

Lesson Plan Template

Grade: 10		Subject: Geometry	
Materials: Pencil, paper		Technology Needed: Laptop/phone	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/ <input type="checkbox"/> Guided practice cooperative learning <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Learning Centers <input type="checkbox"/> PBL <input type="checkbox"/> Lecture <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Technology integration <input type="checkbox"/> Modeling <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) HS.G-SRT.5 – Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures		Differentiation <p>Below Proficiency: If students are struggling with this content, I will help them through by referring them to which page of their notes that were handed out to them that would have similar problems. I will proceed to help them through one or two of these problems.</p> <p>Above Proficiency: If students get finished quickly, I will have them compare the examples before we go through them as a group. They will be expected to discuss how they got the answers and why they believe their answer is right.</p> <p>Approaching/Emerging Proficiency: The students will be expected to complete their assignment in a timely fashion and assist with any others they may need extra help or a different perspective.</p> <p>Modalities/Learning Preferences: Auditory: The students will listen to the explanation of reading with a question in mind and how to determine if two figures are congruent or what property of congruence is being used.</p> <p>Visual: The students will watch and follow along with the examples that we go through as a class.</p> <p>Kinesthetic: The students will be allowed to move to group up with their partners for the assignment.</p> <p>Interpersonal: The students will be placed in small groups to work through and discuss the assignment they are given at the end of class.</p>	
Objective(s) By the end of this lesson, the students will be able to: <ol style="list-style-type: none"> 1. Define what congruence is/what makes two shapes congruent 2. Determine if two shapes are congruent 3. Use the Reflexive, Symmetric, and Transitive properties of congruence Bloom's Taxonomy Cognitive Level: Comprehension and Application			
Classroom Management- (grouping(s), movement/transitions, etc.) The kids will be in a large group setting for the around half of the class period. They will then use their turn-and-talk partner for discussions and/or part of the assignment.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students will be expected to bring their school laptop/phone, a pencil and notebook to class. They will also be expected to be fully engaged throughout the lesson. When the students get in their groups for their discussions/assignments, they are expected to work together and participate to the absolute best of their ability so one person is not doing the entire assignment.	
Minutes	Procedures		
25	Set-up/Prep: Pull up PowerPoint or Word document if there is a SmartBoard or projector available, otherwise just making sure the marker/chalk board is clean and having something to write with. I will also need to create the Kahoot.		
10	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)		

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	<p>I would start by asking the students what they remember or know about being congruent. We would then have a short discussion on their ideas. If they were way off, I would use questions to try and lead them to answers I would want them to give essentially. I would specifically use questions that relate to what it means to be similar and see if we could draw any conclusions from the definition of being similar and how there could be any connections there. For example, a connection is that congruence plays off of similarity since similar triangles are just the same shape, but congruent triangles are the same shape AND the same size. I would then transition to the actual definition of congruence and go from there.</p>
<p>25</p>	<p>Explain: (concepts, procedures, vocabulary, etc.) First, I will go through the notes that each student is given. We will start by filling in the missing portion for the reflexive property. I will relate this to the reflection transformation that they learned a few weeks ago. Basically, just by saying that whatever is on one side must also be on the other side. Next, we will fill in the symmetric property box. For a relation here, I will use addition in general. For example, $3+5$ is the exact same thing as $5+3$. Then, we will fill out the transitive box. This box we will break down as a group and discuss that since side AB and side EF both equal or are congruent to side CD, then they must be equal or congruent to each other. We will then go through some examples together in class. The questions will cover determining which property is presented. Next, we will move on to how we know if triangles are congruent. To do this, we will define what corresponding parts are and what the actual definition for congruence really is. Next, we will jump into how to find corresponding parts. We will fill in the first example box together. Then, using the first example we will go through another example where we must list all of the congruent parts of the triangle on our own. After this, we will do one more example of listing all of the corresponding parts of the triangle and then actually stating if the triangle is congruent by writing a congruence statement. Next, we will use the properties of congruent triangles to obtain information from one triangle to the next. I will then have the students go through one of the checkpoints in their notes on their own, giving them roughly 3-5 minutes to do the examples. We will then walk through the last examples as a group which involve identifying corresponding congruent parts of a triangle and then determining if the triangles are congruent.</p>
<p>15</p>	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) *BASED ON TIME*(If there is enough time, we will go through this Kahoot as a class. If not, they will receive their homework). After the examples are gone through together as a group, we will continue to practice as a group by doing a Kahoot together. This will be a short ten question Kahoot. In the Kahoot, they will practice very similar questions to the examples from their notes. They will be allowed to reference their notes.</p>
<p>5</p>	<p>Review (wrap up and transition to next activity): To wrap up, I will assess the Kahoot to see if there were any areas that everyone really struggled in and what through any pointers that may need to be reviewed. I will then ask the class if they have any clarifying questions. Once all of those questions are answered, I will allow them to start working on their homework assignment. I will make sure to walk around while they are completing this so if any students had questions, but didn't want to ask in front of the group, that they get their questions answered and leave the classroom feeling confident with the material. I will also encourage the students to help each other. From earlier in the year, they will understand that helping each other does not constitute as giving each other answers, but instead making sure everyone is giving input and receiving help where needed. I will make sure to monitor this as I am walking around the classroom and providing help to students as well.</p>
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc. I will be formatively assessing the students in a couple different ways during this lesson. The main one will be walking around the classroom when examples are present or while they are working on their homework at the end as well. I will also formatively assess the students when they complete the Kahoot activity. I will be able to better understand where the students are at with their understanding of the concept. Consideration for Back-up Plan: As a back-up plan, if I can tell that the students are struggling during the Kahoot game, I will have groups ready for them to get into and have them discuss with their groups before they answer. This could affect how well I am able to formatively assess each student individually, but I will still be able to assess them individually while walking around during their homework. I will also know based upon how well the students do on their homework assignment. This should be able to help them improve on their homework. However, if I think they are still struggling after this, I will actually go through some of the homework problems as examples with the entire class. This could</p>	<p>Summative Assessment (linked back to objectives) End of lesson: The end of the lesson, the students will complete their homework assignment. If applicable- overall unit, chapter, concept, etc.: At the end of the chapter, they will have questions on their test regarding congruence and properties of congruence as well.</p>

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have to be done at the beginning of the next class period, which would most likely just be the opening activity for the next day with a potential work day for the homework.

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

I definitely should have gotten the students more engaged with the lesson right away. I just jumped right into the notes and it took the students a little while to become involved and answer questions. I thought my pacing was good and allowed for the students to take proper notes. I do need to work on making sure more students are getting involved in answering questions so the class isn't so dominated between one or two students. The students loved the Kahoot and the game made it fairly easy to see what topics needed to be revisited. By the end of the Kahoot, most of the students had the hang of the concepts. This allowed me to help the other students one-on-one in their assignment if they were still struggling with the concepts.

Link to the Kahoot: <https://create.kahoot.it/details/e9a925c3-0d9b-4b6d-b3ce-f1e2e1f61cf9>