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Learner’s with Exceptional Needs

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Lesson Plan 1

Grade Level: Third Grade

Subject(s) Area: Mathematics

Materials Needed

*Student:* pencils and markers/crayons; Handouts such as the “Fraction Action” and “Equal of Not Equal Parts”

*Teacher:* Projector to show “Fractions as a Whole”; paper plates; construction paper pieces to match fractions; tape/sticky tack; print-out pictures of fruits (apple, orange, banana); regular classroom setting

**STANDARDS**

3.NF.1

-Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction a/b as the quantity formed by *a* parts of size 1/b.

**OBJECTIVES**

Students will:

* Be able to place parts of a whole together to make a whole
* Be able to depict 1/8, 1/6, ¼, and ½ based upon shapes representing those fractions
* Know which fractions are bigger than others based on denominator

(The students will have prior knowledge of the general key terms, such as numerator and denominator. Students will also have prior knowledge that the wholes can be different sizes and still have the same fraction of equal parts. Lastly, students know that the pieces of a whole have to be equal in size.)

\*Adapted for a child with a Specific Learning Disability (e.g., Dyscalculia)

**LEARNING ACTIVITIES**

Procedure:

1. ATTENTION GETTER: Start with playing the “Fractions as a Whole” Video. Play for the students while writing the review on the board. Remind them to look for new things they may be learning in class today. (Only play the first minute) (<http://www.youtube.com/watch?v=DnFrOetuUKg>)
2. After the video is played, discuss with the students what you have written on the board:
* Denominator:
* Numerator:
* Parts of a whole:

And review the definitions of these words to refresh their memory.

1. REVIEW ACTIVITY: Draw a few students’ names to come up to the board as volunteers. Ask each student how many kids are in their family (including themselves). Explain that this is the denominator. Then have them say “I am one out of\_\_\_\_\_\_ kids in my family”. They are the numerator. This shows them that they can use fractions on a day to day basis, which will get them excited and interested to learn more about the topic. Draw the example on the board in shape form so that it is easier to visualize.
2. After the children sit back down, draw an example of a fraction on the board, making sure that they see that the parts are all the SAME SIZE.
* Ex:
1. Shade in one part of each whole, and have the students discuss in groups whether they think that these fractions are equal or not, or in other words, both equal 1/3.

-After discussion, come to conclusion with class that even though the wholes are different sizes, they are both cut up into three equal parts, so they both equal 1/3.

-Shows that the size of the parts does not matter; even if one is larger than the other, they both represent 1/3 of the whole.

1. Explain the process in order to make a whole.
* First show a whole divided up into equal parts, for example a picture of the color wheel into 6 parts. Place separately from each other on the board, to show they are not together as a whole yet
* Ask the children how many parts we need of these pieces to make the shape into a whole again. (We need 6 parts; place all of the parts together, showing the whole color wheel)
* Explain that without all 6 pieces, the color wheel is not the whole color wheel, just a piece of it. To give an example, take away one piece; it obviously is not a whole color wheel anymore. (This begins to introduce them to adding and subtracting fractions)
1. Play the rest of the video, asking the children to pay close attention to the new things that they have not seen before, and not yet learned.
* While playing the video, get the paper plates ready, and the fraction number slips into the drawing hat
* Once the video has stopped, ask the children what they think we will be learning about next (to make it more discussion, have them turn to their group/neighbor and discuss)
* Collaborate as a class, and finally explain to them that what we will be doing next is deciding which fractions are bigger based on the denominator.
1. Divide the students into groups of three or four, and each group gets one paper plate.
* Have them get out their markers, and together color and draw a “pizza” with all of their favorite toppings on them.
* While they are coloring, play the last part of the video again, just to refresh their memory of what they will be talking about, and getting them to guess about what they will be doing next.:
* After about 5-10 minutes, assign each group to a number (2, 4, 6, or 8). With this number, the group will have to divide their pizza into that many equal pieces.
* Once they have completed this, have one student from each group come up to the board and tape their pizza to the white board.
1. Together, we will go pizza by pizza and show a fraction that is equal to having one slice (e.g., 1 slice from the 6 slice pizza = 1/6) As we go fraction by fraction, place a cut out of the piece for each pizza to show the fraction of one slice.
* Ask the students if they were really hungry for lunch and they wanted the biggest slice of pizza, which slice they would have. (obviously the ½ slice)
* This will show them then that it is not the *larger* the number on the bottom (the denominator) the larger the piece. It is actually the *smaller* the denominator, the larger the piece of pizza.
* CONCLUSION: Review all that has been taught today. Have them turn to their neighbor and quiz each other on the below sample questions to create more interaction and one on one review.
* *A whole can be divided into parts. What is important to remember about these parts? (They much be equal parts)*
* *If we have a whole that is divided into sixths, how many parts do we need to make a whole? (Six)*

**ASSESSMENT**

1. To test how well my students retained the new lessons today, I will give them the “Fraction Action” worksheet to practice their ability to identify the above objectives. ([http://www.jumpstart.com/common/fraction-action-view)-](http://www.jumpstart.com/common/fraction-action-view%29-) This worksheet will test their ability to match the fraction to the shape it describes (e.g., 1/6 matches up to the shape that has 6 parts with one part shaded in)
2. I will also hand out the “Equal or Not Equal Parts” activity to assess the students on how well they can pick out shapes that are not divided into equal pieces. (<http://www.teacherspayteachers.com/Product/Equal-Parts-or-Unequal-Parts-Cut-and-Paste-Worksheets-718926>) If necessary, have them work in groups of 2 so they can assist each other and help each other understand the questions. (These worksheets will provide hands on and visual explanations and assessment)
3. To add another visual for the children and assess their understanding, I will bring out “Fraction Fruits”.
* (Have apples cut into fourths, bananas in sixths, cuties into eighths)
* Divide the students in their groups, and handout one whole of each fruit to each group.
* On the board, write the fractions (1/8, 1/6, ¼) Print out pictures of the fruits to place next to the fruits, so the fractions can be associated with the specific fruit.
* Ask the students to place the fruit slices on the paper plate handed out to show their answers.
* Explain that we want to compare wholes of different sizes of fruits, and show the sizes of the different denominators.
* Questions:

-*Compare 1/6 of the banana and ¼ of the apple: which fraction is bigger?*

*-How many parts of the orange do we need to piece together to make the orange a whole?*

*-Compare the ¼ of the apple and the 1/8 of the orange: which fraction is smaller?*

*-Order the fractions (using the fruit slice) from the LARGEST fraction to the SMALLEST.*

*-Have the children quiz each other at their own tables to increase interaction with one another!*

1. Children will then be able to snack on their fruit fractions, and as we snack, I will ask if they have any parts of the lesson that they want to review or still do not understand. If any, we will discuss them using the whiteboard as a visual aid.