

# Anoka Hennepin K-12 Curriculum Unit Plan

**Department: Elementary Math**

**Grade Level: 3**

**Unit Title: Unit 8 - Fractions**

**Number of Lessons/Days: 25 days**

**Unit Summary:** In this unit, students will begin by solving equal sharing problems in order to provide a conceptual foundation for understanding that fractions are more than just a number of parts out of a total number of equal parts. Students will understand that fractions define a multiplicative relationship between the numerator and the denominator. In addition, students will read and write fractions and explore relationships between them using various models. By understanding these relationships, students will successfully order and compare fractions. The students will be assessed using a Unit 8 Diagnostic, formatives throughout the unit, and with a Written Summative and Open Response.

## DESIRED RESULTS (STAGE 1)

**K-12 Program Understanding(s):**

- I. Students will understand that numbers can be used flexibly to solve problems.
- II. Students will understand that properties, patterns, and relationships of numbers can be generalized into universal expressions.

## MN Benchmarks Assessed

Number and Operation	
<b>3.1.3.1</b>	<b>Read and write fractions with words and symbols. Recognize that fractions can be used to represent parts of a whole, parts of a set, points on a number line, or distances on a number line.</b>
<b>3.1.3.2</b>	<b>Understand that the size of a fractional part is relative to the size of the whole.</b>
<b>3.1.3.3</b>	<b>Order and compare unit fractions and fractions with like denominators by using models and an understanding of the concept of numerator and denominator.</b>

## MN Benchmarks Addressed

\***Boldface** indicates the part of the benchmark that is addressed in the unit.

Number and Operation	
3.1.2.3	<p><b>Represent multiplication facts by using a variety of approaches</b>, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line and skip counting. <b>Represent division facts by using a variety of approaches</b>, such as repeated subtraction, equal sharing and forming equal groups. <b>Recognize the relationship between multiplication and division.</b></p>

<p><b>Overarching Understanding(s) from Curriculum Map/Course Understandings:</b></p> <p style="background-color: #e0e0e0;"><i>Students will understand that...</i></p> <ul style="list-style-type: none"> <li>whole numbers (to at least 10,000) and <b>fractional parts</b>, within our base ten number system, communicate quantities.</li> <li>identifying, describing and creating a <b>function</b> or rule can help them make predictions or extend patterns.</li> </ul> <p><b>Topical Understanding(s) Specific to Unit:</b></p> <p style="background-color: #e0e0e0;"><i>Students will understand that...</i></p> <ul style="list-style-type: none"> <li>quantities less than and greater than one can be represented as fractions to compare and solve problems.</li> </ul>	<p><b>Essential Question(s) from Curriculum Map. Course Essential Questions:</b></p> <p style="background-color: #e0e0e0;"><i>To understand, students will need to consider such questions as....</i></p> <ul style="list-style-type: none"> <li>How do I determine when to use fractions and whole numbers?</li> <li>How can the relationships between addition, subtraction, multiplication and division help me solve problems accurately and efficiently?</li> </ul> <p><b>Topical Essential Questions for Unit:</b></p> <p style="background-color: #e0e0e0;"><i>To understand, students will need to consider such questions as....</i></p> <ul style="list-style-type: none"> <li>Using fractions, how can I show parts of whole, parts of a set, and a point on a number line?</li> <li>How can I understand that the size of a fractional part is relative to the size of the whole?</li> <li>How can I put fractions in order and compare them by using models and understanding numerator and denominator?</li> <li>How do I determine the size of a fraction?</li> </ul>
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### To understand, students will need to...

<p><b>know...</b> Students will need to know the following in order to... (e.g. facts, concepts, generalizations, rules, theories, principles)</p> <ul style="list-style-type: none"> <li>the difference between a numerator and a denominator</li> <li>the size of the fractional part is relative to the size of the whole</li> <li>quantities greater than one can be written as mixed numbers</li> </ul>	<p><b>be able to...</b> (Students will be able to DO...skills, procedures, processes)</p> <ul style="list-style-type: none"> <li>use models to represent parts of one and parts of a collection</li> <li>communicate fractional parts as numbers, words, and symbols</li> <li>read and write fractions with words and symbols</li> </ul>
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- **Common vocabulary:**

- denominator
- *equal*
- equivalent fraction
- *fraction*
- numerator
- part
- unit fraction
- whole

*Italicized words are words that students need to know for MCA testing.  
Please emphasize and use them often.*

- **Common misunderstanding(s):**

- Numerators and denominators can be reversed.
- The larger the denominator, the larger the share.
- You can combine fractions with different denominators.
- The size of the whole doesn't change the size of the fractional part.
- The symbol for a fraction represents two numbers, not one.

- recognize the fractions can represent parts of a whole, parts of a set, points on a number line, or distances on a number line
- compare and order fractions with like denominators by using models