Math & Science Collaborative Lesson Plan
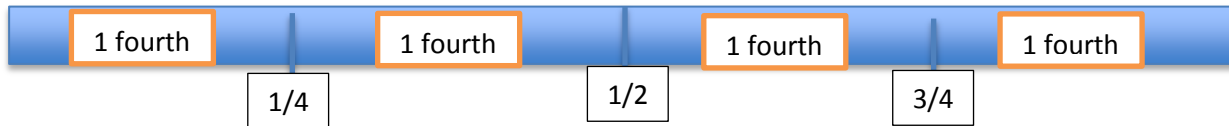
Lesson Title: Fractions – Equal Parts Of A Whole

Unit Learning Target (Standard/Performance Expectation(s))   **3.3.A**   *CCSSM 3.NF.1*
Represent fractions that have denominators of 2, 3, 4, 5, 6, 8, 9, 10, and 12 as parts of whole set or points on a number line

Building Block or Lesson Learning Target:	**Student Success Criteria:**
Identify, explain and demonstrate fraction equations that equal one.	Successful grouping of fractions within family formats.
Previous Lesson Learning Target:	
Label fractional points on a number line.	

Target Introduction/ Thinking Question *   If you have ¼ of an object (circle, square, rectangle, etc.), how many pieces or parts would it take to make a whole object? Is there more than one way to solve this question? Why?

Lesson Progression (Flow) with Talk-Structures	**Anticipated Misconceptions:**	**Formative Task or Question***
Pass out different number lines and ask the students to label each dot between zero and one. Remind the students to count the line segments and not just the dots! Pass out three long paper strips to each student. Ask each student to take one paper strip and fold it in half. Ask the students to write ½ beside the fold. Now ask them to fold the ½ paper in half again and label the new folds. Continue this process one or two more times. With a second paper strip, ask the students to fold this strip in thirds by making an "S" and folding it flat so all students have 3 equal parts between the folds. At this point the students can fold it in half, or fold it in thirds del-ending on what you want for the next outcome, 1/6ths or 1/9ths. With the third strip you can make 5ths 10ths, fifteenths, etc. Ask the students to label each section so the students can see how all the parts are added together to make one whole. This format can also be practiced using square and/or rectangular paper.	Cutting without folding or measuring **Key Terms In Lesson:** Equal parts Halves, thirds, fourths, fifths, sixths, eights, ninths, tenths, twelfths	*Designed to elicit student misconception(s)* What families of fractions do you know? (Half family, Third family, and Fifth family will address all the denominators in this target,) Can you name the members of any family? (1/2, ¼, 1/6, 1/8, 1/10, 1/12, …) (1/3, 1/6, 1/9, 1/12, …) (1/5, 1/10, 1/15, 1/20, …)

Lesson Closure Explain the family connections between common fractions with denominators of 2, 3, 4, 5, 6, 8, 9, 10, and 12 with pictures, words and symbols	**Exit Task*** Label shaded fraction parts of different shapes

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Do the Math for the Thinking Question	**Anticipated Misconceptions:** Counting only the lines between and not the spaces between.

1 fourth   1 fourth   1 fourth   1 fourth

1/4   1/2   3/4

Instructional Adjustment(s) (if needed) *Tied to common misconception(s)*	**Manipulatives and materials to include and have ready to support the lesson *** Long, narrow paper strips Square Paper and Circle paper Number Lines for Fraction Families Paper and Pencil

* Opportunity for formative assessment