



**ELEMENTARY MATH PROJECT**
**Grade 6**
**Key Number Concept 1: Mixed Numbers**
**Sample Week at a Glance**

Prior to this week, students have engaged in problems and tasks designed to activate and deepen their understanding of fraction concepts, limited to proper fractions. These learning experiences have been particularly focussed on the concept of equivalence. Students have represented proper fractions concretely, pictorially, and symbolically and have made connections between these representations.

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| <p><b>Monday</b></p>  | <p>Pose a “Which One Doesn’t Belong?” prompt in which one quadrant contains a mixed number.</p> <p>“Cover Me” Assign the yellow hexagon a value of 1. Have students build one and one-half. Using the same type of pattern block (i.e., colour, shape), find different ways to show <math>1\frac{1}{2}</math>, then <math>2\frac{1}{3}</math>. Assign the pink double hexagon a value of 1. Repeat the process to show <math>1\frac{1}{4}</math>.</p> <p>Gallery Walk. As a whole class, select and sequence some responses for students to analyze. For example one and one-half is one yellow hexagon as well as one red trapezoid or three red trapezoids (a/k/a “three-halves”).</p> |
| <p><b>Tuesday</b></p> | <p>Display a Number Talk or Fraction Talk image that involves mixed numbers.</p>  <p>“What’s My Name?” Assign a value of 1 to the purple Cuisenaire rods. If purple is named “One,” what are the names of the white, red, and light green rods? (Note that these are proper fractions.) What are the names of the yellow, dark green, black, brown, blue, and orange rods? (Note that these are mixed numbers or improper fractions.)</p>   |

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|                         | <p>Whole class discussion. Select and sequence students to share different names for each Cuisenaire rod. For example, dark green is "1½," "three-halves," "one and two-quarters," "six-quarters," and "1 2/4." Make connections between concrete, pictorial, and symbolic representations.</p>   |
| <p><b>Wednesday</b></p> | <p>Pose a "Would You Rather?" prompt designed to have students think about different-sized wholes.</p> <div data-bbox="451 470 969 863" style="border: 2px solid red; padding: 5px;"> <p>Would you rather have 1 of 8 slices from a 10" pizza OR 1 of 10 slices from a 14"?</p>  </div> <p>Have students choose a different colour rod and assign it a value of 1. Repeat the "What's My Name?" exploration.</p> <p>Gallery Walk. As a whole class, select and sequence some responses for students to analyze.</p>  |
| <p><b>Thursday</b></p>  | <p>"Ways to Make a Number" Have students Record as many different ways as they can think of to make 36. For example, students might make 36 using place value (base ten blocks), factors (groups of, arrays, areas), and operations. This primes students to engage in a similar task involving a mixed number.</p> <p>"Ways to Make a Number" Have students record as many different ways as they can think of to make <math>1 \frac{1}{3}</math>. Nudge students to think about different visual representations and their corresponding symbolic representations.</p> <p>Select and sequence students to share different ways in which they made <math>1 \frac{1}{3}</math>.</p> |
| <p><b>Friday</b></p>    | <p>Pose an "Same but Different" prompt designed to have students compare two mixed numbers (or improper fractions).</p> <p>Pose an Open Middle math problem designed to have students build equivalent mixed numbers (or improper fractions). For example,</p> <p>a)</p> $\frac{\square}{\square} = \frac{\square\square}{\square}$ <p>b)</p>   |

$$\frac{\square}{\square} = \square \frac{\square}{\square}$$

c)

$$\frac{\square \square}{\square} = \square \frac{\square}{\square}$$

Have students write about their solutions in their math journals or curricular competency portfolios. Have students emphasize how they reasoned about and persevered to solve the problem.

Next week, students will begin to compare and order proper fractions, then mixed numbers and improper fractions. These learning experiences will reinforce their understanding of representing and “naming” this category of numbers since thinking about equivalence is one approach that students may take.