

In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each chapter. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.



Scan the QR code to check out teaching strategies for this chapter.

In each chapter we will spend time reviewing material taught in prior grades as it relates to the standards being taught in fourth grade. Our goal is to keep a balance of skill based learning along with enhancing our student's ability to problem solve and think conceptually.

Review Material from Prior Grades
<ol style="list-style-type: none"> 1) Place value of three-digit numbers. (2.NBT.1) 2) Round whole numbers to the nearest 10 or 100. (3.NBT.1) 3) Fluently add and subtract within 1,000. (3.NBT.2) 4) Multiply a single-digit number by a multiple of 10. (3.NBT.3) 5) Apply the properties of multiplication to multiply and divide. (3.OA.5) 6) Fluently multiply and divide within 100. (3.OA.7)
New Material for 4 th Grade
<ol style="list-style-type: none"> 1) I can 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. (4.NBT.1) 2) I can round multi-digit whole numbers to any place using place value. (4.NBT.3) 3) I can multiply a whole number of up to four digits by a one-digit number. (4.NBT.5) 4) I can solve multi-step word problems using addition, subtraction, and multiplication. (4.OA.3) 5) I can identify factor pairs and multiples of numbers 1-100 (4.OA.4)
End of Chapter Expectations
<ol style="list-style-type: none"> 1) Chapter Assessment

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Multiplication and Division Strategies	
<p><u>Multiples of 10, 100, and 1,000:</u></p> <p>Example:</p> <p>5×400 When you multiply 5×400, it becomes: 5×4 hundreds. Multiply the whole numbers: $5 \times 4 = 20$ hundreds 20 hundreds = 2,000</p>	<p style="text-align: center;">☺ Family Practice ☺</p> <p>Check out some of these free, math websites to practice addition, subtraction, multiplication, and division skills.</p> <p>1) http://gregtangmath.com/</p> <p>2) http://www.thinkingblocks.com/ThinkingBlocks_AS/TB_AS_Main.html</p>
<p><u>Estimating Products:</u></p> <p>Example:</p> <p>5×393</p> <p>1) Round to the greatest place value- 393 (hundreds)</p> <p>393-The 3 is in the hundreds place and a 9 is to the right. It tells you to add a 10 or round up. So the 3 hundreds becomes 4 hundreds.</p> <p>2) Multiply the rounded amount and the factor: 5×400</p>	<p><u>Multiply Using the Distributive Property:</u></p> <p>Example:</p> <p>What is the answer to $2(4 + 3)$?</p> <p>$2(4 + 3) = 2 \times 4 + 2 \times 3 = 14 \checkmark$</p> <div style="border: 1px solid blue; padding: 5px; margin: 10px 0;"> <p>The "2" outside the brackets is multiplied onto everything that is inside the brackets.</p> </div> <p>Another example:</p> <p>$154 \times 6 = (100 + 50 + 4) \times 6 = (100 \times 6) + (50 \times 6) + (4 \times 6) = 600 + 300 + 24 = 924.$</p>

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Multiplication and Division Strategies, Continued

Multiply Using the Area Model:

This strategy makes multiplication easier by breaking apart the numbers by place value.

Example:

$$8 \times 549 =$$

500	+	40	+	9
-----	---	----	---	---

8

$8 \times 500 =$	$8 \times 40 =$	$8 \times 9 =$
4000	320	72

$$8 \times 549 = 8 \times (500 + 40 + 9)$$

$$= 4000 + 320 + 72 = 4392$$

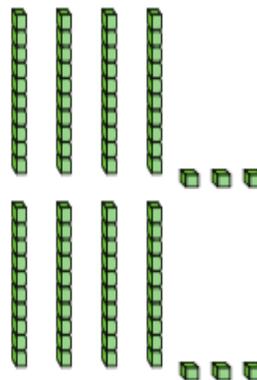
Using Area Models:

- 1) Draw a rectangle and divide it into parts based on the place (*i.e.*, *hundreds means divided into 3 parts since there are 3 places*)
- 2) Separate the largest factor into expanded form. (*i.e.*, $549=500+40+9$)
- 3) Label the parts. On the left will be the single factor. (*i.e.*, 8) Above each section you will put its value. (*i.e.*, 500, 40, and 9 in the ones.)
- 4) Write the equation when you multiply the factor (8) by each place in each box.
- 5) Solve each equation.
- 6) Add the products from each section together to find the total product.

Multiply Using Base 10 Models:

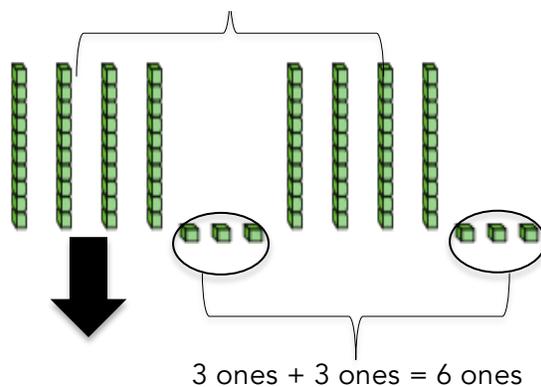
Example:

of Base 10 blocks per group \nearrow 43×2 \nwarrow # of groups



- 1) Count how many blocks should be in each group based on place. (*i.e.*, 4 tens 3 ones)
- 2) See how many groups to make. (*i.e.*, 2)
- 3) Place the amount of blocks into each group (*i.e.*, 2 groups of 42)
- 4) Count your total base 10 blocks, regrouping if needed.

4 tens + 4 tens = 8 tens



3 ones + 3 ones = 6 ones

$$8 \text{ tens} = 80$$

$$6 \text{ ones} = 6$$

$$80 + 6 = 86$$

$$\text{So, } 43 \times 2 = 86$$

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.