

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: Powers and Multiples of 10
Common Core State Standards: 5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
Essential Vocabulary: <ul style="list-style-type: none">• place value• decimal number• powers of 10• expanded form
Unit Overview: <p>Students extend their understanding of the base-ten system by looking at the relationship among place values. Students are required to reason about the magnitude of numbers. Students should realize that the tens place is ten times as much as the ones place, and the ones place is 1/10th the size of the tens place. New at Grade 5 is the use of whole number exponents to represent powers of 10. Students should understand why multiplying by a power of 10 shifts the digits of a whole number that many places to the left. Students will also multiply by multiples of 10 and powers of 10, including 10^2 which is $10 \times 10 = 100$, and 10^3 which is $10 \times 10 \times 10 = 1,000$.</p>
Strategies/Skills: <p>Students will manipulate numbers using powers of 10. Students will explore multiplying and dividing using powers of 10 and notice patterns among numbers. Students will use their knowledge of the base-ten system to write numbers in standard form, word form, expanded form, and as a value multiplied or divided by 10, 100, or 1,000 (10, 10^2, 10^3)</p> <ul style="list-style-type: none">• Place value chart• Number cards
Video Support: <ul style="list-style-type: none">• No videos referenced for this unit.
Additional Resources: <p>If you have limited/no internet access, please contact your child's teacher for hard copies of the resources listed in this document.</p> <ul style="list-style-type: none">• NCDPI Unpacking Document: 5th Grade Unpacking Document