INSTRUCTIONAL DESIGN PROJECT TEMPLATE

Content. It is about the main ideas of the lesson	**Describe:** content here. (COMMON CORE STANDARDS)
	CCSS.MATH.CONTENT.8.G.A.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
	Describe: Standards of mathematical Practice (common core)
	Construct Viable Arguments
	Model with mathematics
	Use appropriate tools strategically
	Attend to precision
	Look for and express regularity in repeated reasoning
Pedagogy. Pedagogy includes both what the teacher does and what the student does. It includes where, what, and how learning takes place. It is about what works best for a particular content with the needs of the learner.	1**. Describe** instructional strategy (method) appropriate for the content, the learning environment, and students. This is what **the teacher will plan and implement.**
	Problem based lesson—I will present the problem to the students, allow them a few minutes to think about how to begin
	2. **Describe** what learner will be able to do, say, write, calculate, or **solve as the learning objective. This is what the student does.**
	The learner will be able to construct regular and irregular quadrilaterals. They will be able to manipulate the quadrilaterals and divide them any way they like. They will be able to use the measurement tool to tell whether they are split into equal parts. Students will be able to try several methods to get the quadrilateral to divide into two equal parts. Being able to use Geometer Sketchpad allows them to make arguments for or against certain quadrilaterals. They will be able to tell why or why not a certain quadrilateral can be split into two equal parts or have two equal areas.
	3. **Describe** the 21st century skill you will address in your lesson
	The 21st century skill is using Geometer Sketchpad to solve the problem.
Technology.	1. **Describe** the technology: What is the technology and what are the different functionalities of the technology you will use for the lesson
	Constructed irregular convex quadrilateral
	Constructed a diagonal inside the polygon
	Constructed the interior of the 2 new triangles
	Found the measurement of the areas of the triangles
	Constructed a regular quadrilateral, using the segment tool, the construct parallel and perpendicular lines

	tools, and then constructed the interior of the regular polygon and hid all the extra lines and points.
	Constructed a diagonal
	Constructed the interior of the 2 new triangles
	Found the area of the new triangles
	2. Describe how you will use the technology as a **tool** to enhance the lesson, transform the content, and/or supports pedagogy (NCTM, 2003).
	Geometer Sketchpad will be used as a speed and accuracy tool. Students will be able to construct the quadrilaterals much more quickly than they would by drawing out many quadrilaterals. Also, the measurements of the quadrilaterals when split in half will be accurate.
	3. **Describe** how the technology will affect student's thinking processes (NCTM, 2000)
	The technology will allow the students to reason why a quadrilateral can or cannot be divided into equal areas. They will be able to construct quadrilateral to support their reasoning.
Representations.	**1. Describe** the different representations you will use in your lesson
	The different representation that I will use is a pictorial representation. This will be of the quadrilaterals that the students will construct. Another representation could be the algebraic representation. This may help them discover when the quadrilateral can or cannot be split into equal areas.
	2. Describe how you will use the different functions of multiple representations in your lesson to enhance the lesson
	I will use multiple representations by using pictorial representations. Students will have to look at the quadrilaterals and tell whether they can be split into two equal areas or not. Students may also have to look at the problem algebraically. They will have to use many different methods to determine when a quadrilateral can be divided into two equal areas.