Third Grade Unit 3: Reasoning With Fractions

Students receiving gifted services should have a journal in which to complete these enrichment activities. These activities can be to supplement or supplant the math material in BYOC, depending on the students' needs. For hard copies of the journal questions and math projects, please see your building gifted specialist.

Topic: Expressing 1 as a Fraction

Learning Target	Possible Activities

• I can use a ruler marked with halves and fourths to draw and measure lengths.
• I can show data using a line plot.
• I can express a fraction as a/a equals one whole.
• I can express 1 by creating a fraction model.
• I can use a number line to generate a fraction as 1 whole.
• I can show in words or pictures how two fractions can be equivalent to 1 (from the same whole).
	• IXL Math: 3rd Grade
	  ○ Understanding Fractions: S.1-S.7
	• Math Journal:
	  ○ A yellow hexagon pattern block has the value of one. How many different ways can you make a shape using pattern blocks that is congruent to the hexagon? Label the blocks you use as fractions.
	  ○ Using a fraction kit how many different ways can you make, draw and label one whole using pieces of the same size?

Topic: Place Fractions on a Number Line

Learning Target	Possible Activities

• I can divide (partition) a number line into equal parts.
• I can identify a given fraction on a number line.
• I can represent and recognize a given fraction on a number line.
• I can identify which fraction is closer to one on a number line.
• I can locate fractions larger than one on a number line.
• I can recognize that a fraction a/b represents its location on a number line.
	• IXL Math: 3rd Grade
	  ○ S.9:Fractions of number lines: unit fractions
	  ○ S.10: Fractions of number lines
	  ○ S.11: Identify unit fractions on number lines
	  ○ S.12: Identify unit fractions on number lines
	  ○ S.13: Graph unit fractions on number lines
	  ○ S.14: Graph fractions on number lines
	  ○ S.2: Identify halves, thirds, and fourths
	• Math Journal:
	  ○ Represent the fractions ½, ¼, and 2/4 on a number line that begins with 0 and ends with 1. Explain your reasoning.
	  ○ Draw a number line that begins with 0 and ends with 1. Divide the space between 0 and 1 into 5 equal segments. Label the segments. Explain your reasoning.

Topic: Equivalent Fractions

Learning Target	Possible Activities

• I can identify equivalent fractions using fraction models
• I can identify equivalent fractions using a number line.
• I can use a number line to generate equivalent fractions.
• I can generate equivalent fractions using fraction models and number lines
• I can show in words or pictures how two fractions can be equal.
• I can compare fractions by reasoning about their size.
• Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. (3/1=3)
	• IXL Math: 3rd Grade
	  ○ Equivalent Fractions: T.1-T.11
	• Math Journal:
	  ○ Tom had a large candy bar. He cut it into pieces so that he could share it equally with his best friend. Show different ways Tom might have cut the candy bar. Label each piece as a fraction.
	  ○ Peter says the fraction 6/6 is equivalent to 1. Jack says 6/6 is equivalent to 6. Who is correct? Explain.

Topic: Comparing Fractions

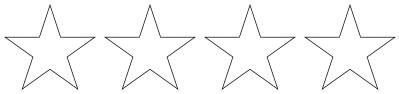
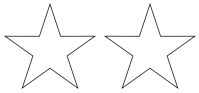
Learning Target	Possible Activities

• I can understand that a unit fraction with a larger denominator represents a smaller number.
• I can understand that a unit fraction with a smaller denominator represents a larger number.
• I can compare fractions with like denominators (same numerator of 1) using pictures, words, and symbols.
• I can compare fractions with like denominators (denominators of 2, 3, 4, 6, and 8).
• I can compare fractions using words,symbols, and represent both fractions on a number line.
	• IXL Math: 3rd Grade
	  ○ Compare Fractions: U.1-U.10
	• Math Journal:
	  ○ Which is larger: a) ¼ or ⅜? b) 3/6 or ⅓? Explain your reasoning.
	  ○ Model two fractions with the same denominator. Which is greater? Explain your thinking.
	  ○ Model two fractions with the same numerator. Which is greater? Explain your thinking.
	  ○ Leah rode her skateboard for 3/4km. Tom rode his skateboard for 3/8km. Tom says he rode further than Leah. Is Tom correct? Explain.
	  ○ Sarah ate ¼ of a large pizza. Ben ate ¼ of a small pizza. Did they eat the ame amount? Explain.

Activities Applicable to Every Unit

- Math Project: Design a Game
    - design a game based on a math concept
- Math Project: Create a Math Storybook
    - create a book based on a math concept
- Math Project: Math Tic-Tac-Toe
    - select and complete three activities from a tic-tac-toe board to demonstrate knowledge and understanding of a math concept

3rd Grade Math Journal Rubric

4 	**My work shows a thorough understanding of the math in this task.** ● I solved the problem correctly using an efficient strategy. ● My explanation is very clear. I included my **work**, **what** I did and **why** I chose the operation or strategy that I used. ● I effectively used math vocabulary and strategy words from our math word wall, word bank or charts.
3 	**My work shows a good understanding of the math in this task.** ● I solved the problem correctly. ● My explanation is clear. ● I used some math vocabulary and strategy words from our math word wall, word bank or charts.
2 	**My work shows some understanding of the math in this task.** ● I solved part of the problem correctly or made some small errors. ● My explanation is unclear or incomplete. ● I did not use math vocabulary and strategy words from our math word wall, word bank or charts.
1 	**My work shows that I need more help to understand the math in this task.** ● I could not solve the problem or my answer is incorrect. ● I did not include an explanation.