1 | Reasoning with Shapes

Topic 3: Congruence Through Transformations

ELPS: 1.A, 1.C, 1.E, 1.F, 1.G, 2.C, 2.E, 2.I, 3.D, 3.E, 4.B, 4.C, 4.D, 4.J, 5.B, 5.F, 5.G

Topic Pacing: 11 Days

Lesson	Lesson Title	Highlights	TEKS*	Pacing**
1	**Elemental** Formal Reasoning in Euclidean Geometry	Students are introduced to formal reasoning as a foundation for proving geometric theorems. They begin by writing a counterexample to demonstrate a statement is false. Students then analyze conditional statements, determine truth values for all possible cases, and summarize the results in a truth table. Euclidean geometry is introduced as a system built by postulates and proven theorems, and students analyze the Linear Pair Postulate, Segment Addition Postulate, and Angle Addition Postulate.	G.4A G.4B **G.4C** G.4D	2
	Suggested Placement of Learning Individually with Skills Practice or MATHia			1
2	**ASA, SAS, and SSS** Proving Triangle Congruence Theorems	Students use what they have learned in the previous topic: (1) isometries preserve distances and angle measures, (2) any point in the plane can be reflected across a line to map to another point in the plane, and (3) a point is equidistant from two other points if and only if it lies on their perpendicular bisector. They use these facts to create and verify proofs of the SSS, SAS, and ASA Congruence Theorems using rigid motion transformations. Students then explore some non-examples of congruence theorems (AAA and SSA).	**G.6B** G.6C	3
	Suggested Placement of Learning Individually with Skills Practice or MATHia			1
	Mid-Topic Assessment			**0**
3	**I Never Forget a Face** Using Triangle Congruence to Solve Problems	Students determine whether triangles are congruent using SSS, SAS, and ASA. First, they explain how a triangle congruence theorem can be applied to a real-world situation. They then determine whether triangles in complex diagrams are congruent. Students then use the coordinate plane to assist in measurements or transformations to determine whether triangles are congruent. Finally, they apply transformations to create an original wallpaper design.	**G.2B** **G.6B** G.6C	**2**
	Suggested Placement of Learning Individually with Skills Practice or MATHia			1
	End of Topic Assessment			1

CL TEXAS MATH SOLUTION

1 Day Pacing = 45-minute Session
✱ This activity highlights a key term or concept that is essential to the learning goals of the lesson.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS: G.4A, G.4B, **G.4C**, G.4D	**LESSON 1** continued	**LEARNING INDIVIDUALLY**	TEKS: **G.6B**, G.6C	**LESSON 2** continued
LESSON 1 **Elemental**	**ACTIVITY 3** ✱	🔄 Skills Practice	**LESSON 2** **ASA, SAS, and SSS**	**ACTIVITY 2** ✱
GETTING STARTED	**TALK THE TALK**	OR	**GETTING STARTED**	**ACTIVITY 3** ✱
ACTIVITY 1 ✱		🤖 **MATHia**	**ACTIVITY 1** ✱	
ACTIVITY 2 ✱				

Day 6	Day 7	Day 8	Day 9	Day 10
LESSON 2 continued	**LEARNING INDIVIDUALLY**	TEKS: **G.2B**, **G.6B**, G.6C	**LESSON 3** continued	**LEARNING INDIVIDUALLY**
ACTIVITY 4 ✱	🔄 Skills Practice	**LESSON 3** **I Never Forget a Face**	**ACTIVITY 2** ✱	🔄 Skills Practice
ACTIVITY 5	OR	**GETTING STARTED**	**TALK THE TALK**	OR
TALK THE TALK ✱	🤖 **MATHia**	**ACTIVITY 1** ✱		🤖 **MATHia**

Day 11
END OF TOPIC ASSESSMENT