

Fraction Fruitapalooza

Overview

This activity is intended to provide real world connections for grade 3 students to support their understanding of fractions. The mathematics involved will be a good review for students prior to their Standards of Learning (SOL) assessment.

Students will:

3.3A Name and write fractions, represented by a model. These fractions may include mixed numbers $1\frac{1}{2}$.

3.3B Model fractions (including mixed numbers) and write the fractions' names.

3.3C Compare fractions having like and unlike denominators, using words and symbols (is less than $<$, is greater than $>$, or is equal to $=$).

3.7 Add and subtract proper fractions having like denominators of 12 or less.

Materials

- Foodservice to provide one lunch tray per child with the following on it:
 - 3 grapes cut into halves (6 halves)
 - 1 “cutie” or “halo” (clementines)
 - 1 unpeeled banana (not cut)
 - Plastic knife
- Bulletin board paper to cover tables
- Four apples cut as follows to demo:
 - 1st apple- cut into halves
 - 2nd apple- cut into fourths
 - 3rd apple- cut into sixths
 - 4th apple- cut into eighths
 - *** Do NOT remove core! ***
- **Students to bring: pencils or crayons**

Procedure

Have students wash hands before sitting down.

MANAGER: Welcome to our first annual Third Grade Fraction Fruitapalooza! I'm so glad you're here to share in some fruit fraction fun with me today! Math is so important, and it is everywhere. In fact, we use it all day here in the kitchen. We use math to measure ingredients for all of our homemade items like lasagna, garlic bread, broccoli and cheese soup, pumpkin soufflé, and pretty much everything else we do! Today we are going to be using math with one of my favorite food groups- fruits! I'm going to turn it over to one of your teachers, Mr./Mrs. _____ to get us started.

TEACHER: Show the different types of fruit on their tray and ask students what math they can use to describe what they see. Possible student responses may include:

“I see ___ different types of fruit.” “I see ___ pieces of fruit.” “I see the grapes are cut into ___ parts.”

They may try and combine fruits together and say something like, “I see there is 1 clementine, 6 grapes and 1 banana so together this is 8 pieces of fruit.”

They may do this with the pieces also and say something like, “Oh, I see each each grape is cut into 2 pieces, so that means there are 6 pieces.”

Show them one piece of grape cut in half and ask them if they can describe this using fractions- halves or one half. Ask them to pick up one grape piece and use fraction language to describe it. They should respond by saying “one-half.” Have them record this ($\frac{1}{2}$) on the bulletin board paper that is covering the table. Remind them that this means there are two parts in this whole and that they are holding 1 part. Ask them to hold two grape pieces and describe this with fraction language. They should respond, “two halves.” Have them record this as $\frac{2}{2}$ on the bulletin board paper. Remind them that this is the same as (equivalent to) one-whole. Using the grapes, ask them to model for you what one and one-half ($1\frac{1}{2}$) looks like. Continue this with various numbers of grape halves.

CAUTION: It is important that when working with fractions, the whole item, fruit in this case, is the same. For example, they should not show you pieces from a grape and pieces from an orange and combine that into a fraction.

NOTE: Manager sections in bold are a “script” for them to follow. Teachers may adapt their sections to their classroom's needs.

MANAGER: Demo the set of apples cut into halves, fourths, sixths, eighths. Show them the slicer/sectionizer that cuts the fruit they eat at lunch, and the different size blades. Have them write each fraction on the bulletin board paper.

TEACHER: Using the precut apples to demonstrate, talk about which is larger: halves, fourths, sixths, eighths. Explain the higher the denominator (bottom number of a fraction), the smaller the piece of the fraction is. Have them write a math sentence using fractions and $>$, $<$, $=$. For example: $\frac{1}{2} > \frac{1}{4}$.

Using the apples cut into sixths, model addition fractions with like denominators, like $\frac{2}{6} + \frac{3}{6}$ and state the sum as $\frac{5}{6}$. Have them write this on the bulletin board paper. Using the apples cut into eighths, model $\frac{2}{8} + \frac{2}{8} = \frac{4}{8}$. Then show them that $\frac{4}{8}$ is $\frac{1}{2}$.

Model subtraction by showing them the apples divided into eighths and ask them how they might model $\frac{5}{8} - \frac{1}{8}$. Hold 5 pieces, and then take away 1 by eating it. They should then see the answer is $\frac{4}{8}$.

Let them do the same with the clementines on their tray. Have them peel the clementine and pull apart the sections. Have them count the number of sections in their clementine. NOTE: Some may have 8, 10 or 12 sections. Ask them to write this as a fraction on the bulletin board paper, for example $\frac{8}{8}$. Check their work since they may have a different number of sections than the students next to them. Then have them model subtraction with the clementines and ask them how they might model $\frac{6}{8} - \frac{2}{8}$ (if they have eighths). They'll enjoy modeling this by eating what they are subtracting. They should then see the answer is $\frac{4}{8}$. As students work with the fruit, circulate among them to see if they are modeling fractions and writing the corresponding fractions.

*** Third graders only add and subtract fractions with like denominators, so don't present tasks that involve fractions with different denominators.

MANAGER: The next day we are having cut fruit is _____. We are serving _____ (apples, pears, oranges, etc.). When you sit down for lunch, count how many pieces you have and think about it like a fraction as you eat it. I'd love for you to come tell me what fraction of your fruit you ate at lunch that day!

TEACHER: Using the banana that you left whole, ask students to peel it and then cut it in half. Watch to see if their halves are equal sizes. If they are not equal, they are not fractions ... not really halves. Ask them to use their halves to make fourths and see if they can make eighths from their fourths. Have them draw a number line as long as the banana on the bulletin board paper showing 0 and 1 and mark these fractions on a number line as they do this.

If time permits, you can teach them this song to sing that goes along with their banana fractions.

To the Tune of "Let it Go" from Frozen (beginning at the chorus)

Here we go
Here we go
Fruit fractions are fun to eat
Here we go
Here we go
Half a banana is a tasty treat!
Half of a half is a fourth
Half of a fourth is an eighth
Eight eighths makes a whole
Fractions never bothered me anyway!

After they have completed their fraction activities, they can enjoy eating their healthy snack.

MANAGER: Thank you so much for joining us today! We hope you will stop by the cafeteria and see what fruit fractions we are serving each week!

NOTE: Manager sections in bold are a "script" for them to follow. Teachers may adapt their sections to their classroom's needs.