**Fractions are our Friends**

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| **Teachers: Dr. Bruun, Ms. Dion, Mr. Moreno, Ms. Rodriguez** |
| **Date:** April 28th, 2016 (STEM Thursday) |
| **Subject / grade level:** 3rd Grade Math |
| **Materials:**   1. **Sentence Strips** 2. **Fruit Loops** 3. **Ziplock Bags** 4. **Index Cards** 5. **Scissors** 6. **Glue Sticks** |
| **TEKS: (3) Number and operations. The student applies mathematical process standards to represent and explain fractional units. The student is expected to:**  **(F) represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines;**  **(G) explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model; and**  **(H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models.** |
| **ENGAGEMENT**  [**https://www.youtube.com/watch?v=wL4hICyMLKU**](https://www.youtube.com/watch?v=wL4hICyMLKU) **(Equivalent Fractions cartoon gold bars)**  **Transition:** |
| **EXPLORATION**  **Station One: Number Line**   1. **Use sentence strips to model ½, 2/2, ¼ , 2/4, ¾, 4/4, ⅛, 2/8, ⅜, 4/8, ⅝, 6/8, ⅞, 8/8** 2. **Students will fold sentence strips into 8 equal sections** 3. **Students will mark out ½, 2/2, ¼ , 2/4, ¾, 4/4, ⅛, 2/8, ⅜, 4/8, ⅝, 6/8, ⅞, 8/8 on the number line** 4. **Have students identify equivalent fractions on number line.**   **Station Two: Fruit Loop Fractions**   1. **Students will explore fraction of a set using fruit loops.** 2. **Each student will be given a bag of 20 fruit loops.** 3. **Students will count out how many of each color their bag contains** 4. **They will record the numbers and what fraction of their set is: red, orange, yellow, green, blue, purple.** 5. **They will compare fractions using <, > and = symbols**   **Station Three: Chocolate Fraction Factory**   1. **Students will each receive pre-cut 2 “chocolate bars” and 3 wrapper sizes.** 2. **Students will discover how many pieces of chocolate (fractions) will fit into the wrappers.**   **Station Four: Computer station**   * **Each student will get a chromebook** * **Students will play each game for 2 minutes, then rotate to the next one** * **Students will keep rotating until they have played all three games**   **Students will use computers to play games: equivalent fractions of a whole using an area model** [**http://www.sheppardsoftware.com/mathgames/fractions/memory\_equivalent1.htm**](http://www.sheppardsoftware.com/mathgames/fractions/memory_equivalent1.htm)  **Equivalent fractions using a number line Animal Rescue Number Line game** [**http://www.sheppardsoftware.com/mathgames/fractions/AnimalRescueFractionsNumberLineGame.htm**](http://www.sheppardsoftware.com/mathgames/fractions/AnimalRescueFractionsNumberLineGame.htm)  **Matching fraction: parts of a set** [**http://www.sheppardsoftware.com/mathgames/fractions/fractionSet.htm**](http://www.sheppardsoftware.com/mathgames/fractions/fractionSet.htm) |
| **EXPLANATION**   1. **Use your number line to explain how ½ and 2/4 are equivalent.** 2. **What other two fractions on your number line are equivalent?** 3. **Who had the greatest fraction of green froot loops? What was it?** 4. **Who had the least fraction of blue froot loops? What was it?** 5. **What is the fraction of students compared to desks in your group?** |
| **ELABORATION**  **After the stations, when students are back as one group, watch:**  [**https://www.youtube.com/watch?v=vKXqzpz-G0s**](https://www.youtube.com/watch?v=vKXqzpz-G0s) **(Equivalent Fractions on a number line)** |
| **EVALUATION**  **Independent STAAR formatted question**   * **List of STAAR questions brought up onto smartboard** * **Students will work as a group to answer each one** * **Group will write answer onto small white boards** * **Will be played as a competition game** |