**FRACTIONS**

Subject: *Introduction to Fractions* Grade: *3*

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| Common Core State Standards |
| **3.NF.1**: Understand a fraction as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction as the quantity formed by *a* parts of size . |
| Objectives |
| Understand the meaning of fractions by emphasizing the idea that a fraction is formed by one part when a whole is partitioned into *b* equal parts. |
| Launch Questions |
| **Q.** What does it mean to divide an object into n-parts of equal size?  **Q.** If I divide an object into n-parts, what do I call one part? |
| Definition/Properties To Know |
| **Fraction:** A numerical expression in the form of - where *a* and *b* are integers - which represents *a* parts of size . Pronounced as either “a b-th” or “a over b”, a fraction is composed of a numerator (*a*) and a denominator (*b*).  {Note: If b≠0, then expression is undefined}  **Unit Fraction:** A fraction in the form of - where *b* is a positive integer - which represents one part of a whole of size *b*.  **Numerator:** In the fraction , the numerator, *a*, represents the amount of *b* sized parts.  **Denominator:** In the fraction , the denominator, *b,* represents the whole which was divided into b parts. (1 = ) |

*Warm-Up Activity:* See “WU 1”

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| Lesson (Introduction to Problem) |
| You and 3 friends go out to 4 different bakeries to try out their best cakes as part of a monthly cake shopping tradition. At the first bakery, your group orders an entire chocolate cake and decide to split the cake into 4 pieces. At the second bakery, you order a whole vanilla cake and decide this time to split the cake into 5 pieces. At the third bakery, your friend decides to buy a cake pre-cut into 8 pieces. Finally, at the fourth bakery, your group decides to buy one whole pound cake for 6 more friends, therefore you ask the pastry chef to cut the cake into 10 slices.  **Q.** At each bakery what portion of the each cake did you eat, what portion of the cake did your friends eat in total, and what portion was left remaining? Represent your answers as fractions.   * Using a pencil, draw a 4 circles (or another shape) and outline the number of slices (parts) corresponding to each cake. {First: 4, Second: 5, Third: 8, Fourth: 10} * For each circle, shade the portion you ate, and write the fraction corresponding to the portion you ate. * Using a different shading method, shade the portion your friends ate and write the fraction representing the portion they ate. * The unshaded region of the circle should represent the remaining amount of cake left. Write the fraction of the portion remaining. |
| Materials (If Needed) |
| * Paper and Pencil * Ruler (if necessary) |

*Main Project:* See “MP 1”

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| Closure/Expectations |
| Students should learn how to divide an object into *n*-parts of equal size and know that a unit fraction represents only one part of a whole object; a collection of *n*-equally sized parts form a whole object of size *n*. |