



Fourth Grade Mathematics Curriculum Map, 1st Nine Weeks 2019-2020

First Nine Weeks		
TN Standards The Major Work of the Grade for TN Assessments are bolded and in italics.	Learning Outcomes	Content
Weeks 1 and 2: Procedures/Accountable Talk/Number Talks/Mathematical Practices		4.NBT.A.2 Place Value: "Read, Write, and Compare Numbers"
<p>4.NBT.A.2 Read and write multi-digit whole numbers (less than or equal to 1,000,000) using standard form, word form, and expanded form (e.g. the expanded form of 4256 is written as $4 \times 1000 + 2 \times 100 + 5 \times 10 + 6 \times 1$). Compare two multi-digit numbers based on meanings of the digits in each place and use the symbols $>$, $=$, and $<$ to show the relationship.</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> I can read and write a multi-digit number in word form, base-ten numerals, and expanded form. I can compare two multi-digit numbers using place value and record the comparison using symbols $>$, $<$, and $=$. <p>Essential Questions:</p> <ol style="list-style-type: none"> How can you read and write numbers through hundred thousands? How can you compare and order numbers? 	<p>Go Math! Chapter 1: Place Value, Addition, and Subtraction to One Million Lesson 1.2: Read and Write Numbers Lesson 1.3: Compare and Order Numbers</p> <p>Vocabulary: hundreds, inverse operations, ones, tens, ten thousands, thousands, estimate, expanded form, period, round, standard form, word form</p> <p>Mathematical Practices Focus MP2 Reason abstractly and quantitatively. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP7 Look for and make use of structure.</p> <p>Instructional Tasks: Engage NY Module 1: Topic B https://www.engageny.org/resource/grade-4-mathematics</p> <p>Mathematical Practice Posters http://www.ride.ri.gov/Portals/0/Uploads/Documents/Instruction-and-Assessment-World-Class-Standards/Transition/EIA-CCSS/ScarpelliID-MP_ICanStatements.pdf</p> <p>**Math Instructional Focus Document** TN Math Focus Documents https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf</p> <p>Fourth Grade Math Teachers in TN Blog of Resources (number talk resources available here) https://fourthgrademathteachersintn.blogspot.com/</p>



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Week 3: 4.NBT.A.1 Place Value: "10 Times Greater to the Right"		
<p>4.NBT.A.1 Recognize that in a multi-digit whole number (less than or equal to 1,000,000), a digit in one place represents 10 times as much as it represents in the place to its right. For example, recognize that 7 in 700 is 10 times bigger than the 7 in 70 because $700 \div 70 = 10$ and $70 \times 10 = 700$.</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> I know multiplying by 10 increases a number's value and shifts its place one position to the left. I can explain the relationship of the place value positions in whole numbers to one million. <p>Essential Questions:</p> <ol style="list-style-type: none"> How can you describe the value of a digit? How can you rename a whole number? 	<p>Go Math! Chapter 1: Place Value, Addition, and Subtraction to One Million Lesson 1.1: Model Place Value Relationships Lesson 1.5: Investigate-Rename Numbers</p> <p>Vocabulary: digit, place value, regroup</p> <p>Mathematical Practices Focus MP2 Reason abstractly and quantitatively. MP4 Model with mathematics. MP6 Attend to precision. MP7 Look for and make use of structure.</p> <p>Instructional Tasks: Engage NY Module 1 Topic A https://www.engageny.org/resource/grade-4-mathematics</p> <p>**Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf</p> <p>Fourth Grade Math Teachers in TN Blog of Resources https://fourthgrademathteachersintn.blogspot.com/</p>



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Week 4: 4.NBT.A.3 Place Value: "Rounding"		
<p>4.NBT.A.3 Round multi-digit whole numbers to any place (up to and including the hundred-thousand place) using understanding of place value.</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> • I can explain how to use place value and what digits to look for in order to round a multi-digit number. • I can use the value of the digit to the right of the place to be rounded to determine whether to round up or down. • I can write a multi-digit number rounded to any given place. <p>Essential Questions:</p> <ol style="list-style-type: none"> 1. How can you round numbers? 	<p>Go Math! Chapter 1: Place Value, Addition, and Subtraction to One Million Lesson 1.4: Round Numbers</p> <p>Vocabulary: estimate, round</p> <p>Mathematical Practices Focus MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP5 Use appropriate tools strategically. MP7 Look for and make use of structure.</p> <p>Instructional Tasks: Engage NY Module 1 Topic C https://www.engageny.org/resource/grade-4-mathematics</p> <p>**Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf</p> <p>Fourth Grade Math Teachers in TN Blog of Resources https://fourthgrademathteachersintn.blogspot.com/</p>



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Week 5: 4.NBT.B.4 “Fluently Add and Subtract”		
<p>4.NBT.B.4 Fluently add and subtract within 1,000,000 using appropriate strategies and algorithms.</p> <p>4.OA.A.3 Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>Learning Targets</p> <ul style="list-style-type: none"> I can use mental math or estimation strategies to check if my answer is reasonable. I can connect the standard algorithm for addition and subtraction to strategies based on place value and/or non-standard algorithms. I can check my answer for reasonableness. <p>Essential Questions:</p> <ol style="list-style-type: none"> How can you add whole numbers? How can you subtract whole numbers? How can you use the strategy “draw a diagram” to solve comparison problems with addition and subtraction? 	<p>Go Math! Chapter 1: Place Value, Addition, and Subtraction to One Million</p> <p>Lesson 1.6: Add Whole Numbers Lesson 1.7: Subtract Whole Numbers Lesson 1.8: Problem Solving-Comparison Problems with Addition & Subtraction</p> <p>Vocabulary: addend, addition, difference</p> <p>Mathematical Practices Focus</p> <p>MP1 Make sense of problems and persevere in solving them. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP8 Look for and express regularity in repeated reasoning.</p> <p>Instructional Tasks: Engage NY Module 1 Topic D, Topic E, Topic F https://www.engageny.org/resource/grade-4-mathematics</p> <p>**Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf</p> <p>Fourth Grade Math Teachers in TN Blog of Resources https://fourthgrademathteachersintn.blogspot.com/</p>



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Weeks 6 and 7: 4.NBT.B.5 “Multiplication/Comparison/1x1/Array/Area Models”		
<p>4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>4.OA.A.1 Interpret a multiplication equation as a comparison (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.</p> <p>4.OA.A.2 Multiply or divide to solve contextual problems involving multiplicative comparison, and distinguish multiplicative comparison from additive comparison. For example, school A has 300 students and school B has 600 students: to say that school B</p>	<p>Learning Targets:</p> <ul style="list-style-type: none"> • I understand the properties of multiplication. • I can interpret and use visual models for multiplication. • I can explain the strategy I used to solve a multiplication problem. • I can show my thinking by creating rectangular arrays. • I can show my thinking by creating area models. • I can write an equation for a model of a multiplication problem. • I can tell which quantity is being multiplied and which number tells how many times. • I can explain how a multiplication equation (e.g., $35=7 \times 5$) can be interpreted as a comparison (e.g., Johnny has 5 times as many cards as Bill who has 7 cards.) • I can write an equation for a situation involving multiplicative comparison. <p>Essential Questions:</p> <ol style="list-style-type: none"> 1. How can you model multiplication comparisons? 2. How does a model help you solve a comparison problem? 3. How does understanding place value help you multiply tens, hundreds, and thousands? 4. How can you estimate products by rounding and determine if exact answers are reasonable? 	<p>Go Math! Chapter 2: Multiply by 1-Digit Numbers</p> <p>Lesson 2.1 Multiplication Comparisons Lesson 2.2 Comparison Problems Lesson 2.3 Multiply Tens, Hundreds, and Thousands Lesson 2.5 Multiply Using the Distributive Property Lesson 2.6 Multiply Using Expanded Form Lesson 2.7 Multiply Using Partial Products Lesson 2.8 Multiply using Mental Math Lesson 2.9 Problem Solving-Multistep Multiplication Problems Lesson 2.10 Multiply 2-Digit Numbers with Regrouping Lesson 2.11 Multiply 3-Digit and 4-Digit Numbers with Regrouping Lesson 2.12 Solve Multistep Problems Using Equations</p> <p>Vocabulary: distributive property, estimate, factor, partial product, place value, product, regroup, round.</p> <p>Mathematical Practices Focus</p> <p>MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP6 Attend to precision. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.</p> <p>Instructional Tasks: Engage NY Module 3 Topic B, Topic C, Topic D https://www.engageny.org/resource/grade-4-mathematics</p>

has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison.

4.OA.A.3

Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

5. How can you use the Distributive Property to multiply a 2-digit number by a 1-digit number?
6. How can you use expanded form to multiply a multi-digit number by a 1-digit number?
7. How can you use place value and partial products to multiply by a 1-digit number?
8. How can you use mental math and properties to help you multiply numbers?
9. When can you use the draw a diagram strategy to solve a multistep multiplication problem?
10. How can you use regrouping to multiply a 2-digit number by a 1-digit number?
11. How can you use regrouping to multiply?
12. How can you represent and solve multistep problems using equations?

Math Instructional Focus Document

https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf

Fourth Grade Math Teachers in TN Blog of Resources

<https://fourthgrademathteachersintn.blogspot.com/>



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First Nine Weeks		
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Week 8 and 9: 4.NBT.B.5 "Multiplication 2x2/Area Models/Partial Products"		
<p>4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>4.OA.A.3 Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quality. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p>Learning Targets</p> <ul style="list-style-type: none"> • I understand the properties of multiplication. • I can interpret and use visual models for multiplication. • I can explain the strategy I used to solve a multiplication problem. • I can show my thinking by creating area models. • I can write an equation for a model of a multiplication problem. <p>Essential Questions:</p> <ol style="list-style-type: none"> 1. What strategies can you use to multiply by tens? 2. What strategies can you use to estimate products? 3. How can you use area models and partial products to multiply 2-digit numbers? 4. How can you use place value and partial products to multiply 2-digit numbers? 5. How can you use regrouping to multiply 2-digit numbers? 6. How can you find and record products of two 2-digit numbers? 7. How can you use the strategy draw a diagram to solve multistep multiplication problems? 	<p>Go Math! Chapter 3: Multiply 2-Digit Number</p> <p>Lesson 3.1 Multiply by Tens Lesson 3.2 Estimate Products (Optional) Lesson 3.3 Investigate-Area Models and Partial Products Lesson 3.4 Multiply Using Partial Products Lesson 3.5 Multiply with Regrouping Lesson 3.6 Choose a Multiplication Method Lesson 3.7 Problem Solving-Multiply 2-Digit Numbers</p> <p>Vocabulary: compatible numbers, Associative Property of Multiplication, Commutative Property of Multiplication, estimate, partial product, product, regroup, multiply, whole number, strategy, place, value, properties of operations, equation, rectangular array, area model</p> <p>Mathematical Practices Focus</p> <p>MP1 Make sense of problems and persevere in solving them. MP2 Reason abstractly and quantitatively. MP3 Construct viable arguments and critique the reasoning of others. MP4 Model with mathematics. MP5 Use appropriate tools strategically. MP7 Look for and make use of structure. MP8 Look for and express regularity in repeated reasoning.</p> <p>Instructional Tasks: Engage NY Module 3 Topic C, Topic H https://www.engageny.org/resource/grade-4-mathematics</p>

Please NOTE:

1. Each chapter of Go Math has a Chapter Resource Book that contains reteach, enrich, and chapter tests as well as Performance Tasks available to print out for use in your classrooms.
2. Student Go Math Editions contain Mid-Chapter Checkpoints, as well as Chapter Review/Test pages, which may be used at your discretion.
3. Each lesson contains a Journal Writing Prompt that can be used as an exit ticket or formative assessment piece of work.
4. Online resources are available for each chapter.
5. Engage New York modules and topics have been provided as extra resources to reach each standard.
6. A blog has been created for 4th Grade Math Teachers in TN to share resources and ideas:
Fourth Grade Math Teachers in TN Blog of Resources: <https://fourthgrademathteachersintn.blogspot.com/>
7. iBooks have been created and shared for all of the NBT standards to use for reteach and review in your classroom.
The link to the shared OneDrive folder is:
https://bartlettcityschool-my.sharepoint.com/:f/g/personal/hsamuelson_bartlettschools_org/EozK_6pMu9xHonangjnSwfkBNel2hOQmRO4sF-xcVu-LOw?e=VW82ZV

To access the Ed Toolbox website including the instructional tasks go to the **Tennessee Tools** link at:

<http://www.edutoolbox.org/tntools>

More Resources:

Textbook Online Resource: Go Math "Think Central": <https://www-k6.thinkcentral.com/ePC/start.do>

Math Instructional Focus Document: https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_4_Mathematics.pdf

Assessment Tasks: <http://www.edutoolbox.org/tntools/list/grade/819/961/4>

Instructional Resources and Task Arcs: <http://www.edutoolbox.org/tntools/list/grade/819/955/4 - 958>

Worksheets for each standard sorted by grade level: <http://www.commoncoresheets.com/SortedByGrade.php>

Illustrative Math Tasks Website: <https://www.illustrativemathematics.org/content-standards/4>

Study Jams Website: <http://studyjams.scholastic.com/studyjams/jams/math/index.htm>

Math Antics Website: <https://www.mathantics.com/>

Fourth Grade Math Suggestions in Children's Literature

Grandfather Tang's Story by Ann Tompert

The Greedy Triangle by Marilyn Burns

The Patchwork Quilt by Valerie Flournoy

Sweet Clara and the Freedom Quilt by Deborah Hopkinson

Anno's Magic Seeds by Mitsumasa Anno