

<b>Title:</b> Adding Mixed Numbers-Fraction Grade 5	<b>Grade:</b> 5th Grade
<b>Content:</b> Math	<b>Duration:</b> 15-20 minutes or daily for one week

**Standard:**

- **5.NF.1:** Add and subtract fractions with unlike denominators (including mixed numbers)

**Objective:** Students will divide objects from around their house into fractions in order to compare the two fractions.

**Materials:**

- 4-5 same rectangular objects
- Paper and pencils
- If using plastic toys like legos, use only dry erase markers.

**Introduction Description:**  
 Students can explore fractions with almost any object found around the home. Fractions can be found when cooking, in recipes, and within many jobs around the world. This activity will allow students to explore the explanation on how to add mixed numbers.

**Vocabulary**

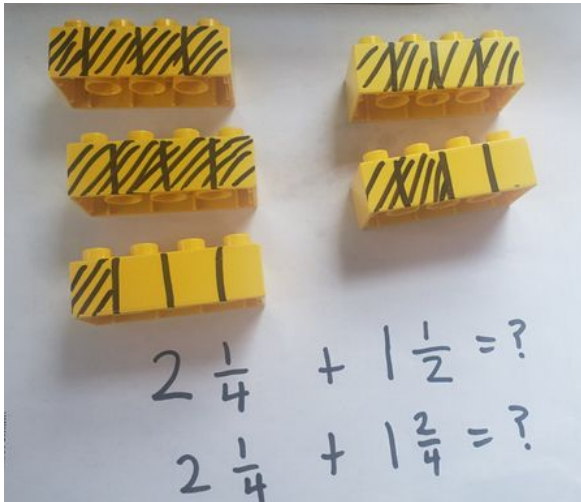
- Numerator- top number on fraction  $2/4$ 
  - In  $2/4$  the “2” is the numerator
- Denominator- bottom number on a fraction
  - In  $2/4$  the “4” is the denominator
- Mixed Number- Fraction that has a whole number
  - $2 \frac{1}{4}$
- Common Denominator- the same number on the bottom number of a fraction
  - $1/4$  and  $3/4$  are have common denominators

**Steps:**  
 Add the mixed numbers  $2 \frac{1}{4}$  and  $1 \frac{1}{2}$

- Find 5 rectangular objects that are about the same length.
  - Examples:
    - Celery cut the same length
    - String Cheese
    - Granola bars
    - Candy bars
    - Legos
    - Plastic blocks (use expo marker to write on)
- Students will need to pull  $2 \frac{1}{4}$  rectangular objects to their working space.
  - Pull two whole objects
    - These two whole pieces will represent the 2 in  $2 \frac{1}{4}$ .
  - Pull another whole object down and divide it into 4 equal parts.
    - The denominator will tell us how many equal parts to divide the whole fraction.
      - Students will shade or bring down only  $1/4$  of the whole
        - This piece will represent the  $1/4$  in  $2 \frac{1}{4}$ .



- Students will need to pull 1 1/2 rectangular objects to their working space.
  - Pull one whole down to your working space.
    - This whole represents the 1 in 1 1/2
  - Pull another whole object down and divide it into 2 equal parts.
    - The denominator will tell us how many equal parts to divide the whole fraction.
      - Students will shade or bring down only 1/2.
- In order to add fraction the fractions need to have the same or common denominators. 2 1/4 and 1 1/2 do not have the same denominators.
  - How can we make them the same?
    - Can we make 1/2 into 1/4 pieces?
      - Divide each 1/2 piece into half to create 4 pieces.



- Now that we have the same or common denominators we are able to add up the two fractions.
  - How many whole fractions do you have altogether?
    - Students should see three whole rectangular objects.
  - How many 1/4 pieces do you have shaded or cut all together?
    - Students should see 3 1/3 pieces or 3/4.
      - So the answer to the problem  $2 \frac{1}{4} + 1 \frac{1}{2} = 3 \frac{3}{4}$ .
- Try this same method again with the fraction again with adding  $1 \frac{1}{3} + 1 \frac{1}{2} = ?$  Talk through the process with someone else working.
- When you are finished submit a picture or a drawing with work with a complete sentence to describe how you found the common denominators.

#### Adaptations (optional):

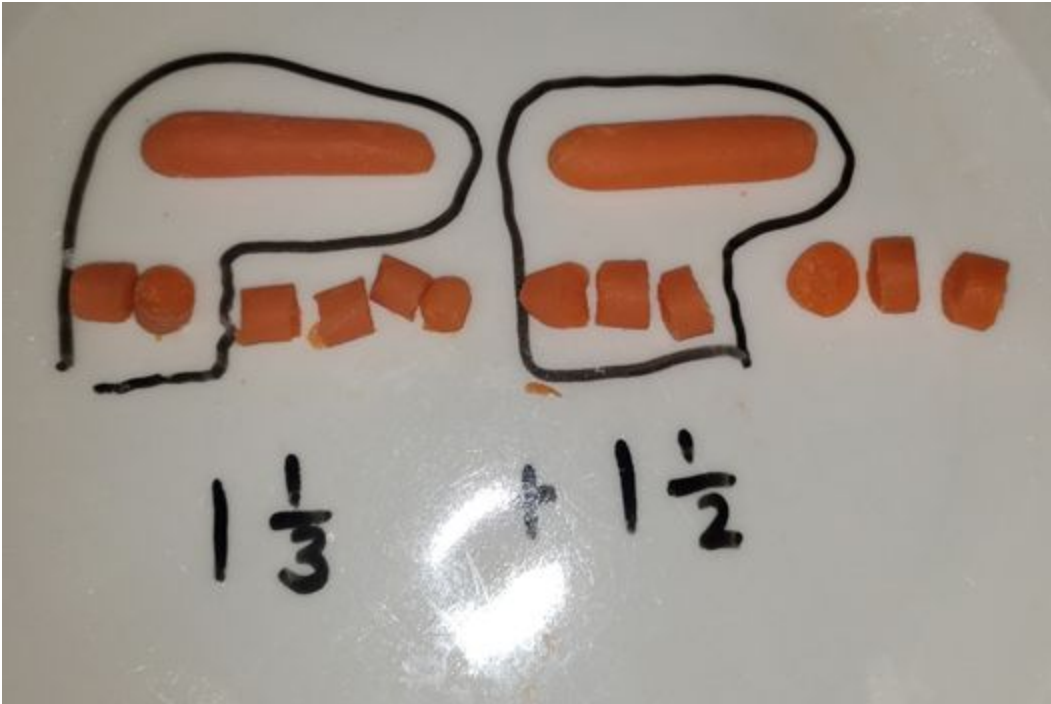
- Use the fraction bars below
- Try doing it with circular objects
- Draw out pictures or take pictures
- Each day students can explore different fraction addition problems with different objects.

#### Finished Product:

A drawing or picture of the student's fraction addition problem with a statement about how to find the common denominators.

Example:

Example:



When adding  $1 \frac{1}{3}$  and  $1 \frac{1}{2}$  I needed to find a common denominator. I realized I could make each of them into  $\frac{1}{6}$  pieces. I divided each  $\frac{1}{3}$  piece into half to create six  $\frac{1}{6}$  pieces. I divided each of the  $\frac{1}{2}$  pieces into three equal pieces to create six  $\frac{1}{6}$  pieces. My answer is two whole carrots and five  $\frac{1}{6}$  pieces to make the answer  $2 \frac{5}{6}$ .

