

# LESSON PLAN

<b>Grade(s)</b>	
<b>Content Area(s)</b>	<i>Math</i>
<b>Topic of Lesson</b>	<i>Geometry: learning 2D and 3D shapes, angles, area and perimeter</i>
<b>Three Objectives</b>	<p><i>In a class discussion, students will be able to correctly identify 7 different polygons when looking at a variety of shapes drawn on a poster. The students will be given a worksheet at the end of the day for homework with 7 different polygons on the sheet.</i></p> <p><i>In a discussion with a partner, students will be able to give 2 real-life examples of the three-dimensional figures that were covered on the website.</i></p> <p><i>For a follow-up math exercise, students will be given a small packet with different cubical and rectangular shapes on each page. Each shape will be identified with either area and perimeter and the student will demonstrate their understanding of how to calculate both area and perimeter by solving each problem.</i></p>
<b>Technology standard</b>	<p>Standard 2. Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school, and in society.</p> <p>Society:  <b><i>G3-5: 2.5: Work collaboratively online with other students under teacher supervision.</i></b>  <b><i>G3-5: 2.5: Explain that some Web sites and search engines may include sponsored commercial links.</i></b></p>
<b>Curriculum Framework</b>	<ul style="list-style-type: none"> <li>• <b>Massachusetts Standards for Mathematical Content</b></li> <li>• <b>Grade 3</b></li> <li>• <b>Geometry</b></li> </ul> <p><i>Reason with shapes and their attributes.</i>  <i>1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</i></p>
<b>Materials needed</b>	<p><i>Handouts</i>  <i>Access to a computer and the Internet</i>  <i>Whiteboard/poster board</i></p>

	<i>Paper</i>
<b>Lesson Procedure, Web Site Use, and Technology Standard Instruction</b>	<p><i>First, the students and I will discuss the difference in shapes. The students will be sitting on their designated spots on the classroom rug. It will be a group classroom discussion. The shapes I will discuss will have been pre-drawn on a whiteboard/poster board and covered by a sheet of paper. I will reveal each covered shape and the students will be given the chance to identify each object. We will go over the basic shapes and move onto the more complex shapes with more sides.</i></p> <p><i>Following the discussion of the basic polygons, we will discuss the common 3D shapes that one sees in the world. After offering some examples in the room that illustrate 3D shapes, the students will be able to give some other examples of objects that are similar to 3D objects.</i></p> <p><i>After discussing 3D shapes I will introduce angles and how to identify the difference between small and large angles. The students will be able to be active and use their arms to demonstrate what a big and small angle looks like. Following the students' participation, I will demonstrate angle sizes with my arms and I will ask the students whether I am portraying an angle that it is small, exactly, or larger than 90 degrees. Finally, we will talk about area and perimeter. Since the students understand the basic concepts I will give them a little worksheet to review area and perimeter.</i></p> <p><i>After my lesson I will count off each of the students numerically to create groups for computer use. There will be two students per group and 4 computers will be available. Before I break the class up I will discuss how to access my website and during this time I will explain sites such as YouTube that use commercials and other ads to keep the site running. I will explain the responsible use of my website and guide them through navigating the site. The students will end their time by completing the quiz at the end. The students will be given a piece of paper to record their results and will hand in their overall score to the teacher.</i></p> <p><i>The students will be able to work together and go through the site and work on the quiz together. While some kids are on the computer I will take another group of kids to the learning rug and give them a chance to draw some shapes and play a little guessing game so the other students can figure out each shape.</i></p> <p><i>The students will explain the shape and why it is the specific shape. After about 15-20 minutes the students will switch and those who were not able to go on the computer will be able to go on the computer to use the site. All students will be given the chance to use the website and complete the quiz.</i></p> <p><i>After, each student is given the chance to use the site I will bring the student back to the rug and see what they learned or what they thought was the most interesting aspect about the lesson.</i></p>

<p><b>How will students be assessed?</b></p> <p><b>How will you know if students have met the objectives stated above?</b></p>	<p><u>Objective 1:</u> In a class discussion, students will be able to correctly identify different shapes when looking at a variety of shapes drawn on a poster.</p> <p><u>Assessment 1:</u> The students will be given the URL for the website and will be able to use the website to study from and the next day the student will be given a handout for morning work to see what they remember. The handout will have 6 random shapes including 3D shapes and polygons. There will be a little space under each shape to identify what the shape is and a word box consisting of 10 words will be provided at the bottom of the handout.</p> <p><u>Objective 2:</u> In a discussion, with a partner, students will be able to give some real-life examples of three-dimensional figures.</p> <p><u>Assessment 2:</u> Peer assessment. Each student will be given a partner. Each group will be given a plastic baggie with a laminated score sheet and a small stack of cards. The students will find a desk to work at or they could work on the class carpet. Each card will have an example of a 3D shape on one side and the name of the shape on the other side. The students will show their partner the picture and if the other student gets the correct 3D shape then the student will score one point. The students will play up to 10 rounds and will keep track of each other's scores.</p> <p><u>Objective 3:</u> Students will demonstrate the difference between area and perimeter when given a handout that illustrates the concepts.</p> <p><u>Assessment:</u> The students will be given a worksheet with examples of area and perimeter. There will be four examples of area and perimeter. The students will have to solve for the area or perimeter of each shape pending on prompt. Each student will complete the assignment and hand it into the teacher after they have finished.</p>
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