

## Serving Sizes

**Grade Level:** 5<sup>th</sup>

**Title of Lesson:** Serving Sizes

**Performance Standard(s) Covered:**

MCC5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

**Essential Question:** How do we add and subtract fractions?

**Objective:** Students will be able to add and subtract fractions to 100% accuracy.

**Key Words and Terms:**

- Fractions
- Numerator
- Denominator
- Serving size

**Learning Activity**

**Abstract:** Students will measure out different amounts of fruits and vegetables and add and subtract the amounts.

**Materials Needed:**

- Measuring cups (one per pair of students)
- An assortment of fruit and vegetables (enough for each group to measure a serving size, anything will do)
  - Carrots
  - Berries
  - Apples
  - Lettuce
  - Celery
  - Tomatoes
  - Oranges
  - Grapefruit
  - Spinach
  - Radishes
- Bowls (one per fruit per pair)
- One knife per group (sharp enough to chop)
- One cutting board per group

- Paper towels
- Access to a sink to wash produce and hands
- Hand soap
- Serving size chart (see chart at end of lesson)

**Safety Concerns:**

- Be aware of any food allergies among students.
- Make sure students wash their produce and their hands before prepping and consuming it.
- Give students proper instruction on how to use knives to slice vegetables.

**Procedure:**

1. Explain to students what a serving size is.
2. Teach them proper sanitation techniques and knife handling skills.
3. Have students select a few fruits and vegetables to measure.
4. Using the cutting board and knives, have students slice and measure out predetermined amounts for each produce selected. Have students measure out different amounts with different denominators.
5. Once each amount is measured out, have students record their observations and compare and contrast the measurements.
6. Have students answer the following questions –
  - a. How many serving sizes were in each measured amount?
  - b. Why is it important to measure serving sizes?
  - c. Why are fractions important?
  - d. Which amount is the greatest? The least?
    - i. Plot the fractions on a number line.
  - e. How many total cups of berries and apples did you have? How many serving sizes does that equal?
  - f. How many berries does it take to equal a serving size? How many apples? Why is there a difference in number of produce?
  - g. If you had  $\frac{3}{5}$  cups of carrots and ate  $\frac{3}{8}$  how many do you have left?
  - h. Allow students to eat some produce. How many serving sizes did you consume?
  - i. How many serving sizes of fruits and vegetables should you consume a day?
  - j. Why do you think some serving sizes are different than others?
  - k. If you have  $1\frac{3}{4}$  cup of radishes, how many servings is that? If you eat half a cup how many do you have left?
  - l. If you have  $\frac{1}{8}$  cup of carrots how many more do you need to make  $\frac{1}{2}$  a cup? How many servings is  $\frac{1}{8}$  cup?
  - m. How many serving sizes did you measure out in total? How many cups?

