**LESSON PLAN TEMPLATE**

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| **Instructor:** Karen Zaun | **Class:** ASE / GED |
| **Date:** September 17, 2015 | **Length of Lesson:**  about 1 hour |
| **Standards Addressed:**  Calculate dimensions, perimeter, circumference and area of two-dimensional figures. Calculate dimensions, surface area and volume of three-dimensional figures. | **Mathematical Practices Addressed:** Model with Mathematics. Use appropriate tools strategically, |
| **Lesson Objectives (Refer to Webb’s Depth of Knowledge Levels 1-3).** | **At the end of this lesson, students will be able to:**Identify, retrieve and utilize the appropriate formula (s) from the GED Math Formula Sheet needed to solve word problems related to two and three dimensional figures. |
| **Assessing the mastery of the objective.** | **I will know that the lesson has been effective when my students can answer the following questions:**Which two or three dimensional figure(s) are included in the word problem?Which measurement of the two or three dimensional figure(s) is the word problem asking to be solved?Which formula (s) from the GED Math Formula Sheet will be needed to solve a particular word problem? **The means of assessment and check for understanding will be:**The students will be given a Worksheet of Geometry word problems and be asked to indicate which formula(s) from the GED Math Formula Sheet would they use to solve the problem. |
| **Pre-teaching*** How will I introduce the objectives?
* How will I make a connection between my content and my students?
* How will I draw on prior knowledge?
* How will I provide purpose for using the strategy?
 | I will provide each student with a copy of the GED Math Formula Sheet.I will let students know that questions on the GED Test can be answered using these Formulas. The GED Math Formula sheet will be available to them on the screen when they take their GED Test. They do not need to memorize these formulas. I will remind them that most of these formulas refer to the basic shapes of Geometry that they are probably already familiar with including circles, squares, rectangles, cubes, cones and cylinders.It will save them time on the day of their GED Math test if they are familiar with the GED Math Formula page. They will have a resource to use to help them solve the problems on the test. |
| **Teaching****Instruction/Modeling*** How will I deliver the information so that students are engaged?
* How will I describe the strategy, provide purpose, model it, and/or provide examples?

**Guided Practice*** How will I provide opportunities for students to practice in the classroom so I know they understand?
* How will I make sure they understand process, structure, and application of mathematical concepts?
* **How will I explicitly target 1 or 2 of the mathematical practices?**

**Independent Practice*** How will I help students extend what they learned so they can complete the task without my help?
 | After each student has received a copy of the GED Math Formula Sheet, we will review the various two and three dimensional figures that are included on the Sheet. Various examples of the two and three dimensional figures will be placed around the room and the students will be asked to point them out.As the various two and three dimensional figures are pointed out by the students, we will begin to discuss and define the Geometric measurements related to them including Perimeter, Circumference, Area, Surface Area and Volume.After the two and three dimensional figures and the Geometric measurements related to them have been discussed as a class, the students will be broken into groups. The groups will be provided with a sampling of the figures. In the groups, they will take turns identifying the figures and the measurements that can be calculated on each one.Once each student has had a turn to identify the figures and the measurements, they will then need to indicate which formula from the GED Math Formula sheet would be used to calculate the measurement. I will then give the students a Worksheet of Geometry word problems and ask them to discuss as a group which formula(s) from the GED Math Formula Sheet would be used to solve the word problems.The students will **Model with Mathematics** whenthey relate examples of two and three dimensional figures to the figures listed on the GED Math Formula Sheet. The GED Math Formula Sheet is an **appropriate tool** that they are learning **to use strategically.**The students will be asked to choose one of the figures and measurements listed on the GED Math Formula Sheet and create their own word problem that requires a formula to solve the word problem. |
| **Post-Teaching*** How will I check for understanding?
* How will I bring closure and provide opportunities for reflection?
 | I will bring the students back together as a class from the groups and review their choice of formula(s) on the Worksheet of Geometry word problems.I will ask some students to write their answers on the board so that all the students in the class can review their answers. |
| **Vocabulary/Terms** | Circle CircumferenceTriangle PerimeterSquare AreaRectangle VolumePyramid Surface AreaCone Composite Plane FiguresSphere Composite SolidsCylinder Irregular Figures |
| **Text and Materials*** Anchor text
* Supplemental Texts
* Websites
* Videos
* Apps
* Teacher Created Materials
 | **Kaplan Strategies, Practice and Review****GED Math Formula Sheet****Examples of two and three dimensional figures** |