

<b>Grade: High School</b>		<b>Subject: Geometry</b>	
<b>Materials: 4.5 notes, 4.5 worksheet, calculators, cumulative unit activity</b>		<b>Technology Needed: Document camera</b>	
<b>Instructional Strategies:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Direct instruction</li> <li><input type="checkbox"/> Guided practice</li> <li><input type="checkbox"/> Socratic Seminar</li> <li><input type="checkbox"/> Learning Centers</li> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Other (list)</li> </ul> <ul style="list-style-type: none"> <li><input type="checkbox"/> Peer teaching/collaboration/cooperative learning</li> <li><input type="checkbox"/> Visuals/Graphic organizers</li> <li><input type="checkbox"/> PBL</li> <li><input type="checkbox"/> Discussion/Debate</li> <li><input type="checkbox"/> Modeling</li> </ul>		<b>Guided Practices and Concrete Application:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Large group activity</li> <li><input type="checkbox"/> Independent activity</li> <li><input type="checkbox"/> Pairing/collaboration</li> <li><input type="checkbox"/> Simulations/Scenarios</li> <li><input type="checkbox"/> Other (list)</li> </ul> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hands-on</li> <li><input type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Imitation/Repeat/Mimic</li> </ul> <p>Explain: Students will complete the notes in class and work on the worksheet provided.</p>	
<b>Standard(s)</b> 8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.		<b>Differentiation</b> <b>Below Proficiency:</b> We will fill out the notes together and do the cumulative unit worksheet. Students can work through homework problems with myself or go to resource room. <b>Above Proficiency:</b> Students can do more problems/applications of the content. I can refer them to a textbook. <b>Approaching/Emerging Proficiency:</b> Students will complete lesson as is. <b>Modalities/Learning Preferences:</b> Visual, intrapersonal	
<b>Objective(s)</b> <ul style="list-style-type: none"> <li>• I can restate the distance formula.</li> <li>• I can use the distance formula and Pythagorean theorem interchangeably.</li> </ul> <b>Bloom's Taxonomy Cognitive Level:</b> <ul style="list-style-type: none"> <li>• Knowledge, comprehension, application</li> </ul>			
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> Students will participate in classroom discussion. They will work independently on their worksheets.		<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> Students will be expected to participate in classroom discussion and work independently on the worksheets. They will be respectful of their peers and allow them to work.	
<b>Minutes</b>	<b>Procedures</b>		
5	<b>Set-up/Prep:</b> Hand out the notes for 4.5 on the Distance formula. Tell students to get their cumulative unit problem out.		
5	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b> Ask students what we learned yesterday and what problems they think we can fill in on the worksheet. <ul style="list-style-type: none"> <li>• Triangle 1: Give measure of side b and side c. Solve for a. Classify by sides. Indicate the side lengths with tic marks.</li> <li>• Triangle 7: measure of x (this is from awhile ago)</li> </ul>		
15	<b>Explain: (concepts, procedures, vocabulary, etc.)</b> Distance formula notes will be filled out. I will go over my notes and add in discussion about how it can be related to the Pythagorean Theorem.		
20	<b>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</b> Hand out worksheet for students to work on.		
5	<b>Review (wrap up and transition to next activity):</b> Let students know tomorrow is a work day and they can ask any questions they have on the material. There will be a quiz on 4.3-4.5 material on Friday.		
<b>Formative Assessment: (linked to objectives)</b>		<b>Summative Assessment (linked back to objectives)</b>	

**Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.**

I should be able to tell if the students are understanding based on the classroom discussion and if they are able to do the checkpoint problems. I can also observe them while they are working on the worksheet for the content.

**Consideration for Back-up Plan:**

If the students seem to not be understanding, we will go over some of the worksheet problems and I will ask for specific questions.

**End of lesson: If applicable- overall unit, chapter, concept, etc.:**

There will be a quiz on Friday of this week as well as a unit test in week 4.

**Reflection (What went well? What did the students learn? How do you know? What changes would you make?):**

I taught this lesson to back to back classes, and my first class suffered. I realized I tried to explain too much extra information was unnecessary. This left the students confused and overwhelmed. I reflected quickly with my practicum teacher and my lesson was entirely different the second time around. I only hit the essential information and the students responded well. Both groups saw the connection from the Pythagorean Theorem content and were able to complete the worksheet. This lesson did not come as easily as the Pythagorean Theorem, but the students still learned something. If I were to do this lesson again, I would like to have introduced more coordinate plane information beforehand. A little more frontloading for this lesson would ensure success.

## Lesson Plan Template