● 25 pairs scissors ● 7 dog images ● 7 duck images ● 7 bear images ● 7 shark images

SAFETY AND PRECAUTIONS
● Appropriate use of scissors (no throwing or spinning scissors around) ● Appropriate use of straws (no throwing, putting them in your mouth, play fighting)

ENGAGE-Taylor	Estimated Time: 5
What the teacher does and what the students will be directed to do:	Probing questions the teacher will ask the students. What questions will guide this part of the lesson? *How might the students answer (in italics)?*
Teacher will assign students into pairs. will hand out sets of triangle manipulatives to each pair of students. Teacher will direct students to sort the various triangles in whatever way they want. Teacher will use a whiteboard to give a brief explanation on angles and how we can use them to sort the different triangles.	How are you sorting the triangles? *Color* *Size* *Angles* What's different about these triangles?

EXPLORE-KP	Estimated Time: 10 minutes

What the teacher does and what the students will be directed to do:	Critical questions the teacher will ask the students. What questions will guide this part of the lesson? *How might the students answer?*
-Teacher will project an image with a right, acute, and obtuse angle. They will ask students which angle is right. The teacher will confirm the right answer. This image will be left up during the Explore section for students to refer to. -Teacher will assign students to groups and give each group a plastic bag with straws. -Students will use straws to make different types of triangles. The types of triangles they will make is listed in the questions section to the right. -When all of the questions have been asked, the students will be directed to put the straws back into the bag. The teacher will then collect the bags. -If there is confusion, the teacher will ask students to show them the triangle they made. Teacher will double check that the shape is a triangle and that the student is using the correct angles. If there are mistakes, the teacher will ask probing questions to the student such as "Is angle larger than a right angle? How do you know?"	Which one of these angles is a right angle? Which is acute? Which is obtuse? *Students will pick one of the three angles as their answer.* Can you make a triangle with one right angle? Use the straws to prove your answer. *Yes/No* Can you make a triangle with one angle less than 90 degrees? Use the straws to prove your answer. *Yes/No* Can you make a triangle with two angles less than 90 degrees? Use the straws to prove your answer. *Yes/No* Can you make a triangle with one angle more than 90 degrees? Use the straws to prove your answer. *Yes/No* Can you make a triangle with two angles more than 90 degrees? Use the straws to prove your answer. *Yes/No*

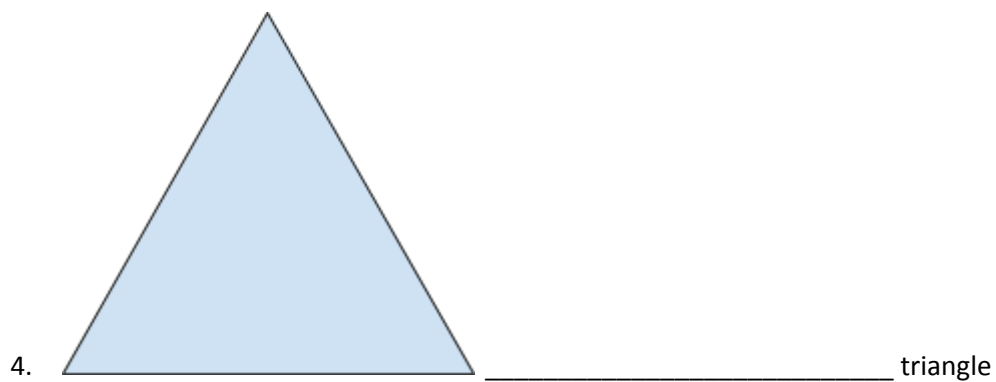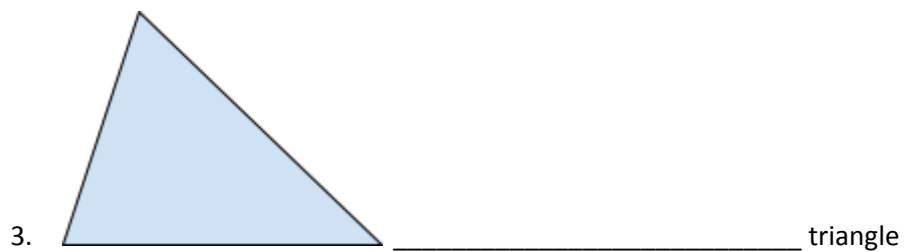| **EXPLAIN- Monique**	Estimated Time: 5
What the teacher does and what the students will be directed to do:	Critical questions the teacher will ask the students. What questions will guide this part of the lesson? *How might the students answer?*
Students will define obtuse, acute, right, and equiangular. Teachers will allow students to discuss what they have found in the previous activity.	What might this triangle be called? What is the triangle called if it has an angle bigger than 90 degrees? or smaller? What about if it has two of the same size angle? *Students will either know what they are called obtuse, right, acute, and equiangular or the teacher will go through each term.*

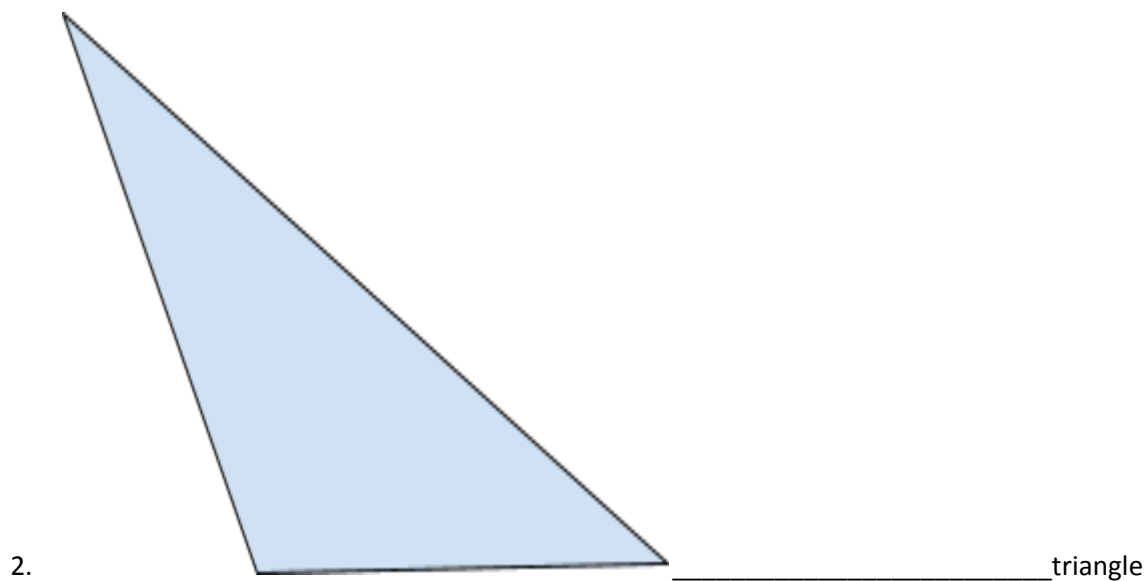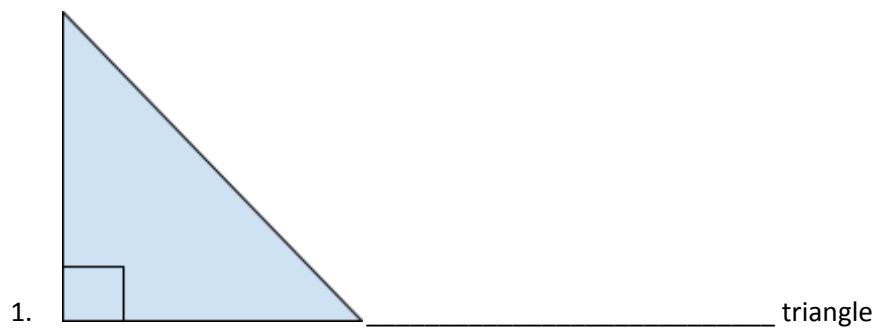| **ELABORATE-Monique**	Estimated Time: 15

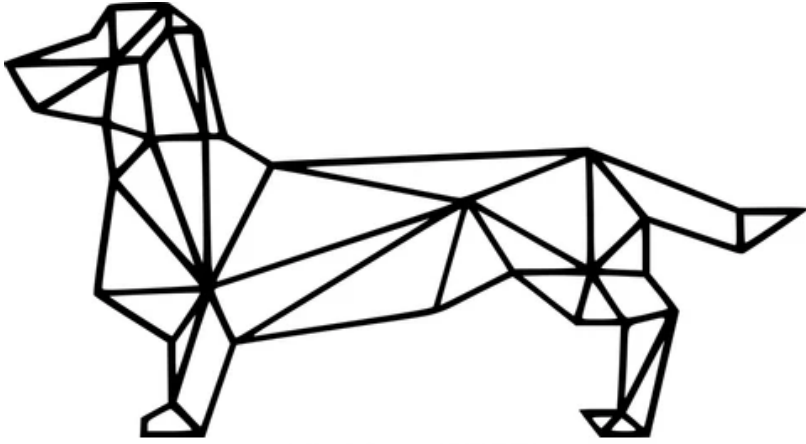| What the teacher does and what the students will be directed to do:	Critical questions the teacher will ask the students. What questions will guide this part of the lesson? *How might the students answer?*
Students will be given an image made out of different types of triangles. They will assign a color to each different type of triangle. They will then color in the image. Afterwards, students will share their pictures with the class.	What different types of triangles are in this image? *Right* *Acute* *Obtuse* *Equiangular* *Not sure* What colors are you using? *Red* *Blue* *Green*

EVALUATE-KP	Estimated Time for Summative Assessment: 7 minutes
Identify the strategies that will be used to evaluate student learning throughout the lesson.	
Formative Assessments -Straw activity (Explore) -Coloring sheet (Elaborate) -Ask and answer (Throughout lesson) Summative Assessment -Students will be directed to put away their coloring sheet. They will not be able to refer to this during the assessment. -Each student will be directed to work on the assessment independently. -Students will be given a page with the 4 different types of triangles. They will need to identify if the triangles are obtuse, acute, right, or equiangular.	

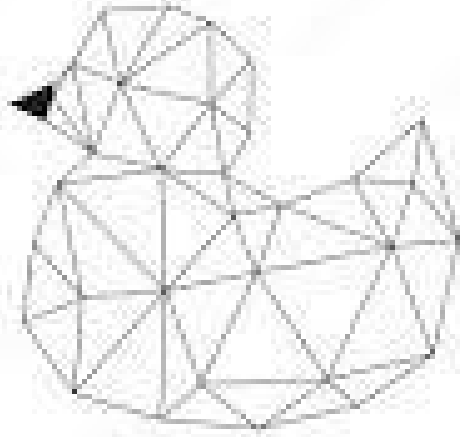| **SUMMATIVE ASSESSMENT** |
|---|
| Include a copy of the summative assessment for this lesson here.

Grading Rubric: Four points possible, one point for correctly identifying each triangle.
    1. Right triangle
    2. Obtuse Triangle
    3. Acute Triangle
    4. Equiangular Triangle |

THIS PAGE IS THE SUMMATIVE ASSESSMENT

Identify the following triangles as either **Acute, Obtuse, Right, or Equiangular**.

1. _____ triangle

2. _____triangle

3. _____ triangle

4. _____ triangle

90°