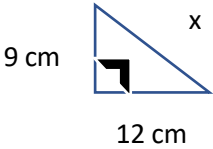


Technology Integrated Lesson- Alexis Wanner Practicum II

<b>Grade: 7<sup>th</sup> grade-accelerated</b>		<b>Subject: Mathematics</b>	
<b>Materials: Pencil, Chromebook, notecards, calculator, graph paper/ loose leaf paper</b>		<b>Technology Needed: Chromebooks, calculators</b>	
<b>Instructional Strategies:</b> <ul style="list-style-type: none"> <li><input checked="" 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 checked="" type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Peer teaching/collaboration/cooperative learning</li> <li><input checked="" 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 checked="" type="checkbox"/> Large group activity</li> <li><input checked="" type="checkbox"/> Independent activity</li> <li><input type="checkbox"/> Pairing/collaboration</li> <li><input checked="" type="checkbox"/> Simulations/Scenarios</li> <li><input type="checkbox"/> Hands-on</li> <li><input checked="" type="checkbox"/> Technology integration</li> <li><input type="checkbox"/> Imitation/Repeat/Mimic</li> </ul>	
<b>Standards</b> 8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real world and mathematical problems in two and three dimensions.  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> Students will be able to describe what the Pythagorean Theorem shows and use the formula to calculate different values on the Cartesian Plane with significant help from the teacher. <b>Above Proficiency:</b> Students will be able to describe what the Pythagorean Theorem shows and use the formula to calculate different values on the Cartesian Plane independently as well as extend these concepts with less neat numbers. <b>Approaching/Emerging Proficiency:</b> Students will be able to describe what the Pythagorean Theorem shows and use the formula to calculate different values on the Cartesian Plane with minimal help from the teacher. <b>Modalities/Learning Preferences:</b> Visual	
<b>Objectives</b> By the end of the lesson, students will be able to -recall from memory what the Pythagorean Theorem is -describe what the Pythagorean Theorem's shows -manipulate a graph and use the Pythagorean Theorem to compute values from said graph  <b>Bloom's Taxonomy Cognitive Level:</b> Remembering, Understanding, Analyzing			
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> Students will remain seated in their assigned desks throughout the duration of class and follow proper COVID-19 protocols in regard to social distancing and mask wearing.		<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> Students will conduct themselves respectfully and work in their assigned spots on the activities, asking questions when help is needed in class.	
<b>Minutes</b>	<b>Procedures</b>		
<b>60</b>	<b>Set-up/Prep:</b> Prepare a question for the "My favorite No" activity and have enough note cards for each one per student. Prepare PowerPoint to review concepts of Pythagorean Theorem. Post link to Technology Integration activity on Google Classroom page. Print off at least one piece of graph paper for each student. Entrance Ticket question: Solve for the missing side.  <div style="text-align: center;">  </div>		
<b>15</b>	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b> Hand out a notecard to each student upon entering the room, on which we will do the "My Favorite No" Activity. Students will be given 5 minutes to complete the problem, drawing a box around their answer. Then the notecards are collected, and the teacher will quickly sort through the correct and incorrect answers. The teacher will then select her "favorite no" or most teachable incorrect answer and write it anonymously on the board. The teacher will ask, "What do you think I like about or am happy about in this problem?" Then, the teacher explains what the correct portion of the problem is. Then the question of "Where is the mistake in this		

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	problem?”, allowing students to supplement the learning of their fellow students. The teacher will then go over where the mistake occurred and how to avoid this mistake in the future.		
10	<p><b>Explain: (concepts, procedures, vocabulary, etc.)</b>            We will go over what the Pythagorean Theorem is as a class, asking</p> <p>1)What is the equation of the Pythagorean Theorem? <math>a^2 + b^2 = c^2</math></p> <p>2)What does the Pythagorean Theorem tell us about? <b>It shows us the relationship between the side lengths of a right triangle.</b></p> <p>3) How could we use this in real life? <b>Architecture, Construction, Navigation, Surveying, and more!</b></p>		
20	<p><b>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</b>            The students will take out a pencil, calculator, graph paper or loose-leaf paper, and their Chromebook. The students will log onto our Google Classroom Page and click on this link:  <a href="https://prairiepublic.pbslearningmedia.org/resource/mket-math-g-mmystery3/mmysterythree/">https://prairiepublic.pbslearningmedia.org/resource/mket-math-g-mmystery3/mmysterythree/</a>            We will explain the directions and work through the first exercise together as a class, then allow the students to work independently or with a partner on the Maritime Mysteries Activity.</p>		
3	<p><b>Review (wrap up and transition to next activity):</b>            The students will clean up their area and pack up the materials in preparation to move to the next class.</p>		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>Formative Assessment: (linked to objectives)</b>  <b>Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.</b>            Walk around the classroom to monitor students’ progress on the “My Favorite No” activity and on the Maritime Mysteries activity, providing additional instruction and help when needed throughout class.</p> <p><b>Consideration for Back-up Plan:</b>            Prepare additional problems involving graphing, the Pythagorean Theorem, and right triangles to supplement and/or extend instruction if necessary.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><b>Summative Assessment (linked back to objectives)</b>  <b>End of lesson:</b>            Student will showcase their skill throughout the graphing and calculations from Maritime Mysteries, showing their comprehension of the Pythagorean Theorem and its uses.</p> <p><b>If applicable- overall unit, chapter, concept, etc.:</b>            The students will take a summative assessment on the standard to ensure their academic progress with this content.</p> </td> </tr> </table>	<p><b>Formative Assessment: (linked to objectives)</b>  <b>Progress monitoring throughout lesson- clarifying questions, check- in strategies, etc.</b>            Walk around the classroom to monitor students’ progress on the “My Favorite No” activity and on the Maritime Mysteries activity, providing additional instruction and help when needed throughout class.</p> <p><b>Consideration for Back-up Plan:</b>            Prepare additional problems involving graphing, the Pythagorean Theorem, and right triangles to supplement and/or extend instruction if necessary.</p>	<p><b>Summative Assessment (linked back to objectives)</b>  <b>End of lesson:</b>            Student will showcase their skill throughout the graphing and calculations from Maritime Mysteries, showing their comprehension of the Pythagorean Theorem and its uses.</p> <p><b>If applicable- overall unit, chapter, concept, etc.:</b>            The students will take a summative assessment on the standard to ensure their academic progress with this content.</p>
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	<p><b>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</b>            The students LOVED this activity. Although they needed additional promptings with a few different phrases on the game, the students were very engaged and happy to be doing math that is more applicable to life.</p>		