Examples of how students will develop their understanding of place value in Third Grade

Grade Two Mathematics	Grade Three Mathematics	Grade Four Mathematics
•Understand that 100 can be thought of as a bundle of ten tens—called a "hundred"	•Use place value understanding to round whole numbers to the nearest 10 or 100	•Use place value understanding to round multi-digit whole numbers to any place
•Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (place value)	•Quickly and accurately add and subtract numbers through 1000	•Use place value understanding to find products of two multi-digit numbers
•Add and subtract numbers through 1000 using what students have learned about place value	•Use place value understanding to multiply and divide numbers up through 100	•Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right
	•Multiply one-digit whole numbers by multiples of 10 between 10 and 90. For example, 9x80 or 5x60	•Compare two multi-digit numbers based on the meanings of the digits in each place, using the symbols > (more than), = (equal to), and < (less than)

Students understand that 15 tens = 5 tens + 10 tens (or 1 hundred)

$5 \times 30 =$ 5 groups of 3 tens = 15 tens

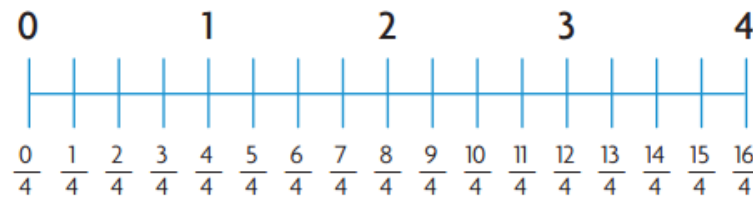$15 =$ | 1 | 5 | 0
hundreds | tens | ones

(tens)

Students use their understanding of place value as a strategy for multiplying one-digit numbers by multiples of ten. This will prepare them to multiply two multi-digit numbers in Fourth Grade.

Examples of how students will learn about and work with fractions

Grade Two Mathematics	Grade Three Mathematics	Grade Four Mathematics
•Break circles and rectangles into two, three, and four equal parts	•Determine a fraction's place on the number line by defining the length from 0 to 1 as the whole and "cutting it" into equal parts	•Break down a fraction into smaller fractions with the same denominator, or bottom number, in more than one way ($\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{2}{8} + \frac{1}{8}$)
•Describe parts of a whole using the words halves, thirds, half of, a third of, etc.	•Understand two fractions as equal if they are the same size or at the same point on a number line	•Explain why a fraction is equal to another fraction
•Describe a whole as two halves, three thirds, four fourths	•Compare the size of two different fractions of the same size object. For example, which is bigger, $\frac{1}{8}$ of a pizza or $\frac{1}{4}$ of that same pizza?	•Add and subtract mixed numbers (whole numbers mixed with fractions, such as 1¼ with the same denominator
		•Multiply a fraction by a whole number

Using a number line helps students think of a fraction as a number

0   1   2   3   4

$\frac{0}{4}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$ $\frac{5}{4}$ $\frac{6}{4}$ $\frac{7}{4}$ $\frac{8}{4}$ $\frac{9}{4}$ $\frac{10}{4}$ $\frac{11}{4}$ $\frac{12}{4}$ $\frac{13}{4}$ $\frac{14}{4}$ $\frac{15}{4}$ $\frac{16}{4}$

Students begin to understand that fractions are sometimes the same quantity as a whole number ($\frac{8}{4} = 2$) and whole numbers can be expressed as fractions ($3 = \frac{12}{4}$).

@range Unified School District

A Parent's Guide to Mathematics Curriculum

"Tell me and I'll forget. Show me and I'll remember. Involve me and I'll understand."
-Confucius

THIRD GRADE

Students Need Skills To Be Successful In the 21st Century!

In order for students to be 21st Century scholars Orange Unified School District is committed to ensuring that all students graduate high school with the skills they need to be successful in a global society. In mathematics, there are three shifts that will help prepare students for success in the 21st Century. First, instruction will concentrate on a more focused set of major math concepts and skills. This will allow students time to master these skills at a level of depth that leads to application and innovation. Second, concepts and skills are presented in a more organized way throughout the year and from one grade level to the next. This ensures a coherent learning sequence that supports students' mathematical development. Third, rich and challenging math content will be used to engage students in solving real-world problems in order to make math more relevant and meaningful.

The complete Math California Common Core State Standards for each grade level are available on the Orange Unified School District's website:
www.orangeusd.org

What Your Child Will Learn In Third Grade

In grade three, students will continue to build their concept of numbers, developing an understanding of fractions as numbers. They will learn the concepts behind multiplication and division and apply problem-solving skills and strategies for multiplying and dividing numbers up through 100 to solve word problems. Students will also make connections between the concept of the area of a rectangle and multiplication and addition of whole numbers. Activities in these areas will include:

• Understanding and explaining what it means to multiply or divide numbers

• Multiplying all one-digit numbers from memory (knowing their times table)

• Multiplying one-digit numbers by multiples of 10 (such as 20, 30, 40)

• Solving two-step word problems using addition, subtraction, multiplication, and division

• Understanding the concept of area

• Relating the measurement of area to multiplication and division

• Understanding fractions as numbers

• Understanding and identifying a fraction as a number on a number line

• Comparing the size of two fractions

• Expressing whole numbers as fractions and identifying fractions that are equal to whole numbers (for example, recognizing that $\frac{3}{1}$ and 3 are the same number)

• Measuring weights and volumes and solving word problems involving these measurements

• Representing and interpreting data

Collaborating With Your Child's Teacher

You are an important part of your child's education! Reaching out to your child's teacher is highly encouraged and welcomed. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

✔ Is my child at the level where he/she should be at this point of the school year?

✔ What are my child's strengths in math?

✔ What do you think is giving my child the most trouble? How can I help my child grow in this area? What resources are available for support?

✔ What can I do to help my child with upcoming work?

Helping Your Child Learn Outside Of School

✔ Play math games with your child. For example, "I'm thinking of two numbers whose product is between 20 and 30. How many pairs can you think of?" Have your child explain the solutions. How does he or she know that all the number pairs have been identified?

✔ Encourage your child to write or describe numbers in different ways. For example, what are some different ways to make 1450? 1450 = 1 thousand, 4 hundreds, 5 tens, and 0 ones, or 1000 + 450, 14 hundreds and 50 ones,13 hundreds + 15 tens, etc.

✔ Use everyday objects to allow your child to explore the concept of fractions. For example, use measuring cups to have students demonstrate how many ⅓'s are in a whole, how many ¼ cups you need to make 1¼ cups, and how many times you have to refill a ½ cup measure to make 1½ cups.

✔ Encourage your child to try to make sense of problems and persevering when a problem seems difficult.

✔ Make generalizations based on structures or patterns of previous learning.