Grade 8 Unit 1: Rigid Transformations and Congruence
Lessons 1–6: Rigid Transformations

Explore, Play, and Discuss

- I can describe how a figure moves and turns to get from one position to another.
- I can identify corresponding points before and after a transformation.
- I know the difference between translations, rotations, and reflections.

Activity Suggestions:

- ➢ Lesson 1: Students respond to questions in an online or paper journal, or talk them over with someone at home.
- ➢ Activity 2.3: Virtual Card Sort

Assessment Suggestions:

- ➢ Check Your Readiness Assessment: Administer questions 1–3 and 6–7 within the first day or two of this section. Use the guidance provided with each problem to adjust instruction so that students can access the math in the unit.

Deep Dive

- I can decide which type of transformations will work to move one figure to another.
- I can use grids to carry out transformations of figures.
- I can use the terms translation, rotation, and reflection to precisely describe transformations.
- I can apply transformations to points on a grid if I know their coordinates.

Activity Suggestions:

- ➢ Lesson 3: Sync discussion.
- ➢ Activity 4.3: Sync discussion.

Assessment Suggestions:

- ➢ Lesson 3 cool-down or Activity 5.1
- ➢ Lesson 4 cool-down

Synthesize and Apply

- I can apply transformations to a polygon on a grid if I know the coordinates of its vertices.

Activity Suggestions:

- ➢ Activity 5.3: Make contents of cards available in online or paper journals for students to respond.
- ➢ Lesson 6: Students respond to the Info Gap at home while a family member is only given the data card.
- ➢ Activity 7.2: Sync discussion
- ➢ Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them.

Assessment Suggestions:

- ➢ Lesson 6 cool-down
- ➢ Activity 5.1
- ➢ Students use learning targets to decide what additional practice they need.

Ongoing Practice	
	• Assign one or more of the distributed practice problem sets from Lessons 1–6 to be completed over the time period that the section is being worked on. • These could also be lagging, so that students are working on practice problems from the previous section or unit during this section or unit. • Specify which problems students should submit, or let them choose. • Note: Several existing platforms already have IM's practice problems loaded so that students can complete and submit them online. Some can be autoscored.

Anytime Resources	
	• Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them. • Emphasize the Are You Ready for More opportunities to students who want to explore the topics in more depth.

Lessons 7–10: Properties of Rigid Transformations

Explore, Play, and Discuss		
	• I can describe how to move one part of a figure to another using a rigid transformation.	
	Activity Suggestions: ➢ Activity 7.1: Students respond to questions in an online or paper journal, or talk them over with someone at home. ➢ Activity 8.1: ➢ Activity 7.2: Use the digital version or demonstrate how to use an index card and trace figures to perform transformations.	**Assessment Suggestions:** ➢ Tell students to look for repeated shapes in their lives that could be transformations of one another. Photograph or record a description of the shapes to share at the next meeting.

Deep Dive

- I can describe the effects of a rigid transformation on the lengths and angles in a polygon. (Lesson 7)
- I can describe how to move one part of a figure to another using a rigid transformation. (Lesson 8)
- I can describe the effects of a rigid transformation on a pair of parallel lines. (Lesson 9)
- If I have a pair of vertical angles and know the angle measure of one of them, I can find the angle measure of the other. (Lesson 9)
- I can find missing side lengths or angle measures using properties of rigid transformations. (Lesson 10)

Activity Suggestions:

- ➢ Activity 7.3: Sync discussion
- ➢ Activity 8.2: Sync discussion

Assessment Suggestions:

- ➢ Lesson 8 cool-down
- ➢ Activity 9.1
- ➢ Lesson 10 cool-down

Synthesize and Apply

Activity Suggestions:

- ➢ Activity 8.3: Students respond to questions in an online or paper journal, or talk them over with someone at home.
- ➢ Lesson 8: Lesson synthesis
- ➢ Activity 10.2: Students respond to questions in an online or paper journal, or talk them over with someone at home.

Assessment Suggestions:

- ➢ Mid-Unit Assessment

Ongoing Practice

- Assign one or more of the distributed practice problem sets from Lessons 7–10 to be completed over the time period that the section is being worked on.
- These could also be lagging, so that students are working on practice problems from the previous section or unit during this section or unit.
- Specify which problems students should submit, or let them choose.
- Note: Several existing platforms already have IM's practice problems loaded so that students can complete and submit them online. Some can be autoscored.

Anytime Resources	
	• Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them. • Select Lesson 17: Tessellations to apply learning of the unit • Emphasize the Are You Ready for More opportunities to students who want to explore the topics in more depth

Lessons 11–13: Congruence

Explore, Play, and Discuss

- I can decide visually whether or not two figures are congruent. (Lesson 11)

Activity Suggestions:

- ➢ Lesson 11: Focus student attention on Activity 2. Students respond to questions in an online or paper journal, or talk them over with someone at home.

Assessment Suggestions:

- ➢ Lesson 11 cool-down

Deep Dive

- I can decide using rigid transformations whether or not two figures are congruent. (Lesson 12)
- I can use distances between points to decide if two figures are congruent. (Lesson 13)

Activity Suggestions:

- ➢ Activity 12.2: Sync discussion
- ➢ Lesson 13: Sync discussion

Assessment Suggestions:

- ➢ Lesson 13 cool-down or Activity 13.1
- ➢ Lesson 12 cool-down

Synthesize and Apply

Activity Suggestions:

- ➢ Activity 12.3: Students respond to questions in an online or paper journal, or talk them over with someone at home.
- ➢ Lesson 13 Lesson Summary

Assessment Suggestions:

- ➢ End of Unit Assessment: Skip question 6, 7b.

Ongoing Practice	
	• Assign one or more of the distributed practice problem sets from Lessons 11–13 to be completed over the time period that the section is being worked on. • These could also be lagging, so that students are working on practice problems from the previous section or unit during this section or unit. • Specify which problems students should submit, or let them choose. • Note: Several existing platforms already have IM's practice problems loaded so that students can complete and submit them online. Some can be autoscored.

Anytime Resources	
	• Allow students to complete Lesson 17: Tessellations to apply learning of the unit. • Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them. • Allow students to complete Lessons 14–17 focusing on angle measures in triangles. • Emphasize the Are You Ready for More opportunities to students who want to explore the topics in more depth.