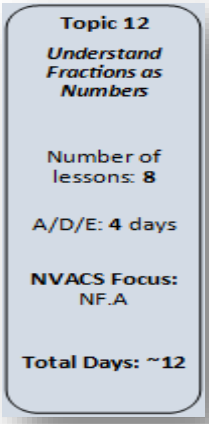
Grade 3 Topic 12: Understand Fractions as Numbers



Big Conceptual Idea: Number and Operations Fractions, 3-5 (pp. 3-5)

Prior to instruction, view the Topic 12 Professional Development Video located in Pearson Realize online. Read the Teacher's Edition (TE): Cluster Overview/Math Background (pp. 605A-605F), the Topic Planner (pp.605I-605K), all 8 lessons, and the Topic Assessments (pp. 667-668A).

Mathematical Background: Read Topic 12-13 Cluster Overview/Math Background (TE, pp. 605A-605F)	Topic Essential Question: What are different interpretations of fractions? *Reference Answering the Topic Essential Question (TE, pp. 663-664) for key elements of answers to the Essential Question.*

The lesson map for this topic is as follows:

12-1	12-2	12-3	12-4	12-5	12-6	12-7	12-8	Assessment

4 A/D/E days used strategically throughout the topic.

3rd Grade Curriculum Pacing Framework: Balanced Calendar

Instructional note:

Topic 12's big idea is on developing understanding of fractions as numbers (fractional number sense). Students work to accurately position fractional numbers on the number line. Third grade is the first time the Numbers and Operations-Fractions domain appears in the Nevada Academic Content Standards (NVACS). However, students build fractional understanding beginning in Kindergarten. Prior knowledge that was developed in the Geometry domain (please note there are other ideas in MD that also build toward these outcomes and understandings).

Kindergarten

K.G.B.6 Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"* (NVACS, 2010, p. 12).

First

1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrase *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares (NVACS p.16).

Second

2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words *halves*, *thirds*, *fourths*, *half of*, *third of*, and etc., and describe the whole as two halves, three thirds, or four fourths. Recognize that equal shares of identical wholes need not have the same shape (NVACS, p. 20).

Both first and second grade work with establishing fractional language of fourths, thirds, halves, and the whole. Topic 12 begins with dividing shapes into equal regions and formally naming them as a fraction. Students name the area with unit fractions. Empson and Levi describe, "The value of any fraction is determined by the multiplicative relationship between the numerator and denominator" (2010, p. 4). This relationship is seen in third grade standards with unit fractions and iterating units. Students are expected to engage in reasoning with the structure of iterations and unit fractions. They are asked to identify what the whole would look like when only shown a fractional amount of the whole. For example, students are shown $\frac{1}{3}$ of a distance on a line segment and are expected to identify which line segment represents the whole. This mathematical understanding relies on iterations, or copies of the unit fraction. When the unit fraction is known, we can then make additional copies of it until the whole has been built.

Note that students with weak spatial structuring and reasoning may struggle with this idea. Consider providing support with geoboards and linear measuring tools such as tape measures and rulers when relating to a number line. This understanding becomes critical for developing the fractional sense in fourth grade that's needed for operating on fractions. In fourth grade students will explore the idea that fractions, just like whole numbers, can be decomposed. For example, just as I can decompose 10 into 8 and 2, I can decompose $\frac{3}{4}$ into $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$.

Second grade standards are designed to develop students' spatial structures and reasoning to be able to, "Recognize that equal shares of identical wholes need not have the same shape" (NVACS, 2010, 2.G.A.3). Another important idea worth revisiting is that while our parts do have to be equal in area they do not have to be congruent in shape (NVACS, 2010, 2.G.A.3).

Developing concept of the whole in the part-whole structure is crucial for future work in the other interpretations. Therefore, as we continue to stress the importance of what is the whole, we also discuss ideas such as, "How can we show a whole (1, $\frac{4}{4}$, $\frac{3}{3}$, etc.)", "How do we show a fraction beyond one (whole) on the number line ($\frac{4}{3}$, $\frac{2}{1}$, etc.)?" and, "How does the fraction communicate the relationship between the amount of equal parts being discussed in the whole?"

Despite previously partitioning circles and rectangles in equal parts for halves, thirds, and quarters, doing so on a number line may be new for students; especially if they did not have sufficient time working with the second grade measurement standards. As a whole-group enrichment activity it may be helpful to build a number line that stretches across the classroom starting at 0 and going to 2 that shows halves, thirds, fourths, sixths, and eighths (these are the denominators that fractions in 3rd grade are limited to per NVACS, 2010, p.25). Going beyond one whole gives students the opportunity to discuss and communicate how a fraction can be greater than one and understand that depending upon the equal number of parts needed to make the whole(s) (denominator), fractions greater than one can be named in many different ways. This will also connect to the understandings developed in 2nd grade and help link measurement to working with the number line. Providing students the opportunity to discuss the difference between $\frac{1}{2}$, $\frac{2}{1}$ and $\frac{2}{2}$ will clarify common confusions, partial understandings and misunderstandings that are often found at this grade level and better develop understanding of the role of the numerator and denominator.

Developing fractional sense offers many opportunities to confront common misconceptions. Small (2014) identifies the following common misconceptions:

- conflicts with prior knowledge about whole numbers, such as:
  - there is always a specific "next" whole number, but there is no specific next fraction.
  - 1 being the smallest number, but then finding out there are smaller numbers.
  - division makes amounts smaller, but not when dividing by proper fraction (not covered in 3rd grade).
  - 3 being more than 2, but $\frac{1}{3}$ being less than $\frac{1}{2}$; or $\frac{4}{5}$ being more than $\frac{7}{10}$ even though 7 and 10 are more than 4 and 5.
- too often using faulty perceptual arguments rather than mathematical reasoning to compare two fractions.
- viewing the numerator and denominator as separate entities (as essentially two numbers) rather than viewing the fraction as a single number.
- believing that fractions are always less than 1, perhaps because of the early emphasis on fractions as being parts of a whole, which become problematic once fractions greater than 1 are introduced.
- difficulties in placing fractions on number lines that extend past 1 (e.g., marking the point 2 when asked to place ½ on a number line that extends from 0 to 4).
- not recognizing the role the whole plays in describing a fraction.

The commonly accepted definitions for the numerator and denominator often develop the misconception of seeing each as a separate whole number. This misconception results in confusion in later grades when students are asked to operate on fractions by generalizing whole number strategies. Avoiding this misconception means we need to develop understanding of fractions as numbers the same way students developed understanding of whole numbers, by starting with counting and redefining our numerator and denominator to honor this development. Doetch (2017) explains it this way:

> "Students must learn that a fraction does not tell us anything about the size of the whole or the size of the part. A fraction tells us only about the relationship between the part and the whole".
>
> "In whole-number learning, counting helps students compare the size of numbers and later to add and subtract. This is also true with fractions. Students should come to think of counting fractional parts in much the same way as they might count with counters (bears, cubes, Unifix cubes, or other objects). When students know the parts they are counting, they can tell when they get to one whole. Students should be able to answer the following questions.
>
> 'How many thirds are in a whole?'
> 'How many fifths are in a whole?'
> 'How many twelfths are in a whole?'
>
> Counting by repeating a piece is called iterating. Understanding that $\frac{3}{4}$ can be thought of as a count of three parts called fourths. This concept becomes clear when focusing on these two ideas about fractions.
>
> - The numerator counts.
> - The denominator tells what fractional part is being counted.
>
> Another way to think of it is.
>
> - The numerator tells how many to count.
> - The denominator tells what is being counted."

Additionally, when students develop understanding of fractions as numbers by counting we no longer need to use the language "out of" to describe a fractional amount, for example, $\frac{3}{4}$ as 3 out of 4. This language supports ratio understandings which are not explored until 6th grade.

As this is students' first formal introduction to fractions there may be need to spend more than 1 day on a lesson. The need to spend more than 1 day on a lesson should be a balance of being learner responsive and pacing considerations; therefore, making a lesson a 2-day lesson is a class by class decision. As a result, an additional *Solve & Share* is offered for most lessons. The *Another Look* videos could be used to fill-in for a *Visual Learning Animation*. Please note the intent is not that every lesson become a 2-day lesson, but rather, to provide the resource if it is needed.

Throughout this topic, you will notice how essential it is for our 1st and 2nd grade teachers to ensure instruction to both the Geometry and Measurement and Data Domains. Failure to instruct to ***all*** the standards in 1st and 2nd grade have a critical impact on forming the necessary foundations for working with fractional models and developing the necessary understandings of fractions in 3rd grade.

Focus Math Practice 1: Make sense of problems and persevere

Focus on opportunities for students to develop Mathematical Practice 1 behaviors throughout the entire topic, as this is the focus of the Math Practices and Problem Solving lesson 4-9. Reference the Teacher's Edition (pp. F21 - F21A) and the Nevada Academic Content Standards for Mathematical Practice.

Essential Academic Vocabulary Use these words consistently during instruction.	
New Academic Vocabulary: (First time explicitly taught)	**Review Academic Vocabulary:** (Vocabulary explicitly taught in prior grades or topics)
unit fraction fraction numerator denominator nearest fourth inch line plot nearest half inch	*inch* *halves* *thirds* *fourths* *yard*

Additional terminology that students may need support with: *divide (meaning to equally partition something)*

*Collaborative Team Conversations (CTC)

Consider using ***one*** of the following as part of the formative assessment process at the lesson level to **collect student work** to analyze for evidence of mathematical understanding:

Guiding questions: "Are students understanding the size of the whole is determined by the fractional part?"
"Are students able to accurately display data on a line plot?"

Lesson	Evidence	Look for
12-3	*Quick Check* (digital platform)	Focus CTC around data analysis and collection of student workspace (scratch paper). Printable version available under "Teacher Resources". • understand the fraction part of the whole determines the whole.
12-7	*Solve & Share* (student work samples)	Focus CTC around the big idea: • look for students who accurately measure sides of polygon. and display data on line plot to the nearest ½ inch. • identify most common length of polygon.

Learning Cycle Assessments (summative)	*Topic Assessments* SE pp. 663-668	Use *Scoring Guide* TE pp. 663-668A

Standards listed in **bold** indicate a focus of the lesson.

NVACS (Content and Practices)	Mathematical Development of the Big Idea	Instructional Clarifications & Considerations
Lesson 12-1: Divide Regions into Equal Parts		
3.NF.A.1 3.G.A.2 MP.1 MP.2	Access Prior Learning: In Topic 15, Grade 2, students partitioned rectangles into rows and columns of same-size squares. They also partitioned circles and rectangles into halves, thirds, and fourths.	Instructional note: Consider creating a class anchor chart to connect prior foundational knowledge from grades 1 (1.G.A.3) and 2 (2.G.A.3) by drawing one polygon and partitioning it into halves. Have students provide the language that each equal part is a half and label each equal part as a half of the whole polygon. Include the idea that two halves make one whole. Repeat this process with thirds and fourths (connecting the term "quarters" to fourths). *-continues on next page-*

MP.3 MP.4 MP.6 MP.7	Beginning of the Big Idea: Students are *beginning* to develop fractional sense by connecting the language of halves, thirds, and fourths to formal written form $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ while introducing $\frac{1}{6}$. Students will also *begin* developing understanding of a unit fraction.	Solve & Share Students are asked to color two different area models to show six equal parts of the whole. Students should recognize that even when colored differently, the number of equal sized parts to make the whole must be the same (denominator) to compare the number of equal sized colored parts (numerator) between the regions. Visual Learning: The term "unit fraction" as being single equal parts of the whole will be used in the *Visual Learning Animation*. Numerator and denominator will also be discussed. Convince Me: Consider assigning and discussing the *Convince Me!* as this supports the development of spatial structure in fractions. Students that are struggling with this idea may benefit from additional work with geoboards or area model representations to explore these ideas further. Independent Practice/Math Practices and Problem Solving: Consider assigning items 5, 6, 9, and 10 and support with geoboards or area model representations to support understanding fractions as equal parts of a whole. Assess and Differentiate: If time permits, consider using the *Intervention Activity* to strengthen the idea that fractions must be equal parts of the whole. Students will benefit from explaining their reasoning about how they know the parts are equal.
Lesson 12-2: Fractions and Regions		
3.NF.A.1 3.G.A.2 MP.1 MP.2 MP.4 MP.6	Access Prior Learning: In Topic 15, Grade 2, students partitioned rectangles into rows and columns of same-size squares. They also partitioned circles and rectangles into halves, thirds, and fourths. Beginning of the Big Idea: Students are *beginning* to develop fractional sense by connecting the language of halves, thirds, and fourths to formal written form $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ while introducing $\frac{1}{6}$. Students will also *begin* understanding that a fraction represents multiple copies of a unit fraction (iterations).	Solve & Share: Watch for students that do not partition the rectangle into four equal size parts and support as needed. During the whole class discussion consider developing student understanding of naming parts of a whole as a fraction, as well as, fraction as number; by asking them, "How much of the garden did Pat plant flowers?" Students may likely say 3. In this case, build on their 2nd grade learning experiences by asking them, "What did we break the whole into?" At this point, support students in developing understanding of the denominator as telling us "what fractional part is being counted" and the numerator counts (Van de Walle, Karp, Lovin, & Bay-Williams, 2014). Look Back: Consider discussing the *Look Back!* as a whole group to facilitate and develop students' understanding that there are 2 fractions with every representation, the one being discussed and what's not being discussed. For example, when ¾ of the whole is shaded, ¼ of the whole is unshaded. Visual Learning: Consider pausing and discussing after the *Visual Learning Animation* asks, "What is the whole?" Can students explain how they know what the whole is? Another pausing point to consider is, "Which parts of the fractions are the same? Why?". Convince Me: Consider assigning and discussing the *Convince Me!* to give students the opportunity to reason with the idea of unit fractions. Independent Practice/Math Practices and Problem Solving: Consider assigning item 14 as it provides an opportunity for distributed practice of 2-step problems with multiple operations. Assess and Differentiate: If time permits, teach students how to play *Toss and Talk* or *Teamwork*. All students should have the opportunity to play both of these games as they provide engaging and meaningful practice of a key concept.
Lesson 12-3: Understand the Whole		
3.NF.A.3c 3.NF.A.1 MP.2 MP.3 MP.7	Access Prior Learning: In previous lessons students learned that a fraction represents multiple copies (iterations) of a unit fraction.	Solve & Share: To assess students' readiness consider drawing a rectangle partitioned into halves and ask students to label the unit fraction into each part prior to introducing the *Solve & Share*. For students that struggle with the idea that a unit fraction can be iterated (make additional copies of) until the whole has been built, see the *Instructional note* at the beginning of this document for ideas on how to support and consider discussing the prompts provided in *Ask Guiding Questions as Needed*. *-continues on next page-*

MP.8	Developing the Big Idea: Students are beginning to understand that they can repeat copies (iterate) of a unit fraction this can determine the whole.	Look Back: Consider discussing the *Look Back!* while students share their solution methods and reasoning. This question helps students understand that there are 2 fractions with every representation, the one being discussed and what's not being discussed. This question develops an idea that will be discussed in the Visual Learning Animation, the size of the unit fraction can help to discover the size of the whole. Visual Learning: The *Visual Learning Animation* illustrates the part-whole relationship with the unit fraction. Students discover that the size of the whole can be determined by knowing the size of the unit fraction. This relates well to area models which make the relationship between wholes and unit fractions explicit. Consider $\frac{1}{6}$ of a personal pizza and $\frac{1}{6}$ of a family size pizza. To support students' development of this understanding, consider pausing and discussing after the following questions are posed: • Do you think your pictures for the tracks will be the same or different? Why? • What do you need in order to draw 6 lengths of 1/6? • What fraction is one whole equal to in this problem? Another Example: Consider posing the question, "How are the area model (used in the *Solve & Share* and *Another Example!*) and the linear model (used in the *Visual Learning*) similar and different?" Help students make connections across models and recognize fraction as a number (represents a quantity) to the models. Assess and Differentiate: If time permits, you may consider replacing the *Math and Science Activity* with the games *Teamwork*, *Toss and Talk*, or the *Fluency Practice Activity*. *CTC: *Quick Check* (digital platform)
Lesson 12-4: Number Line- Fractions Less than 1		
3.NF.A.2a 3.NF.A.2b MP.3 MP.4 MP.6	Access Prior Learning: In previous lessons in this topic students learned that the denominator indicates the number of equal parts that the whole is divided into and the numerator indicates how many equal parts the fraction represents. Developing the Big Idea: Students further *develop* their understanding of fractions by finding that points on a number line can represent fractions. The denominator represents the number of equal parts between 0 to 1, and the numerator represents the number of parts between 0 and the point.	Solve & Share: Child-watch for students that have the misconception of starting with $\frac{1}{3}$ instead of $\frac{0}{3}$. In addition, child-watch for students that are confusing what the whole represents (1-mile). Look Back: Consider discussing the *Look Back!* to support students' fraction reasoning. Visual Learning: Consider discussing the *Convince Me!* to revisit the ideas developed in lesson 12-3's Visual Learning Animation. Assess and Differentiate: Consider having all students do the *Intervention Activity* (TE, p. 631A) to work more with the number line model. Possible Day 2 Solve & Share: (Read the *Instructional note* at the beginning of this topic for guidance on making a lesson more than 1 day.) Consider using item 10 MP. 6 *Be Precise* from the *Independent Practice/Math Practices and Problem Solving*.
Lesson 12-5: Number Line- Fractions Greater than 1		
3.NF.A.2b 3.NF.A.2a 3.NF.A.3c MP.3 MP.4 MP.5 MP.6 MP.8	Access Prior Learning: In the previous lesson students learned to use number lines to work with fractions. Developing the Big Idea: Students further *develop* their understanding of representing fractions on a number line by generalizing to represent fractions greater than 1 on a number line. Students further *develop* their fractional sense by developing	Instructional note: The primary purpose of this lesson is to confront the misconception that it is not possible to have fractions greater than 1. Solve & Share: As students generalize understanding of fractions greater than 1 to a number line, it may be helpful to relate it to fractions on a ruler. Consider discussing the *Look Back!* to support students' fraction reasoning. After students have shared their solution methods and reasoning, consider discussing the *Look Back!* to generalize understandings developed from the *Solve & Share*. *-continues on next page-*

	understanding of how to represent a whole number as a fraction.	NVACS standard 3.NF.A.3c calls for students to, "Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = $\frac{3}{1}$; recognize that $\frac{6}{1}$ = 6; locate $\frac{4}{4}$ and 1 at the same point of the number line diagram"* (2010). Therefore, consider holding up 2 more whole strips of paper and asking students how do represent 2 wholes as a fraction (e.g., $\frac{2}{1}$). Don't worry if students are struggling with this idea, it will be further developed in lesson 13-7. Visual Learning: The *Visual Learning Animation* asks, "What do the marks on the number line represent?" Consider pointing out that it is necessary to know how many equal parts there are from 0 to 1 on a number line before writing missing fractions. Independent Practice/Math Practices and Problem Solving: Consider assigning item 13 *Critique Reasoning* for distributed practice of the Associative and Distributive Properties of Multiplication. Assess and Differentiate: If time permits, you may consider replacing the *Problem Solving Reading Mat* with the game *Teamwork* (TE, p. 619A) or *Toss and Talk* (TE, p. 613A, TE, p. 631A). Possible Day 2 Solve & Share: (Read the *Instructional Note* at the beginning of this topic for guidance on making a lesson more than 1 day.) Consider using item 10 MP. 6 *Be Precise* from the *Independent Practice/Math Practices and Problem Solving*.
Lesson 12-6: Line Plots and Length		
3.MD.B.4 MP.1 MP.2	Access Prior Learning: In Topic 14, Grade 2, students measured to the whole inch and represented the data on a line plot. In lesson 12-4, Grade 3, students learned to represent fractions on a number line. Developing the Big Idea: Students further *develop* their understanding of representing fractions on a number line by generalizing understanding from lesson 12-4 and extend it to representing fractions beyond 1 on a number line.	Instructional Note: Standard 3.MD.B.4 states that students use rulers to collect measurement data and show the data using whole numbers, halves, or quarters. Student measure to the nearest ¼ inch before the nearest half inch to establish the ¼ marks as benchmarks for when measuring to the nearest ½ inch. Solve & Share Consider assessing readiness prior to introducing the *Solve & Share*, by distributing rulers and asking students what they know or notice about the inches side of a ruler. Ideas to generate in this conversation are: • When measuring objects, we start at 0. • The numbers on the ruler indicate inches. • The lines in between the inches indicate where each inch has been partitioned into halves and quarters. • Where the marks for halves and quarters marks are located. • How to read measurements that go past a whole to the nearest $\frac{1}{2}$; and $\frac{1}{4}$ inch. Child-watch for students that do not start their measurements correctly along the ruler and support as needed. Also watch for students that need support to measure to the half inch and quarter inch. After students have shared their solution methods and reasoning, consider discussing the *Look Back!* to revisit ideas from Topic 7 with bar graphs and picture graphs. Visual Learning: As students generalize understanding of fractions to a number line, it may be helpful to relate it to fractions on a ruler. Consider asking and discussing, "How do you know which tick mark is appropriate for reasoning with fractions of fourths?". Also discuss and revisit the ideas of scaling and precision when gathering/representing data from Topic 7. Assess and Differentiate: Consider doing the *Intervention Activity* (TE, p. 643A) with all students as it asks them to make a line plot using the given lengths. Possible Day 2 Solve & Share: (Read the *Instructional Note* at the beginning of this topic for guidance on making a lesson more than 1 day.) Consider using items 9 and 10 from the *Independent Practice/Math Practices and Problem Solving*.

Lesson 12-7: More Line Plots and Length		
3.MD.B.4 MP.1 MP.2 MP.4 MP.5 MP.6	Access Prior Learning: In the previous lesson, students use what they know about number lines and fractions to understand that points plotted onto a number line create a line plot, which helps organize and interpret data to the quarter inch. Developing the Big Idea: In this lesson, students are further *developing* their understanding of line plots, but to the nearest half inch. Students also develop the understanding that a half-inch is two quarter inches.	Instructional note: Identifying ¼ measurements on a ruler can be reinforced in lesson 12-7 as students can use ¼ and ¾ measurements to determine if the measurement is closest to a whole inch or the half inch. Solve & Share: Consider printing the rulers provided in Teaching Tool 19 and drawing your own polygon for students to measure as the one provided in the book does not yield consistent measurements. Continue to watch for students that do not start their measurements correctly along the ruler and support as needed. Also watch for students that need support to measure to the half inch and quarter inch. Visual Learning: After the *Visual Learning Animation* asks, "How do you know that the $3\frac{1}{2}$ - inch length occurred most often?" Consider wrapping up the discussion by pointing out that every dot on a number line represents actual data. When data changes, the line plot also needs to change. Independent Practice/Math Practice and Problem Solving: Consider using items 12 and 13 as students use information in a table to solve problems. Consider asking students to make a line plot of the data presented in the table. Assess and Differentiate: Consider having all students do the *Intervention Activity* (TE, p. 649A) as it gives students the opportunity to measure items, collect data and use the data collected to build a line plot.
Lesson 12-8: Math Practices and Problem Solving- Make Sense and Persevere		
3.NF.A.1 MP.1 MP.2 MP.3 MP.6	Access Prior Learning: In previous lessons, students have developed an understanding of fractions as number and representing data with fractions on a line plot. Developing the Big Idea: Students are further *developing* their understanding of MP. 1 and fractions as numbers to analyze given information and determine what is or is not needed to solve problems in real-world contexts.	This lesson provides an opportunity to focus on the Thinking Habits and display the behaviors associated with Math Practice 1. Refer to the *Math Practices and Problem Solving Handbook* (TE pp. F21-F21A, F29) for suggestions on how to develop, connect and assess this Math Practice. Also reference the handbook in the Student Edition (SE, p. F21). Solve & Share: Consider reintroducing MP. 1 Thinking Habits (SE, p. F21) before introducing the *Solve & Share*. Also consider using the time students are working on the *Solve & Share* as an opportunity to child-watch for behaviors associated with MP.1 that are listed in the *Math Practices and Problem Solving Handbook* (TE, p. F21A). After discussing student solution methods and reasoning, have students self-score for the behaviors associated with this math practice. Visual Learning: Considering pausing and discussing, "How can I make sense of and solve this problem?". For all problem solving it is key that students know what the problem is asking and generate a plan for finding that information. Assess and Differentiate: If time permits, consider teaching students how to play the game *Teamwork* (TE, p. 655A). All students should have the opportunity to play this game as it provides engaging and meaningful practice of a key concept.

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