Grade 6 Topic 07 - Adding and Subtracting Fractions and Mixed Numbers

Content Area: **Mathematics**
Course(s):
Time Period: **Week1**
Length: **1 Week**
Status: **Published**

Stage 1: Desired Results

Unit Overview/ Rationale

Standards & Indicators

MA.6.6.NS.B.4	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.
MA.6.6.RP.A.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

Big Ideas - Students will understand that...

Basic facts and Algorithms – There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper/pencil, use equivalence to transform calculations into simpler ones.

Number Uses, Classification, and Representation - Numbers can be used for different purposes, and numbers can be classified and represented in different ways.

Estimation – Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally. Some measurements can be approximated using known referents as the unit in the measurement process.

Solving Equations and Inequalities – Rules of arithmetic and algebra can b used together with notions of equivalence to transform equations and inequalities so solutions can be found.

Practices, Processes and Proficiencies – Mathematics content and practices can be applied to solve problems.

Essential Questions - What provocative questions will foster inquiry and transfer of learning

What are standard procedures for estimating and finding sums and differences of fractions and mixed numbers?

Content - Students will know...

Find the least common multiple of two numbers.

Understand and apply the concept of a ratio.

Skills - Students will be able to...

Add and subtraction fractions with like denominators and give the answer in simplest form.

Find common multiples and the least commone multiple (LCM) of a set of numbers.

Find equivalent fractions with the LCD to add and subtract fractions with unlike denominators and give the answer in simplest form.

Estimate sums and differences of numbers by rounding the the nearest whole number.

Find the sums of mixed numbers with and without renaming.

Find the differences of mixed numbers with and without renaming.

Make and use tables to solve word problems.

Stage 2: Assessment Evidence

Assessment

Stage 3: Learning Plan

Learning Activities

Add and subtract fractions with like denominators using drawings.

Find the least common multiple (LCM) of two numbers using numberlines.

Find a least common denominator to add fractions with unlike denominators.

Estimate sums of fractions and mixed numbers by rounding to the nearest whole number on a number line.

Round to estimate the sum of ixed numbers, and use those estimations to check the reasonableness of the exact sums.

Estimate differences of mixed numbers, then rename fractions and mixed number in order to subtract.

Make a table to organize and solve a problem.

Resources

Fraction Models: Strips (Teaching Tool 26)