

# Project 10

## Bricks In Fraction

**Objective:** Child will be able to visually represent equivalent fractions by overlapping different sizes of bricks.

**Essential Question(s):** How do fractions with different denominators relate to each other?

**Special Materials:** Paper and pencil for labeling.

**Bricks Required:** 16x16 plates; 1x2, 2x2, 2x4, 2x8, 1x3, 1x4, 1x6 bricks

**Project Structure:**

**Engage/Explore**

1. Have child lay out enough bricks to cover two rows of a 16x16 plate, using each type of brick (e.g., two 2x8 bricks and sixteen 1x2 bricks).
2. Ask child to place their plates on a sheet of paper and label each row: 1 whole,  $\frac{2}{2}$ ,  $\frac{4}{4}$ , etc.
3. Ask child to find various equivalent fractions, such as  $\frac{1}{2}$  and  $\frac{2}{4}$ .

**Explain**

1. Ask child to solve a few addition and subtraction problems with common denominators.
2. Ask child to use their boards to show the pieces for their fractions.
3. Have child develop an explanation and reasoning for the correct addition/subtraction of the problems, using the bricks as evidence.

**Elaborate**

1. Challenge: Solve problems involving non-common denominators.
2. Child should demonstrate how they solved problems and found common denominators using the bricks.

From left to right: The model of comparing fractions; layering bricks to see equivalent (top row has four 1x4s on a 2x8 to show four eighths equal one half); comparing three 1x6 bricks to six 1x3 bricks.

