Grade 6 Unit 2: Introducing Ratios
Lessons 1–5: What are Ratios?

Explore, Play, and Discuss

- I can write or say a sentence that describes a ratio.
- I know how to say words and numbers in the correct order to accurately describe the ratio.
- I can draw a diagram that represents a ratio and explain what the diagram means.
- I can include labels when I draw a diagram representing a ratio, so that the meaning of the diagram is clear.

Activity Suggestions:

- ➢ Lesson 2, Activity 1. Convention of a ratio.
- ➢ Lesson 2, Activity 2. Exploring the idea of a diagram that represents a ratio and practicing. Do activity synthesis.

Assessment Suggestions:

- ➢ Administer the Check Your Readiness assessment 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. If students have trouble with multiplication by scaling or division of whole numbers, refer to the Curriculum Adaptation Pack for this unit for additional suggestions.
- ➢ Lesson 2 cool-down

Deep Dive

- I can explain the meaning of equivalent ratios using a color mixture as an example.

Activity Suggestions:

- ➢ Lesson 4, Activities 2 and 3. Students are mixing colors and determining if the ratios of mixtures are equivalent to each other. Do the lesson synthesis.
- ➢ Lesson 5, Activity 3 questions 1–5: If possible, be prepared to split students into smaller groups for question 5. Otherwise, modify the language routine to allow students to refine their definition together.

Assessment Suggestions:

- ➢ Lesson 4 cool-down
- ➢ Lesson 5, Activity 3, Question 6

Synthesize and Apply

- I can use a diagram to represent a recipe, a double batch, and a triple batch of a recipe.
- If I have a ratio, I can create a new ratio that is equivalent to it.
- If I have two ratios, I can decide whether they are equivalent to each other.

Activity Suggestions:

- ➢ Lesson 1, synthesis
- ➢ Lesson 3, Activity 3
- ➢ Lesson 5, Activity 2

Assessment Suggestions:

- ➢ Lesson 3 cool-down
- ➢ Lesson 5 cool-down
- ➢ Ask students to find a recipe and write some equivalent ratios for some of the ingredients.

Ongoing Practice

- Assign one or more of the distributed practice problem sets from Lessons 1–5 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.

Anytime Resources

- Culminating Lessons from Unit 1
- Lesson 1 Activity 3

Lessons 6–10: Representing Equivalent Ratios

Explore, Play, and Discuss

- I can tell when a question is asking for the number of groups and that number is less than 1.
- I can use diagrams and multiplication and division equations to represent and answer "what fraction of a group?" questions.

Activity Suggestions:

➢ Lesson 6, Activities 2 and 3. Students are introduced to a tape diagram in the context of recipes and paint.

Assessment Suggestions:

➢ Lesson 6 cool-down

Dive Deep

- I can choose and create diagrams to help me reason about prices.
- I can explain what the phrase "at this rate" means, using prices as an example.

Activity Suggestions:

➢ Lesson 6, lesson synthesis

➢ Lesson 8, Activities 2 and 3. Explore the idea of unit pricing. Do the lesson synthesis

➢ Lesson 9, Activity 2
Comparing time to speed. Do the activity synthesis.

Assessment Suggestions:

➢ Lessons 8 and 9 cool-downs

Synthesize and Apply

- I can choose and create diagrams to help me reason about constant speed.
- I can find the other thing if I know an object is moving at a constant speed and I know two of these things: the distance it travels, the amount of time it takes, and its speed. I can decide whether or not two situations are happening at the same rate.
- I can explain what it means when two situations happen at the same rate.

Activity Suggestions:

➢ Lesson 8, Activity 3. Students practice finding unit prices using different strategies. Do activity synthesis.

➢ Lesson 10, Activities 3 and 4. comparing situations with ratios. Do the lesson synthesis.

Assessment Suggestions:

➢ Lesson 9 cool-down

➢ Lesson 10 cool-down

Ongoing Practice	
	• Assign one or more of the distributed practice problem sets from Lessons 1–10 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.

Anytime Resources	
	• Culminating Lessons from each section of Unit 1

Lessons 11–14: Solving Ratio and Rate Problems

Explore, Play, and Discuss		
	• I can figure out where the rows are and where the columns are if I am looking at a table of values. • I can come up with numbers to make a new row when I see a table representing a set of equivalent ratios.	
	Activity Suggestions: ➢ Lesson 11: Provide a worked example of a double number line as in the launch for Activity 2.	**Assessment Suggestions:** ➢ Lesson 11 cool-down

Dive Deep

- I can create a table that represents a set of equivalent ratios.
- I can explain why sometimes a table is easier to use than a double number line to solve problems involving equivalent ratios.
- I include column labels when I create a table, so that the meaning of the numbers is clear.

Activity Suggestions:

- ➢ Lesson 12, Activity 2: Use a table to find a price. Do the activity synthesis.
- ➢ Lesson 13, Activity 2: Use double number lines. Do the activity synthesis.

Assessment Suggestions:

- ➢ Lesson 12 and Lesson 13 cool-downs

Synthesize and Apply

- I can decide what information I need to know to be able to solve problems about situations happening at the same rate.
- I can explain my reasoning using diagrams that I choose.

Activity Suggestions:

- ➢ Lesson 13, Activity 3 and lesson synthesis: comparing the use of double number lines and tables. Do activity synthesis and ensure visible worked examples.

Assessment Suggestions:

- ➢ Lesson 13 cool-down

Ongoing Practice

- Assign one or more of the distributed practice problem sets from Lessons 1–14 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.

Anytime Resources	• Culminating Lessons from each section of Unit 1

Lessons 15–17: Part-Part-Whole Ratios

Explore, Play, and Discuss	• I can comprehend the word “parts” as an unspecified unit in sentences (written and spoken) describing ratios.	
	Activity Suggestions: ➢ Lesson 15, Activity 2, questions 1 and 2	**Assessment Suggestions:** ➢ Lesson 15, Activity 2, question 3. ➢ Do the activity synthesis for Activity 2 and emphasize how the tape diagram is broken into “parts.”

Dive Deep	• I can create tape diagrams to help me reason about problems involving a ratio and a total amount. • I can solve problems when I know a ratio and a total amount.	
	Activity Suggestions: ➢ Lesson 15, Activity 3: Use of a tape diagram. Do the activity synthesis. Provide a worked example of a tape diagram.	**Assessment Suggestions:** ➢ Lesson 15 cool-down

Synthesize and Apply

- I can choose and create diagrams to help think through my solution.
- I can solve all kinds of problems about equivalent ratios.
- I can use diagrams to help someone else understand why my solution makes sense.

Activity Suggestions:

- ➢ Lesson 16, Activity 2. Emphasize comparing different strategies. Do the activity synthesis.
- ➢ Lesson 16, Activity 3. Putting all the methods together. Do the activity synthesis.

Assessment Suggestions:

- ➢ Lesson 16 cool-down.15
- ➢ End-of-Unit Assessment. May need some revisions based on teaching.

Ongoing Practice

- Any activity in lesson 16
- Assign one or more of the distributed practice problem sets from Lessons 1–17 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

- Culminating Lessons from each section of Units 1 and 2