Grade 3

Unit	Unit Title	Lesson	Day
2.2	Equivalent Fractions	1 of 4	1

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	Understand and determine if two fractions are equivalent using visual models.	**SMP3** Construct viable arguments and critique the reasoning of others. **SMP4** Model with mathematics. **SMP8** Look for and express regularity in repeated reasoning.	How can you use models to find equivalent fractions? How do you know two fractions are equivalent?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Model a fraction as part of a whole that is divided into equal parts. Represent fractions on a number line.	Equivalent fractions		**OnCore** Lesson 63 (Student pp. 125-126) Number lines Paper (for folding) Fraction strips

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide children to model equivalent fractions following the lesson guidelines in lesson 63 (TM p. 66), teachers will: •Have students make circle models for two fractions with different denominators that are not equivalent. •Discuss the meaning of the term *equivalent fractions.* •Guide students through the example and see that they recognize that the equivalent fractions are two different names for exactly the same amount. •Model with students equivalent fractions on a number line.	In Lesson 63 students will: •Shade the number of pieces represented by fractions. • Divide geometric shapes into more equal pieces, thus giving different names to the same shaded area. •Shade circle models then divide the pieces to find equivalent fractions. • Use the number line to find equivalent fractions. •Solve real world problems on equivalent fractions. • Complete OnCore student pp.125-126.

Grade 3

Unit	Unit Title	Lesson	Day
2.2	Equivalent Fractions	2 of 4	2

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. b. Recognize and generate simple equivalent fractions, e.g. ½ =2/4, 4/6=2/3). Explain why the fractions are equivalent, e.g., by using a visual model.	Generate and recognize simple equivalent fractions. List equivalent fractions and explain why they are equivalent using visual models.	**SMP3** Construct viable arguments and critique the reasoning of others. **SMP4** Model with mathematics.	How can you use models to name equivalent fractions? How do you know two fractions are equivalent?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Model fractions as equal parts of a whole. Model fractions as equal parts of a group of objects. Recognize model of equivalent fractions.	Equivalent Fractions		**OnCore** Lesson 64 (Student pp. 127-128) Number lines Fraction strips

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide children to generate equivalent fractions by using models following the lesson guidelines in lesson 64 (TM p. 67), teachers will: •Introduce the lesson by showing models for two equivalent fractions and ask students to name the fraction each model represents and explain why the fractions are equivalent. • Guide students through the example making sure they recognize that both strips are exactly the same size (the whole). • Point out that they can only create equivalent fractions by comparing equal parts of the same whole. •Work with students to find equivalent fractions when each fraction represents the same pare of a group (as in problems # 3 and 4 on student page 128). •For problem #2 on age 128, make sure students shade the same portion of the whole in the second figure, not the same number of parts.	In Lesson 64 students will: •Shade models to find equivalent fractions. •Circle equal groups to find equivalent fractions. • Explain why two fractions are equivalent. • Complete OnCore student pp.127-128.

Grade 3

Unit	Unit Title	Lesson	Day
2.2	Equivalent Fractions	3 of 4	3

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3=3/1; recognize that 6/1 =6; locate 4/4 and 1 at the same point of a number line diagram.*	Recognize fractions that are equal to whole numbers. Express whole numbers as fractions.	**SMP4** Model with mathematics. **SMP7** Look for and make use of structure.	•When might you use a fraction greater than 1 or a whole number? •How can you express a whole number as a fraction? •How can you tell when a fraction is equivalent to a whole number? •When might you use a fraction greater than 1 or a whole number?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Use a fraction to name part of a whole that is divided into equal parts.		Students may think of fractions as *only* an amount less than one as they see it as "part of a whole."	**OnCore** Lesson 65 (Student pp. 129-130) Number lines Fraction strips and fraction circles

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide children to relate fractions and whole numbers by expressing whole numbers as fractions and recognizing fractions that are equivalent to whole numbers following the lesson guidelines in lesson 65 (TM p. 68), teachers will: •Guide students to see that when the numerator of a fraction is a whole-number multiple of the denominator (for example 6/3), the value of the fraction is equal to the multiple (2). •Review how to use fractions to name points on a number line in the interval from 0-1 and point out that fractions 0/3 and 3/3 are names for 0 and 1 respectively. •Work with students to determine the whole-number name and the fraction name for the picture of three identical circles that are each divided into two equal parts.	In Lesson 65 students will: • Use on a number line from 0-1 to name if two fractions are equal. • Write a fraction greater than 1 for the parts shaded in the pictures. •Solve real-world fraction problems. •Complete OnCore student pp. 129-130

Grade 3

Unit	Unit Title	Lesson	Day
2.2	Equivalent Fractions	4 of 4	4-10

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, <, and justify the conclusions, e.g., by using a visual fraction model.	Compare two fractions with the same numerator or denominator by reasoning about their size. Use symbols >, =, <, and visual models to represent comparisons of fractions. Understand that then comparing fractions the whole must be the same.	**SMP1** Make sense of problems and preserve in solving them. **SMP2** Reason abstractly and quantitatively. **SMP3** Construct viable arguments and critique the reasoning of others. **SMP4** Model with mathematics. **SMP5** Use appropriate tools strategically. **SMP7** Look for and make use of structure.	How can you compare fractions with the same numerators (denominators)? How can you compare fractions using >, =, <,?
5. Prerequisite Knowledge	**6. Essential Vocabulary**	**7. Possible Misconceptions**	**8. Necessary Materials**
Use a fraction to name part of a whole that is divided into equal parts. Use > and < to compare numbers. Understand unit fractions and partitioning a whole into equal-sized pieces. Represent and locate fractions on a number line.	Compare Greater than (>) Less than (<) Denominator Numerator	Students may think with unit fractions (or any fraction with the numerators the same) that larger the denominator, the larger the fraction (i.e., ¼ is greater than 1/3 because 4 is larger than 3).	**OnCore** Lessons 66 -70 (Student pp. 131-140) Fraction strips and fraction circles **Investigations** Unit 7 Snap-in 1.4B SAB pp.8D-8F and RM p.C46 Number line

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide children to solve comparison problems by using the strategy *act it out,* to compare fractions with the same denominator or the same numerator by using models and reasoning strategies following the lesson guidelines in lessons 66-70 (TM pp. 69-73), teachers will: •Have students use fraction strips to act out comparisons making sure they understand they can make the comparison because the *same size wholes* are divided into *equal parts.* Guide students to reason that the greater the number of equal parts represents the greater amount. •Discuss how the number of pieces a whole is divided into affects the size of the pieces. Guide students to reason that the same number of pieces will be a smaller part of the whole when the pieces are smaller and when the pieces are larger, the part of the whole will be larger. •Give students a fraction and ask them to write a fraction that is less than, greater than, or equal to it and have students make drawings to justify their answers. Teachers will be following lesson activities from Investigations Unit 7 session 1.4B Snap-In materials. (TM CC62-67) In the activities teachers will: •Encourage students to use number lines to compare fractions,	In Lessons 66-70 students will: • Use fraction strips and fraction circles to compare fractions. • Act out the solution of a problem in which the fractions have different denominators (numerators), but have the same numerators (denominators). •Solve real-world fraction problems. • Compare fractions using >, =, and < symbols. • Order fractions from least to greatet and greatest to least. •Complete OnCore student pp. 131-140. In Investigations Unit 7 Snap-In 1.4B students will: • Represent and compare fractions using a number line.