

Unit 8

Family Letter

Dear Family,

In this unit, *Fraction Equivalence*, your child will learn how to identify and generate equivalent fractions and how to use different strategies to compare fractions.

STEM Career Kid for this Unit

Hi, I'm Malik.

I want to be a photonics engineer. I will use math in my job when I study and use lasers. I'll show students how I will use fraction equivalence to calibrate lasers.



What math terms will your child use?

Term	Student Understanding
benchmark fraction	Common fractions that can be used to measure or judge against when comparing fractions
equivalent fraction	Fractions that have the same value but different denominators

What can your child do at home?

Work with your child to create a visual display of equivalent fractions. You can use blocks, beads, or pieces of paper for the displays. Include all proper fractions with denominators of 2, 3, 4, 5, 6, 8, 10, and 12. Connect all equivalent fractions with lines or some other distinction. Discuss any patterns you notice.



What Will Students Learn in this Unit?

Equivalent Fractions

Your child will learn that equivalent fractions represent the same amount of the same size whole. The numerators and denominators of equivalent fractions have a relationship: the numerator and denominator of one fraction can be multiplied by the same number to get the numerator and denominator of the other fraction.

Example:



$\frac{1}{3}$ and $\frac{4}{12}$ are equivalent because
 $\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$

Comparing Fractions Using Benchmarks

Your child will practice using the benchmark numbers $\frac{1}{2}$ and 1 to compare two fractions. If one fraction is less than a benchmark number and the other fraction is greater than the benchmark number, the first fraction is less than the second.

Comparing Fractions Using Number Lines

Your child will learn how to use number lines to compare fractions by determining where two given fractions are located in relation to a benchmark number. The fraction that is farther to the right is greater than the fraction that is farther to the left.

Comparing Fractions Using Other Methods

Your child will compare fractions with like numerators and denominators.

Example:

$\frac{4}{5} > \frac{4}{6}$ $\frac{4}{5}$ is greater than $\frac{4}{6}$ because fifths are larger than sixths.

$\frac{7}{10} < \frac{9}{10}$ $\frac{7}{10}$ is less than $\frac{9}{10}$ because there are less $\frac{1}{10}$ pieces in $\frac{7}{10}$ than in $\frac{9}{10}$.

Your child will also compare fractions with unlike numerators and denominators by rewriting the fractions as equivalent fractions that have the same numerators or denominators. Then he or she will compare the fractions.