

Dear Parents,

We will begin our next unit of study in math soon. The information below will serve as an overview of the unit as you work to support your child at home. If you have any questions, please feel free to contact me. I appreciate your on-going support.

Sincerely,

Your Child's Teacher

## Unit Name: Adding and Subtracting Fractions

### Common Core State Standards:

**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 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.

**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 relationship between addition and subtraction.

**4.NF.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100 (e.g.  $3/10$  as  $30/100$ ).

**4.NF.6** Use decimal notation for fractions with denominators 10 or 100 (e.g.  $62/100$  as  $.62$ ).

### Essential Vocabulary:

- |                          |                     |
|--------------------------|---------------------|
| ● Operations             | ● Reason            |
| ● Addition/joining       | ● Denominator       |
| ● Subtraction/separating | ● Numerator         |
| ● Fraction               | ● Decomposing       |
| ● Unit fraction          | ● Mixed number      |
| ● Equivalent             | ● Multiple/multiply |
| ● Partition              |                     |

### Unit Overview:

In this unit, students will apply their understanding of fraction equivalence and operations to help solve addition and subtractions with fractions. Students will add and subtract fractions including mixed and improper fractions. Mixed numbers will be introduced for the first time in 4<sup>th</sup> grade. When adding and subtracting with mixed fractions, students will add and subtract whole numbers first and then work with fractions using the same strategies. Students will learn how to turn mixed fractions into improper fractions using visual models. Additionally, students will learn how to break improper fractions into mixed numbers by using their understanding of fractions equaling 1 (e.g.  $5/3 = 3/3 + 2/3$  or  $5/3 = 1 + 2/3$ ).

**\*There is NO mathematical reason why fractions must be written in simplified form, although it may be convenient to do so in some cases.**

### Strategies/Skills:

Students will build on their understanding of fractions from 3<sup>rd</sup> grade to make sense of larger fractions when adding, subtracting and equivalence. They are expected to use a variety of models to support their reasoning about numbers.

- Fraction bars

### Wake County Public Schools, Unit Overview for Parents

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- Number line
- Grid models
- Pattern blocks

### **Video Support:**

Video support can be found on The WCPSS Academics YouTube Channel.

- <http://tinyurl.com/WCPSSAcademicsYouTube>
  - [Adding and Subtracting Fractions 1](#)
  - [Adding and Subtracting Fractions 2](#)
  - [Adding and Subtracting Fractions 3](#)
  - [Adding and Subtracting Fractions 4](#)

Video support can be found on LearnZillion.

- <http://learnzillion.com>
  - Use a number line to show how fractions with denominators 10 and 100 are equivalent  
<https://learnzillion.com/student/lessons/2841-use-a-number-line-to-show-how-fractions-with-denominators-10-and-100-are-equivalent>
  - Use a grid model to show how fractions with denominators 10 and 100 are equivalent  
<https://learnzillion.com/student/lessons/2749-use-a-grid-model-to-show-how-fractions-with-denominators-10-and-100-are-equivalent>
  - Generate equivalent fractions using a grid model  
<https://learnzillion.com/student/lessons/2970-generate-equivalent-fractions-using-a-grid-model>
  - Adding fractions with denominators 10 and 100  
<https://learnzillion.com/student/lessons/2975-add-fractions-with-denominators-10-and-100>
  - Convert decimals to fractions to the tenths place using number line  
<https://learnzillion.com/student/lessons/1424-convert-decimals-to-fractions-to-the-tenths-place-using-number-lines>
  - Convert decimals to fractions to the hundredths place using visual aids  
<https://learnzillion.com/student/lessons/1425-convert-decimals-to-fractions-to-the-hundredths-place-using-visual-aids>
  - Convert fractions to decimals to the tenths place using visual aids and division  
<https://learnzillion.com/student/lessons/1426-convert-fractions-to-decimals-to-the-tenths-place-using-visual-aids-and-division>
  - Convert fractions to decimals to the hundredths place using division  
<https://learnzillion.com/student/lessons/1427-convert-fractions-to-decimals-to-the-hundredths-place-using-division>

### **Additional Resources:**

If you have limited/no internet access, please contact your child's teacher for hard copies of the resources listed in this document.

- NCDPI Unpacking Document: [4<sup>th</sup> Grade Unpacking Document](#)

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