

Plan for Grade 8 Unit 1: Rigid Transformations and Congruence

Relevant Unit(s) to review: Grade 7 Unit 7: Angles, Triangles, and Prisms

<p>Essential prior concepts to engage with this unit</p>	<p>In grade 6, students study coordinate planes and plotting points on a coordinate plane. This is an essential prior concept that runs throughout this unit. It also builds on the Grade 7 Unit 7 material on angle relationships and naming angles with the same vertex. These concepts are essential as students identify and describe rigid transformations with descriptions of angles and corresponding sides.</p>
<p>Brief narrative of approach</p>	<p>Rigid Transformations and Congruence includes major work of the grade and should remain intact as much as possible. The last 3 lessons, which focus on vertical angle theorem, have been removed to allow more time for units that include more of the major work of the grade. The removed lessons will be revisited in a Geometry course.</p>

<p>Lessons to Add</p>	<p>Lessons to Remove or Modify</p>
<p>While there are connections to Grade 7 Unit 7, students should be able to engage with this unit without any additional review. If the initial Check Your Readiness assessment indicates students are not familiar with important concepts, consider proceeding through the unit without any modification continuing to monitor their readiness.</p>	<ol style="list-style-type: none"> 1. Remove 8.1.14. Students are introduced to transversal and types of angles. This is an additional standard for Geometry and can be revisited in high school Geometry 2. Remove 8.1.15. This is also an additional standard for grade 8 that can be revisited in Geometry 3. Remove 8.1.16. This lesson focuses on triangles on and off a grid can be removed and revisited in Geometry 4. Move 8.1.17 to outside of class as a culminating activity for the unit
<p>Lessons added: 0</p>	<p>Lessons removed: 4</p>

Modified Plan for Grade 8 Unit 1

Day	IM lesson	Notes
	assessment	8.1 Check Your Readiness Assessment Analyze for missed learning for grade 7 content to make decisions about pacing Note that the Check Your Readiness assessment includes item-by-item guidance to inform just-in-time adjustments to instruction within the lessons in 8.1.
1	8.1.1	Students are introduced to polygons moving across planes.
2	8.1.2	Students begin to use the terms clockwise and counterclockwise to describe how polygons move across the plane.
3	8.1.3	Students describe the moves needed to perform a translation, and draw corresponding points and figures that are created from translations.
4	8.1.4	Students are introduced formally that a transformation is a translation, rotation, or reflection or a combination of them.
5	8.1.5	Students generalize how points of reflection occur from any point on the coordinate plane, and identify coordinates that represent a transformation from one figure to another.
6	8.1.6	Students create drawings of a transformed object using verbal descriptions.
7	8.1.7	Students comprehend rigid transformation and draw and label a diagram of a polygon under a rigid transformation.
8	8.1.8	Students draw and label rotations of 180 degrees for a midpoint, and generalize the outcome when rotating 180 degrees.
9	8.1.9	Students draw and label rotations from 180 degrees to a point or two parallel lines, and draw and label rigid transformations of parallel lines.
10	8.1.10	Students draw and label images of triangles under rigid transformations, and generalize that

		lengths and angle measures are preserved under any rigid transformation.
11	Mid-Unit Assessment	
12	8.1.11	Students compare and contrast side lengths, angle measures, and area using rigid transformations to explain why a shape is or is not congruent to another.
13	8.1.12	Students comprehend that 2 figures with the same area and perimeter may not be congruent.
14	8.1.13	Students determine whether shapes are congruent by measuring corresponding points.
15	End-of-Unit Assessment	Lessons 14–16 are removed. Modify the assessment to skip question 2 about vertical angles. Skip question 6 about vertical angles, Skip question 7.c. about the sum of angles in a triangle.

Priority and Category List for Lessons

High priority (+), Medium priority (0), Low priority (-)

E: Explore, Play, and Discuss, D: Deep Dive, A: Synthesize and Apply

Lesson	Priority (+, 0, -)	Category (E, D, A)	Notes
8.1.1	0	E	In this lesson, students are introduced to figures on a plane and describe in their own words how the figures move.
8.1.2	+	E	In this lesson, students begin to describe a given translation, rotation, or reflection with greater precision and are introduced to the terms translation, rotation, and reflection.
8.1.3	+	D	In this lesson, students apply translations, rotations, and reflections to figures.
8.1.4	+	D	In this lesson, students are formally introduced to translation, rotation, and reflection. Students also learn about sequences of transformations.
8.1.5	+	D	In this lesson, students use coordinates to describe figures and their images under transformations in the coordinate plane.
8.1.6	0	A	In this lesson, students focus on communicating precisely the information needed to apply a sequence of transformations to a polygon on the coordinate grid.
8.1.7	+	D	In this lesson, students begin to see that translations, rotations, and reflections preserve lengths and angle measures, and for the first time call them rigid transformations.
8.1.8	+	D	In this lesson, rigid transformations are applied to line segments and triangles.
8.1.9	0	D	This lesson focuses on the effects of rigid transformations on lines.
8.1.10	0	D	In this lesson, students create composite shapes using translations, rotations, and reflections of polygons and continue to observe that the side lengths and angle measures

			do not change.
8.1.11	+	E	In this lesson, students explore what it means for shapes to be “the same” and learn that the term congruent is a mathematical way to talk about figures being the same that has a precise meaning.
8.1.12	+	D	In this lesson, students find rigid transformations that show two figures are congruent and make arguments for why two figures are not congruent.
8.1.13	+	D	In this lesson, the focus is on the fact that the distance between <i>any</i> pair of corresponding points of congruent figures must be the same.