**FRACTIONS**

Subject: *Comparing Fractions*  Grade: *3*

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| Common Core Standards |
| **3.NF.3d**: Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols *>, =,* or *<,* and justify the conclusions, e.g., by using a visual fraction model. |
| Objectives |
| Learn to compare fractions with the same numerator and/or denominator. Understand that a bigger denominator or numerator does not necessarily mean that the fraction itself is bigger than the fraction it is being compared with. |
| Launch Questions: |
| **Q.** Given two unit fractions, how does one determine which is bigger?  **Q.** Given two fractions with similar numerators and opposite denominators, how does one determine which is bigger? |
| Definition/Properties To Know |
| **Inequality:** A mathematical relation that holds between two numbers that differ in values. |

*Warm-Up Activity:* See “WU 7”

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| Lesson (Introduction to Problem) |
| You and a friend are winners of a tournament and you both win a giant trophy. Realizing that only one person can keep the trophy, you and your friend decide to settle the score by playing a game of dice, but with a twist. One player will roll a dice two times and decide which number will be the numerator or denominator. The two numbers will form a fraction. The second player follow the same procedure and obtain a fraction. The goal is to form a fraction than your competitor. If both fractions are equal, both players have to roll the dice again.  **Q.** What’s the biggest fraction that can be formed? The smallest fraction?  **Q.** Which pairs of numbers form a fraction that equals 3? (*Ex. If number is 4, then (1,4))*  **Q.** List all the fractions - which can be formed using the numbers on the dice - that are less than 3. List all the fractions greater than 3.   * Have students list all the numbers on the dice. * To find biggest fraction, tell them to think about whole numbers. To find smallest fraction, ask them to think about unit fractions. * For the second question, students should think about the equivalent fractions and how 3 can be represented in many ways. * For the final question, students can play around with the dices and keep track of which fractions they form are smaller/bigger than 3. |
| Materials (If Needed) |
| * Paper and Pencil * Dice |

*Main Project:* See “MP 7”

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| Close/Expectations |
| Students learn to reason the value/size of fractions and compare them with other fractions. By doing so, students will be able to order fractions on a number line to see difference values. Overall, the goal of these 7 “mini-lesson plans” is to provide the fundamental knowledge of fractions to 3rd graders so that when they progress to 4th grade, the students will be able to explore more “Fractions” content. |