SD Common Core State Standards Disaggregated Math Template

Domain:	Number and Operations Fractions	**Cluster:**	Develop understanding of fractions as numbers	**Grade level:**	3

Correlating Standard in Previous Year	Number Sequence & Standard	Correlating Standard in Following Year
2.G.3 Partition circles and rectangles into two, three, or equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	3.NF.1 Understanding the 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.	4.NF.3b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:3/8=1/8+1/8+1/8; 3/8= 1/8+2/8; 2 1/8= 1+1+1/8=8/8+8/8+1/8

Student Friendly Language:
I can show equal parts of a whole with a fraction in many different ways.

Know (Factual)	**Understand (Conceptual) The students will understand that:**	**Do (Procedural, Application, Extended Thinking)**
• parts of a fraction • quantity • equal	A fraction represents equal parts of a whole.	Represent equal parts of a whole as a fraction in many ways.

Key Vocabulary:					
numerator	denominator	whole	fraction	fraction bar	equal

Relevance and Applications: How might the grade level expectation be applied at home, on the job or in a real-world, relevant context? Include at least one example stem for the conversation with students to answer the question “why do I have to learn this”?

You need to know how to describe something that is less than a whole group or object.
Bringing treats to school and dividing them up equally among the class.

Mom tells you to be home at a quarter to eight.

Cutting a pizza into pieces to share.

Sharing a candy bar with friends.

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Correlating Standard in Previous Year	Number Sequence & Standard	Correlating Standard in Following Year
2.G.3 Partition circles and rectangles into equal shares.	3.NF.2 Understanding a fraction as a number on the number line diagram.	4.NF.2 Compare two fractions with different numerators and denominators. 4.NF.3 Understand a fraction a/b with a>1 as a sum of fractions 1/b. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8. c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction. d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

Student Friendly Language:
I can name the equal parts on a number line. I can show where to put a fraction on a number line.

Know (Factual)	Understand (Conceptual) The students will understand that:	Do (Procedural, Application, Extended Thinking)
• number line • equal parts • parts of a fraction	The denominator of the fraction determines how many equal parts to split a whole number into on a number line. The numerator determines how many spaces to move forward on the number line. The number of spaces from zero to the point on the number line is the size of the fraction.	Place a fraction on a number line. Determine the relative size of fractions from the number line.

Key Vocabulary:			
numerator	denominator	number line diagram	fraction
Relevance and Applications: How might the grade level expectation be applied at home, on the job or in a real-world, relevant context? Include at least one example stem for the conversation with students to answer the question “why do I have to learn this”?			
Looking at a gas gauge to determine how much gas you have left in the tank. Measuring using a ruler or measuring tape.			

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Correlating Standard in Previous Year	Number Sequence & Standard	Correlating Standard in Following Year
2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, ect., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	3.NF.3 Explain equivalent fractions in special cases, and compare fractions by reasoning about their size. 1 Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. 2 Recognize and generate simple equivalent fractions, e.g., ½=2/4, 4/6=2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. 3 Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3=3/1; recognize that 6=6/1; locate 4/4 and 1 at the same point of a number line diagram. 4 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 >, <, =, and justify the conclusions, e.g., by using the visual fraction model.	.4NF.1 Explain why a fraction a/b is equivalent to a fraction by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. 4.NF.2 Compare 2 fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <,>, =, and justify the conclusion by using a visual fraction model.

Student Friendly Language:

I can show that a whole can be divided, or cut up, into equal pieces.
I can recognize a fraction through pictures of objects.
I can compare the size of 2 fractions with the same numerator or denominator and show which fraction is greater than, less than, or equal to another fraction by illustrating a picture.
I can recognize, understand, and explain whole numbers as equal (equivalent) fractions by illustrating pictures or creating a number line showing the equal fractional pieces.

Know (Factual)	Understand (Conceptual) The students will understand that:	Do (Procedural, Application, Extended Thinking)
• parts of a fraction • comparing fractions • number line is a representation of a ruler or a clock.	Fractional parts can be represented using pictures and as a fractional (n/d) number. Whole numbers can be written as fractions (6/6=1) The denominator is the total number of pieces a number or shape is broken up into. The numerator is the indicated parts of the whole. Number lines can also be broken up into fractional parts to show parts of a whole. Equivalent fractions can have different numerators and denominators. The symbols <, >, = are used to compare fractions.	Create and choose pictures that represent a given fraction. Create and choose a fraction from a given picture. Apply their knowledge to explain a fraction of a given situation. Compare fractions with like denominators. Compare fractions with like numerators. Compare fractions using greater than, less than, equal to. Compare fractions using a number line or a ruler. Express fractions in terms of a whole. Explain the difference between a numerator and a denominator. Construct a visual representation of an equivalent fraction. Identify equivalent fractions in the real world. Explain how fractions are equivalent.

Key Vocabulary:

Whole number Number line Ruler Mixed Fractions Improper Fractions Compare and Contrast Greater than, Less than, Equal to
Fraction Numerator/Denominator Equivalent fraction Reducing/simplify Fractions Adding or Subtracting Fractions Parts of a whole

Relevance and Applications: How might the grade level expectation be applied at home, on the job or in a real-world, relevant context? Include at least one example stem for the conversation with students to answer the question "why do I have to learn this"?

Share things equally with people-apples, soda.
Shopping-1/2 off--finding the best deal.
Eating Pizza-do you have enough for everyone, what's left.
Sales tax on your total bill.
Leaving a tip at a restaurant
Graded papers-number correct out of total problems.
% are actually fractions.

Saving account-and the % you accrued.
Recipe/baking.
SS—land and water on Earth.
Stats—Volleyball/basketball.
Video games: time played, fraction of time on it during the week vs how much time you spent on something else.
Construction projects—tape measures.