

Grade 3

Unit 1.3	Unit Title Fractions on a Number Line and Line Plots	Lesson 1 of 3	Day 1 – 3
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Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
<p>3.NF.2 a Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts.</p> <p>Note: Grade 3 expectations are limited to fractions with denominators of 2,3,4,6,8)</p>	<ul style="list-style-type: none"> •Recognize that a whole partitioned into equal parts is composed of unit fractions of equal size. •Read fractions as 1 out of the b equal parts. Ex. $1/8$ is one out of the 8 equal parts. 	<p>SMP5. Use appropriate tools strategically.</p> <p>SMP6. Attend to precision.</p>	<ul style="list-style-type: none"> • How do you represent the fraction $1/b$ (<i>use a number for b</i>) on the number line? • Why is it important that the parts of the number line that make up the whole be of equal size? •What does the denominator of a fraction $1/b$ represent?
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
<ul style="list-style-type: none"> •Partitioning of circles and rectangles. •Understanding of halves, thirds, fourths, quarters, half of, a third of, a fourth of. •Partitioning whole number lengths on a number line, with equally spaced points starting from 0. 	unit fraction numerator denominator number line partitioning equal parts fraction strips	Counting the marks on the number line, not the spaces.	<p>OnCore Lesson 62 Student pg 123 only</p> <p>Note: Investigations Unit 7 Finding Fair Shares may be used to reinforce prerequisite knowledge. Student pages 1,2,5,7,10,17,21</p>

Instruction

<p>9. Instruction Practices (What are the teachers doing) Teachers will guide students using OnCore Lesson 62 to teach fractions (focusing on unit fractions) on a number line. INV Unit 7 may be used to activate prior knowledge of fractional (shaded) parts of shapes.</p>	<p>10. Learning Practices (What are the students doing) Students activating prior knowledge of fractional (shaded) parts of shapes using the Investigations pages from unit 7. They will move to placing unit fractions on a number line.</p>
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Grade 3

Unit 1.3	Unit Title Fractions on a Number Line and Line Plots	Lesson 2 of 3	Day 4 - 6
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Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
<p>3.NF.2.b Represent fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.</p> <p>Note: Grade 3 expectations are limited to fractions with denominators of 2,3,4,6,8)</p>	<ul style="list-style-type: none"> •Represent fractions a/b on a number line from 0 to 1 by partitioning unit fractions. •Read fractions as a out of the b equal parts. Ex. $3/8$ is three out of the 8 equal parts. 	<p>SMP5. Use appropriate tools strategically.</p> <p>SMP6. Attend to precision.</p>	<ul style="list-style-type: none"> •Can you explain how to represent a fraction a/b (where a and b are whole numbers, b representing 2,3,4,6,8) on a number line? •How can you justify where your fraction belongs on a number line?
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Recognize that a whole partitioned into equal parts is composed of unit fractions of equal size.	unit fraction numerator denominator number line partitioning equal parts	Counting the marks on the number line, not the spaces.	<p>OnCore Lesson</p> <ul style="list-style-type: none"> •Lesson 62 (Student p 124 only) INV Unit 7 Snap-ins. Session 1.4A Student pgs. C42 & 43
Instruction			
<p>9. Instruction Practices (What are the teachers doing)</p> <p>Teachers will guide children using OnCore Lesson 62 and Investigations Unit 7 Snap-Ins Session 1.4A to represent fractions a/b (where $b = 2,3,4,6,8$) on a number line by marking off a lengths of $1/b$ from 0.</p>		<p>10. Learning Practices (What are the students doing)</p> <p>Students will practice representing fractions on a number line using OnCore student pages 124 and the new Investigations pages C42 & 43.</p>	

Grade 3

Unit 1.3	Unit Title Fractions on a Number Line and Line Plots	Lesson 3 of 3	Day 7 - 10
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Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
<p>3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units – whole numbers, halves or quarters.</p>	<ul style="list-style-type: none"> • Use a ruler to measure using whole numbers, halves (1/2) and fourths (1/4). • Represent your measurement data using a line plot with a horizontal scale marked off with wholes, halves and fourths, where appropriate. 	<p>SMP5. Use appropriate tools strategically.</p> <p>SMP6. Attend to precision.</p>	<ul style="list-style-type: none"> •How do you create a line plot to show data that includes fractions? •How can you generate measurement data and show the data on a line plot? •How can you read and interpret data in a line plot? (Note: mean, median or mean are not taught at this time.)
5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
<ul style="list-style-type: none"> •Recognize inch as a unit of measure. •Able to measure objects to nearest inch. •Locate whole numbers on a number line. •Locate fractions on a number line. 	<p>inch half $\frac{1}{2}$ fourth $\frac{1}{4}$ Inch ruler line plot</p>	<ul style="list-style-type: none"> •Not starting measurements at zero using a 12-inch (foot long) ruler. •Misinterpreting the fractional marks on the ruler. 	<p>OnCore Lessons 85 & 86 Student pages 169 - 172</p> <p>NOTE: There are no lessons in Investigations Unit 6 that would coordinate with this standard.</p>

Instruction

<p>9. Instruction Practices (What are the teachers doing) Teachers will guide children through Lesson 86 in the use of a inch ruler (a number line in which the distance between consecutive numbers is standardized to one inch). Have students locate the marks of different lengths, remembering that they measured to the whole number the year before. In Lesson 86 teachers will help students gather measurement data and construct a line plot. Read, interpret, and draw conclusions about the data.</p>	<p>10. Learning Practices (What are the students doing) In Lessons 86 (pg 171, 172) students will learn how to use an inch ruler that has been divided up into fractional parts of halves and fourths to gather measurement data. They will use this measurement data in Lesson 85 (pg 169,170) to construct line plots. They will be able to read, interpret and conclusions about the data.</p>
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