Grade 7 Unit 2: Introducing Proportional Relationships
Lessons 1–9: Comparing Proportional and Nonproportional Relationships

Explore, Play, and Discuss

- I can write the constant of proportionality as an entry in a table.

Activity Suggestions:

- ➢ Lesson 4: Students find missing values in tables and see if they can find the constant of proportionality (activities 2 and 3)
- ➢ Lesson 5: Students find patterns in images and describe the pattern using ratios (activity 1). Students complete tables finding a constant of proportionality (activities 2 and 3).

Assessment Suggestions:

- ➢ Check Your Readiness Assessment: Administer all 7 items 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 if a relationship represented by a table could be proportional and when it is definitely not proportional.
- I can decide if a relationship represented by an equation is proportional or not.

Activity Suggestions:

- ➢ Combine Lesson 7 and Lesson 8: Focus on activities 2 and 3 in Lesson 7 discussing if the situations can be represented by an equation. Focus on activities 3 and 4 in Lesson 8 emphasizing that proportional relationships have the equation $y = kx$.

Assessment Suggestions:

- ➢ Lesson 8 Cool-down

Synthesize and Apply

- I can ask questions about a situation to determine whether two quantities are in a proportional relationship.
- I can solve all kinds of problems involving proportional relationships.

Activity Suggestions:

- ➢ Lesson 9: If students cannot be paired for the task, teachers may have whole group discussions about the Problem and Data Cards.
- ➢ Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them.

Assessment Suggestions:

- ➢ Lesson 9 Cool-down
- ➢ Revisions to previous assessment prompts
- ➢ 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 4–9 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

- Delve into one of the culminating lessons from Units 1 or 2.

Lessons 10–15: Representing Proportional Relationships with Graphs

Explore

- I know that the graph of a proportional relationship lies on a line through (0, 0).

Activity Suggestions:

➢ Lesson 10: Illustrate the idea that the graph of a proportional relationships is a line through the **origin** (activities 2 and 3).

Assessment Suggestions:

➢ Lesson 10 Cool-down

➢ Lesson 11: Activity 1

Deep Dive

- I can draw the graph of a proportional relationship given a single point on the graph (other than the origin).
- I can find the constant of proportionality from a graph.
- I understand the information given by graphs of proportional relationships that are made of up of points or a line.

Activity Suggestions:

➢ Lesson 11: Focus on activities 2 and 3 with discussion of student interpretation of *k* and different ways of expressing the information in the graphs.

Assessment Suggestions:

➢ Lesson 11 Cool-down

Synthesize and Apply

- Create and interpret graphs that show two different proportional relationships on the same axes.
- Generalize (orally and in writing) that when two different proportional relationships are graphed on the same axes, the steeper line has the greater constant of proportionality.

Activity Suggestions:

➢ Lesson 12: Focus on activities 2 and 3. If the technology is available, use the digital versions of the activities.

Assessment Suggestions:

➢ Lesson 12 Cool-down

➢ Lesson 15

➢ End of Unit Assessment

➢ 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 10–12 to be completed over the time period in which 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	
	• Delve into one of the culminating lessons from Unit 1 or 2.