Berea MS Lesson Plan 2025 - 2026 Week (Specific Dates): September 8 to 12 **Teacher**: Ms. C Cochling **Grade/Subject Math 8**

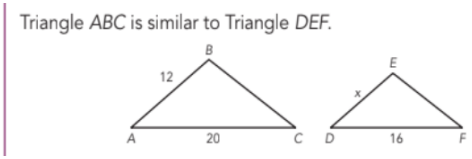
Unit Title:	Congruence and Similarity
Unit Vocabulary:	Congruence, similarity, Angle-Angle Similarity Proportional Scale factor
Upcoming Common Assessments (MasteryConnect):	September 12, 2025 (Major) Quiz September 19, 2025 Major September 26, 2025

	Standard(s) + Learning Objective	**Activating Experience** (Opening, may include "Scholar Starter")	**Learning Experience** (Work Time: SB Materials and Resources, Vocab, Scaffolds/Supports, SWRL, Costas)	**Formative or Summative Assessment(s)**	**Summarizing Experience** (Closing)	**WICOR, AVID and/or ELLevation Strategies** (aligned with learning objective)
MONDAY	**Standard** (write out): **Learning Objective** **Skill (what), Content (why), Product (how):** Scholars will identify and distinguish between rigid motions and dilations and perform a sequence of transformations to map a preimage onto an image using labeled diagrams	**Scholar Starter** Bell Ringer cycle 2 Day 1 **Image Sort** Scholars given mixed diagrams showing different transformation Prompt: How can we group	**Essential Questions** What do rigid motions and dilations reveal about the relationships between shapes and their images? How can we determine and describe a sequence of transformations that maps one figure onto another? **Standards Based Materials & Resources:** Direct instruction Revisit the definition for rigid motion and dilation, similarity and congruent, corresponding sides, vertices and	Exit ticket Masteryconnect Question on translation in Google Classroom.	Conclude the lesson by answering the essential question. In notebooks	notation to structure thinking and and explain movement **R-** **Sentence Frames.** **Think pair share**

	and written explanations	these images? What are the similarities and differences among these images? Have students share responses then quick write what rigid motions have in common.	angles. Textbook McGraw Hill p. 86 - 88 Guided Task Carnegie Learning M1-146 # 1, M1-148 # 3a, Independent Task M1- 149 #5 M1- 150 #6 Additional activity **Content/Academic Vocabulary:** Translation, preimage, image, coordinate plane, vertical and horizontal rotation, dilation, rigid motion, similar, congruent, proportional,corresponding **ILAP/IEP/504 Scaffolds & Supports:** Sentence starters for MLs -Use of hands on resources such as patty paper -Visuals presentations, videos -Translation of key words in spanish (MLs) **Opportunities to SWRL:** **S-** Students will discuss the prompt in the activating strategy.			

			W- The students will write the response to the prompt in their notebook **R-** Read the coordinates from the preimage and image after translation **L-** Listen to pair discussion. **<u>Costa's Levels of Thinking/Questioning:</u>** **Level 1:** What is a rigid motion? Name the three types of rigid motions. What does dilation do to a shape? What is preserved during a rotation? What changes? What is the difference between congruent and similar figures? **Level 2:** How can you tell if a transformation is a rigid motion just by looking at the coordinates? Compare a dilation and a translation. How are they similar? How are they different?			

			Given a transformation, how can you verify whether the size of the figure stayed the same? How do you describe a rotation using degrees and direction? Which transformations preserve both angle and side length? Explain how you know. **Level 3:** Explain how a sequence of transformations can result in a figure that looks different but is congruent to the original. Give an example. Given two shapes on a coordinate plane, how can you determine the exact sequence of transformations that maps one onto the other? If a figure undergoes a dilation followed by a reflection, will the resulting image always be similar to the preimage? Why or why not? Can two different transformation sequences result in the same image?			

			Prove your reasoning using a coordinate grid or diagram			
TUESDAY	**Standard** (write out)**: 8.MGSR.2.2:** Determine if two-dimensional figures are congruent or similar. **Learning Objective** **Skill (what), Content (why), Product (how):** Scholars will determine whether two triangles are similar by applying the Angle-Angle (AA) Similarity Postulate to justify their reasoning, and will demonstrate this by solving problems and explaining their conclusions in writing or orally	**Scholar Starter** **Activating Strategy**	**Standards Based Materials & Resources:** Video on Similarity Students watch video and take notes (focus note taking with sentence stem or starters) sample **Direct Instruction** Teacher models to scholars how to find missing side of proportion  Model one showing angle - angle relationship Front load key vocabulary Corresponding sides proportional Corresponding angles equal/congruent **Independent work** -Cornell note taking from video -McGraw Hill text p. 89 to 96	Exit ticket to be taken from reveal	**Think-Write -Pair Repeat** **THINK (30 seconds)** Students silently reflect on the question: ***How do I know two triangles are similar using the angle-angle criterion?*** **WRITE (1 minute)** Students write a **1–2 sentence summary** using key vocabulary. **Sentence frame (MLs):**	Roundtable activity WICOR **W- Write-** Each scholar will write responses **I- Inquire**-students analyze and justify a series of rigid motion and dilation **C- Collaboration-** **O- Organization-** Students used coordinate to prompt from activity **C- Collaboration** Students work in groups **O- Organize** Scholars organize thoughts and responses as

			<u>Content/Academic Vocabulary:</u> Similar Figures, Congruent Angles Corresponding Angles, Angle-Angle (AA) Similarity Criterion Ratio, Proportional, Coordinate Notation Transformation, Image & Pre-image Justify, Scale Factor, Rigid Motion **<u>ILAP/IEP/504 Scaffolds & Supports:</u>** **Visual Aids**: Use color-coded triangles to highlight corresponding angles. **Sentence Frames**: Triangle ___ and triangle ___ are similar because… I used AA similarity by identifying angles ___ and ___ as congruent. **Word Bank Wall**: Provide academic vocabulary with definitions and visuals. **Small Group Instruction**: For students needing additional support, work through one similarity example		Two triangles are similar if… I can prove this by… **PAIR (2 minutes)** In pairs, students **read their summaries aloud** to each other (Read/Speak). **Partner listens and gives feedback**: I agree because… Can you explain what you meant by… **REPEAT (1–2 minutes)**	they work together and response to prompt on activity

			step-by-step. **Chunking Tasks**: Break multi-step similarity justifications into small, manageable steps. **Allow Multiple Modalities for Response**: Written, oral, diagram-based explanations. **<u>Opportunities to SWRL:</u>** **Speak:** Pair-share or group discussion explaining triangle similarity using AA. Sentence stems provided. **Write:** Justify triangle similarity in writing using diagrams and coordinate notation. **Read:** Read examples of triangle similarity proofs and analyze peer explanations. **Listen:** Listen to partners' reasoning during collaborative tasks. Listen to video and teacher modeling task **<u>Costa's Levels of Thinking/Questioning:</u>** **Level 1:** What does it mean for two angles to be congruent? -What is the Angle-Angle (AA) Similarity Criterion? -Identify the corresponding angles in these		Students **revise or expand** their written summary based on feedback.	

			two triangles. -What is a ratio? -Name two types of transformations that preserve angle measures. **Level 2:** Compare these two triangles on a coordinate plane. Are they similar? Explain your reasoning. How does the AA similarity criterion help us determine similarity without measuring side lengths? **Level 3:** How can you determine if two triangles are similar if you only know one angle and one pair of corresponding sides? What additional information would you need? Describe a real-world scenario where identifying triangle similarity using AA would be useful.			

W E D N E S D A Y	**Standard** (write out)**:** Apply proportional reasoning to find the missing side lengths of two similar figures. **Learning Objective** **Skill (what), Content (why), Product (how):** Scholars can apply proportional reasoning by describing the relationships between the angles and sides of similar triangles to find unknown side lengths or distances.	**Scholar Starter** **Similar or Not? Gallery Walk** 6–8 printed geometric pairs (some similar, some not) posted around the room Each geometric pair labeled A chart or recording sheet with columns**:** **Triangle Pair | Are they similar? | How do you know?** **Instruction** **Gallery Walk –** Students circulate in pairs to observe each Geometric set.	**Standards Based Materials & Resources:** Problem solving with similar triangles Mc Graw Hill p.98 to 102 **Content/Academic Vocabulary:** Proportion, Ratio, Equivalent ratios, Scale factor, Cross products, Similarity, Similar figures, Congruent angles, Corresponding sides, Corresponding angles, Proportional, AA (Angle-Angle) Similarity, SSS (Side-Side-Side) Similarity, SAS (Side-Angle-Side) Similarity, Dilation **ILAP/IEP/504 Scaffolds & Supports:** **Visual Aids**: Use color-coded triangles to highlight corresponding angles. Sentence Frames: **Word Bank or Wall**: Provide academic vocabulary with definitions and visuals. **Group work**: Scholars work in groups to complete tasks. **Chunking Tasks**: Break multi-step similarity justifications into small, manageable steps. **Allow Multiple Modalities for Response**: Written, oral, diagram-based	Exit Ticket From Reval	Whole-class discussion: "What must be true for us to say two triangles are similar?" Scholars restate the AA Similarity Postulate in their own words. Turn and talk: *How did solving today's problems help you understand similarity?*	WICOR **W- Write-** Each scholar will write responses to prompt from activity Gallery Walk **C- Collaboration** Students work in groups in Gallery Walk and class activity **O- Organize** Scholars organize thoughts and responses as they work together and response to prompt on activity **R-Read** Read the content in the text and prompt from Gallery Walk Quick write

		Discuss & Decide – For each pair, scholars discuss whether the Geometric figures are similar and justify their reasoning using informal language (the angles look the same, the sides are in proportion). **Record Responses –** Each scholars writes their answer and justification on their sheet. **Share Out –** After the walk, select 1–2 geometric pairs to debrief as a class. Ask volunteers to explain their thinking.	Additional guided practice with teacher check-ins **<u>Opportunities to SWRL:</u>** **S-** Scholars speak in gallery walk activity answering prompts and also while doing group work. W- Scholars write responses on justification sheet in gallery walk and also in text Mc Graw Hill R- Scholars read prompts in gallery walk as well as their text book. L- Scholars listen to each other response to the prompt as well as to direct instruction **<u>Costa's Levels of Thinking/Questioning:</u>** **Level 1:**What transformation moves a figure without changing its size or shape? If two triangles have the same size and shape, what do we call them? **Level 2:** A triangle is rotated 90° clockwise. How does this affect the triangle's orientation, size, and shape? Explain how you know whether two rectangles are similar or congruent after one is dilated. **Level 3:** Two figures look alike but are not the same size. Explain, using transformations, how you can prove whether they are similar or not.			

			Given two quadrilaterals, describe a sequence of transformations that would show they are congruent or prove why no sequence can make them congruent.			
THURSDAY	**Standard** (write out)**:** **Learning Objective** **Skill (what), Content (why), Product (how):** Scholars will determine whether two figures are congruent or similar by analyzing the effects of transformations, translations, reflections, rotations, and dilations on their size, shape, and orientation , and will demonstrate understanding by solving problems and justifying their reasoning through written explanations,	**Display** 4–5 pairs of figures on the board (some congruent, some similar, some neither). Example: Two triangles of the same size but rotated, two rectangles of different sizes but same shape, two irregular shapes. **Quick Think:** Ask scholars: *"Which figures look the same? Which look alike but not exactly the same? How*	**Standards Based Materials & Resources:** Mastery Connect Review Questions **Content/Academic Vocabulary:** Reflection, Rotation, Dilation, Translation, Proportion, Congruent, Similar, corresponding, Preimage, image **ILAP/IEP/504 Scaffolds & Supports:** Visuals Word bank/ word wall Small group **Opportunities to SWRL:** **S-** Scholars will speak using sentence frames in the turn and talk in the activating strategy. **W**- Scholars will write their response to the prompt in the activating strategy **R-** Scholars will read the prompt in activating strategy as well as the practice questions **L-** Scholars listen to each other speak in Turn and Talk **Costa's Levels of Thinking/Questioning:**	Fist to Five How do you feel about your level of understanding ? How prepared are you for your test?		WICOR W- Scholar write response in activating strategy I- Scholars inquire, asking probing question how to solve test prep questions C- Scholars collaborate to complete their test prep questions O R- Scholars read prompt in

	diagrams, or oral presentations	*can you tell?"* **Turn & Talk:** Have students explain their reasoning to a partner using the sentence frame: *"These figures are congruent/similar because…"* **Whole-Class Debrief:** Connect their observations to the lesson objective. Highlight: *Congruence = same size/shape through rigid transformations (translation, reflection, rotation).* *Similarity =*	**Level 1:** What is the name of a transformation that flips a figure over a line? Which transformations change a figure's position but not its size? **Level 2:** A triangle is rotated 90° clockwise. How does this affect the triangle's orientation, size, and shape? Explain how you know whether two rectangles are similar or congruent after one is dilated. **Level 3:** Two figures look alike but are not the same size. Explain, using transformations, how you can prove whether they are similar or not. Given two quadrilaterals, describe a sequence of transformations that would show they are congruent or prove why no sequence can make them congruent.			activating strategy and questions in test prep.

		same shape, different size through dilation				
F R I D A Y	**Standard** (write out)**:** **Learning Objective** **Skill (what), Content (why), Product (how):**	TEST	**Standards Based Materials & Resources:** **Content/Academic Vocabulary:** **ILAP/IEP/504 Scaffolds & Supports:** **Opportunities to SWRL:** **Costa's Levels of Thinking/Questioning:** **Level 1:** **Level 2:** **Level 3:**	TEST	TEST	TEST