Unit 5: Fractions

Content Area: **Mathematics**
Course(s): **Mathematics 4**
Time Period: **February**
Length: **5 weeks**
Status: **Published**

Enduring understandings

Essential Questions

What is the importance of the denominator when adding or subtracting fractions?

How can a rational number be represented by a fraction or a pie diagram?

Content

Vocabulary

Add

Compare

Eighth

Equal

Fourth

Equivalent

Greater than

Greatest

Least

Less than

Numerator

Denominator

Tenmarks.com

k5learning.com

http://nextgen.apps.sparcc.org/math/3-5

http://www.insidemathematics.org/common-core-resources/mathematical-content-standards/standards-by-grade/4th-grade

http://www.mathgoodies.com/standards/alignments/grade4.html

https://learnzillion.com/resources/17036-math-lesson-plans-4th-grade

Skills

Use shading to help determine fractional parts.

Use pattern blocks to discover fractional parts.

Use Cuisenaire rods to problem solve.

Use paper folding strategies to explore fractional parts.

Compare fractions.

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

Make a line plot to display data.

Find equivalent fractions using models.

Find measurements of lines.

Use a visual fraction model to represent a comparable example of 5/4 as the product $5 \times (1/4)$, recording the conclusion by the equation $5/4 = 5 \times (1/4)$.

Use a visual fraction model to express In general, $n \times (a/b) = (n \times a)/b$.)

Explore measurement with measuring tapes.

Draw a picture as a problem solving strategy.

Create a word line using the words fourth, eighth, sixth, etc.

Use fraction cards to order fractions and compare to ½.

Determine between what two whole numbers and answer lies.

Use properties of operations to add fractions in mixed form.

Use properties of operations to subtract fractions in mixed form.

Convert mixed fractions to improper fractions and then add or subtract.

Record decomposition of fractions.

Write a number sentence to demonstrate an understanding of a fraction with a numerator greater than 1 as a sum of fractions.

Standards

CCSS.Math.Content.4.MD.B.4	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots.
CCSS.Math.Content.4.NF.A	Extend understanding of fraction equivalence and ordering.
CCSS.Math.Content.4.NF.A.1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
CCSS.Math.Content.4.NF.A.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
CCSS.Math.Content.4.NF.B.3	Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.
CCSS.Math.Content.4.NF.B.3.a	Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
CCSS.Math.Content.4.NF.B.3.b	Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.
CCSS.Math.Content.4.NF.B.3.c	Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
CCSS.Math.Content.4.NF.B.3.d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
CCSS.Math.Content.4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
CCSS.Math.Content.4.NF.B.4.a	Understand a fraction a/b as a multiple of $1/b$.
CCSS.Math.Content.4.NF.B.4.b	Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number.
CCSS.Math.Content.4.NF.B.4.c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.