

<b>Lesson: Angles</b>	<b>Duration: 1 hour</b>
	<b>Grade: Cycle 3 Years 1 and 2</b>
	<b>Topic: Classifying Angles</b>
<b>Subject Competency:</b>	<ul style="list-style-type: none"> <li>• Mathematics</li> </ul>
<b>Learning Intentions or Objectives (SWBAT)</b>	<ul style="list-style-type: none"> <li>▪ Students will effectively use a protractor to measure angles.</li> <li>▪ Students will use proper mathematical language in communicating the concepts.</li> <li>• Students will identify and construct obtuse, acute, and right angles.</li> </ul>
<b>Subject Competency:</b>	<ul style="list-style-type: none"> <li>• <b>Competency 2:</b> To reason using mathematical concepts and processes</li> <li>• <b>Competency 3:</b> To communicate by using mathematical language</li> </ul>
<b>Essential Knowledges:</b>	<p><b>Angles: Estimating and measuring:</b></p> <ul style="list-style-type: none"> <li>• Comparing angles (right, acute, and obtuse)</li> <li>• Degree</li> </ul>
<b>Cross Curricular Competencies:</b>	<ol style="list-style-type: none"> <li><b>1. Intellectual Competency:</b> -To use information</li> <li><b>2. Personal and Social Competency:</b> -To cooperate with others</li> <li><b>3. Communication-Related Competency:</b> -To communicate appropriately</li> </ol>
<b>Broad Areas of Learning:</b>	<p><b>Citizenship and Community life:</b></p> <ul style="list-style-type: none"> <li>-Involvement in action in a spirit of cooperation and solidarity:</li> <li>-Interaction with peers in a spirit of mutual help</li> </ul>

<b>Classroom Management</b>	<p><b>Classroom management will be carried out by:</b></p> <ul style="list-style-type: none"> <li>-Communicating clear and precise expectations to students</li> <li>-Closing the lights and ceasing any form of discussion and/or counting down to 5.</li> <li>-Increase participation by using <a href="#">collaborative learning</a> and group projects.</li> <li>- Using hands-on activities instead of lecturing for the full hour.</li> </ul>
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<b>Differentiated Learning</b>	<ul style="list-style-type: none"> <li>-Students who have IEP's will be paired up with stronger students to facilitate learning. In order to make sure that all students have grasped the concepts, instructions, and activities, I will walk around the class observing if students need further explanations. I will interject if I notice students are in distressed or confused.</li> </ul>
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<b>Evaluation</b>	<p><b>Criteria:</b></p> <ul style="list-style-type: none"> <li>-To effectively estimate and measure angles</li> <li>-To effectively use appropriate mathematical language</li> <li>-To participate in group activities</li> </ul> <p><b>Means:</b></p> <ul style="list-style-type: none"> <li>-Group work (draw and indicate the angle)</li> <li>-Using appropriate mathematical language when explaining their work.</li> <li>-Teacher observes and documents</li> </ul>
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# Lesson- Classifying Angles

## Materials

- Mathematics textbook
- Stencils (Protractor instructions and exercise stencils)
- Protractors and rulers

## Teacher Preparation

- Prepare all the stencils (Sheet to record angles and list of degrees to be drawn).
- Make sure there are enough protractors for each student and/or group.
- Draw the angles and write down degrees on the blackboard.

## **Introduction (25 minutes)**

- Prior to the lesson, review how to use a protractor with the students. Distribute a stencil that explains in steps on how to use a protractor (appendix). Take a few minutes to go over the instructions.
- Assign students mathematical vocabulary words from their math textbook (p.194-195):
  1. **Right angle:** The angle made by a square corner. A right angle measures 90 degrees.
  2. **Obtuse angle:** An angle that measures greater than 90 degrees.
  3. **Acute angle:** An angle that measures less than 90 degrees.
  4. **Right-angled triangle:** A triangle with one right angle
  5. **Obtuse-angled triangle:** A triangle with one obtuse angle
  6. **Acute-angled triangle:** A triangle with only acute triangles
- At the beginnings of class go over the mathematical vocabulary to remind the students on the different types of angles.
- **Ask students:**
  - What is a right angle?
  - What is an obtuse angle?
  - What is an acute angle?

## **Pre-activity**

- Draw 1 or 2 angles on the board so that students can measure and identify them (Obtuse, acute, and right angle).
- Write down a 1 or 2 degrees on the board so students can construct and identify the angle.
- Have students construct their own angles and have other students volunteer to measure them.
- Have students write down degrees and have other students construct the angles.

## Development (25 minutes)

### Activity

For this activity students will be paired up in groups. Each group will randomly select a coupon from a box. These coupons contain 4 different degrees on them. The students' task is to construct the angle using a protractor and to identify if it is an obtuse, acute, or right angle. Each group will explain and justify their answers.

- Before starting the activity, explain to the students the rules of group work/discussions.
  1. Respect one another
  2. Listen to one another
  3. Help each other
  4. Work together (this is not an individual task). If students are disruptive they will be sent outside of the class.
- **Tell students:** For this activity you will be paired up with a partner, and then assigned to your respective groups.
- Give each group a stencil
- **Note:** This stencil is for students to illustrate and record their angles.
- Ask each group (one at a time) to select their coupons from a box.
- Student will then construct and name each angle from their list of degrees.

### Conclusion (10 minutes)

- Students will briefly share their work with the class and teacher.
  
- Have students complete page 195 for homework (**textbook**) and page 64 (**workbook**).

**Reflective Notes:**