Playing with LEGO® Bricks and Fractions

Don't want to play outside today? Take out your LEGO® bricks, build some fun, and learn about fractions!

A fraction is a way to break a whole number into equal parts. In mathematics, a fraction is written as the **numerator** over the **denominator**. The numerator, or top number, is the number of equal parts being counted. The denominator is the number of parts in the whole number. When written, these parts are separated by a line, for example: 3/5 and 2/3. There are different types of fractions, but in this activity, you will learn about **proper fractions**. These are fractions in which the numerator is smaller than the denominator.

Gather up these supplies:

- LEGO® baseplate
- Lots of assorted LEGO® bricks, using the 1 X 4 pieces to represent fractions
- Index cards
- Pen or pencil
- If you don't have LEGO® bricks, you can substitute colorful blocks, pieces of construction paper, felt, jelly beans, or any type of object that can be separated by color. You can see in the example on the next page that we also used juice boxes!
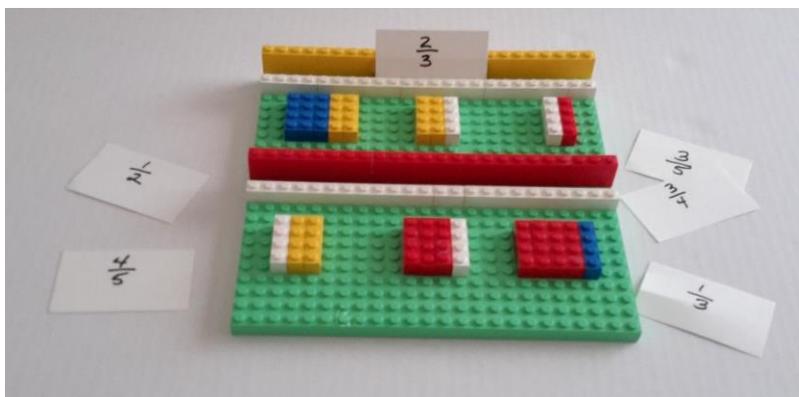
Use the LEGO® bricks to build two small walls across the baseplate to form a display for the index cards (see photo below). The back wall should be higher than the front wall so that the card can lean against it.
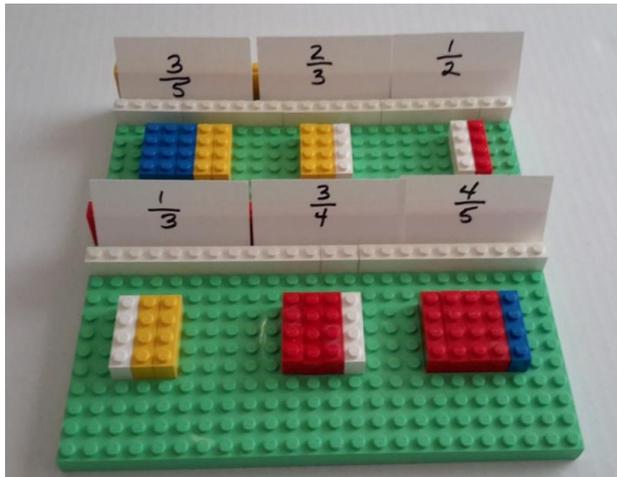
Cut the index cards in half and write various fractions on them.

Place the cards on the table.

Select a fraction and place it in the display.

Choose the 1 X 4 LEGO® bricks to represent the fractions on the display card.

You can use the LEGO® bricks to build the fractions flat, as shown, or in vertical stacks.

You can talk about opposite fractions, 2/5 & 3/5, and how to add fractions with the same denominator.

If you have a large baseplate, you can work with larger fractions.

You can display the numerator in only one color.

Mathematicians are people who study **mathematics** or **math**. **Math** is used to solve all kinds of problems and is needed in many jobs. Scientists, engineers, pilots, business people, and construction workers need to understand math to do their work. What would you like to do when you grow up? How is math used in the career you have chosen?

ADDITIONAL RESOURCES:

https://nrich.maths.org/famous-mathematicians

https://www.youtube.com/watch?v=n0FZhQ_GkKw

Books available from the Washoe County Library System:

Fabulous Fractions: Games and Activities that Make Math Easy and Fun by Lynette Long

The Hershey's Chocolate Bar Fraction Book by Jerry Pallotta

Working with Fractions by David Adler and Edward Miller