

# CURRICULUM *Correlation*

*Waterford  
Math & Science  
and Classroom  
Advantage*

**100%**

*Pennsylvania  
Academic  
Standards for  
Mathematics*

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# OVERVIEW



*This document provides a detailed correlation of* **WATERFORD MATH & SCIENCE, CLASSROOM ADVANTAGE** *and* **PENNSYLVANIA ACADEMIC STANDARDS FOR MATHEMATICS.**

**Waterford Math & Science** provides young learners comprehensive instruction in the major areas of early math: numbers and operation, geometry, algebraic reasoning, geometry and measurement, and data analysis. The integrated science curriculum emphasizes exploration and the scientific method while teaching earth, life, and physical science.

**Classroom Advantage** puts Waterford's award-winning, comprehensive online reading curriculum at teachers' fingertips for use with whole- and small-group lessons.

Over the years, Waterford curriculum has been formally evaluated in dozens of studies. In each study, Waterford classrooms outperform comparison-group classes in most, if not all, of the examined measures. In particular, Waterford stands out for providing significant learning gains for at-risk students and English Language Learners.

**PERSONALIZED LEARNING FOR STUDENTS**  
Students will experience the curriculum listed in this correlation chart based on their individual needs, as determined by their performance as follows:

**Placement Assessment:** Students begin their experience with a Placement Tool. Based on rigorous research, the Placement Tool evaluates a student's abilities and determines an appropriate starting point in the following levels:

- Level One (kindergarten)
- Level Two (first grade)
- Level Three (second grade)

**Ongoing Assessment:** Waterford Math & Science provides a mastery-based curriculum. As such, Waterford automatically provides instruction, remediation, and review to support students toward mastery of learning objectives based on student performance in ongoing assessment.

**COLLABORATIVE LEARNING FOR GROUPS**  
Teachers can easily create and share Playlists of Waterford activities to use with whole- and small-group lessons. Tools in Classroom Advantage make it easy and fun to present activities on an interactive whiteboard or other projection device. In addition, teachers have access to a library of PDF Teacher Materials with lesson plans and reproducibles they can use on and off the computer.

## DOCUMENT ORGANIZATION

This document includes a correlation chart with the following columns:

- Pennsylvania Standards: lists the standards.
- Waterford Digital Resources: lists Waterford online activities presented to students during their personalized instruction and that are also available for collaborative instruction in Classroom Advantage.
- Waterford Print Resources: lists PDF materials and activities that can be viewed in the Waterford Manager by using the Search feature in the Curriculum Tab.





PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>KINDERGARTEN</b>		
<b>2.1 NUMBERS AND OPERATIONS</b>		
<b>A. COUNTING AND CARDINALITY</b>		
<p>CC.2.1.K.A.1 Know number names and write and recite the count sequence.</p>	<ul style="list-style-type: none"> <li>• Counting Songs</li> <li>• Number Songs</li> <li>• Math Books (See lists of titles at end of document)</li> <li>• Number Instruction</li> <li>• Number Counting</li> <li>• Order Numbers</li> <li>• Number Sense and Recognition</li> <li>• Bug Bits</li> <li>• Moving Target</li> <li>• Picture and Shape Puzzle</li> <li>• Counting Puzzle</li> <li>• Dot-to-Dot</li> </ul>	<ul style="list-style-type: none"> <li>• K.CC.3.pdf: Write numbers from 0 to 20. Represent a number of objects with a written numeral. <i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Numbers Practice: 1-20 (one per number)</li> <li>- Numbers 1-5</li> <li>- Add groups</li> <li>- Count on by 1</li> <li>- Number Writing Practice: 0-20 (one per number)</li> </ul> </li> </ul>
<p>CC.2.1.K.A.2 Apply one-to-one correspondence to count the number of objects</p>	<ul style="list-style-type: none"> <li>• Counting Songs</li> <li>• Number Songs</li> <li>• Math Books (See lists of titles at end of document)</li> <li>• Number Instruction</li> <li>• Number Counting</li> <li>• Order Numbers</li> <li>• Number Sense and Recognition</li> <li>• Bug Bits</li> <li>• Moving Target</li> <li>• Picture and Shape Puzzle</li> <li>• Counting Puzzle</li> <li>• Dot-to-Dot</li> <li>• Make and Count Groups</li> </ul>	<ul style="list-style-type: none"> <li>• K.CC.4a.pdf: When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.                             <ul style="list-style-type: none"> <li>- Number Walk</li> </ul> </li> <li>• K.CC.4b.pdf: Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.                             <ul style="list-style-type: none"> <li>- Mixed Up Counting</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>A. COUNTING AND CARDINALITY</b> <i>continued</i>		
<p>CC.2.1.K.A.3 Apply the concept of magnitude to compare numbers and quantities.</p>	<ul style="list-style-type: none"> <li>• More Than, Fewer Than</li> <li>• More Than</li> <li>• Fewer Than</li> <li>• Make a Math Story</li> <li>• For the Birds book</li> <li>• Order Numbers</li> <li>• Greater Than, Less Than</li> </ul>	<ul style="list-style-type: none"> <li>• K.CC.6.pdf: Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.                             <ul style="list-style-type: none"> <li>- Beans and More</li> <li>- More Than Buttons</li> <li>- Short Names, Long Names</li> <li>- Noodle Necklaces</li> <li>- Groups Do Count!</li> <li>- More Than, Fewer Than, Equal</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Which Has More? 1</li> <li>- Fewer Than</li> <li>- More or Fewer</li> <li>- Which Has More? 2</li> <li>- Greater or Less</li> <li>- More Than/Fewer Than Flashcard Sets</li> </ul> </li> <li>• K.CC.7.pdf: Compare two numbers between 1 and 10 presented as written numerals.                             <ul style="list-style-type: none"> <li>- More or Less Spinner</li> <li>- Catch Me If You Can!</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Greater or Less</li> <li>- Less or Greater</li> <li>- Spinner</li> <li>- Board game</li> <li>- Number cards</li> </ul> </li> </ul>
<b>B. NUMBERS AND OPERATIONS IN BASE TEN</b>		
<p>CC.2.1.K.B.1 Use place value to compose and decompose numbers within 19.</p>	<ul style="list-style-type: none"> <li>• Place Value</li> </ul>	<ul style="list-style-type: none"> <li>• K.NBT.1.pdf: Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation; understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.                             <i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Place Value 11-19</li> <li>- Place Value 11-19 (2)</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>2.2 ALGEBRAIC CONCEPTS</b>		
<b>A. OPERATIONS AND ALGEBRAIC THINKING</b>		
<p>CC.2.2.K.A.1 Extend the concepts of putting together and taking apart to add and subtract within 10.</p>	<ul style="list-style-type: none"> <li>• Songs: On the Bayou; Pirates Can Add</li> <li>• Add Groups</li> <li>• Subtract Groups</li> <li>• Act Out Addition</li> <li>• Act Out Subtraction</li> <li>• Flower Story Problems</li> <li>• Story Problem Strategies</li> <li>• Subtract Those Cars</li> <li>• Circus Subtraction</li> <li>• Bakery Subtraction</li> <li>• Five Delicious Muffins</li> <li>• Missing Addends</li> <li>• Missing Minuends and Subtrahends</li> </ul>	<ul style="list-style-type: none"> <li>• K.OA.2.pdf: Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.                             <ul style="list-style-type: none"> <li>- Additions Stories</li> <li>- Act It Out Stories</li> <li>- Manipulative Stories</li> <li>- Edible Stories</li> <li>- One, Two, Three, Show</li> <li>- Circus Subtraction</li> <li>- Partner Subtraction</li> <li>- Farmer’s Market</li> <li>- Green and Speckled Frogs</li> <li>- Cars and Trucks Subtraction</li> <li>- Yummy Subtraction</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Act Out Addition</li> <li>- Act Out Subtraction</li> <li>- Addition Newsletter</li> <li>- Subtraction Newsletter</li> <li>- Subtraction Flashcards</li> </ul> </li> </ul>
<b>2.3 GEOMETRY</b>		
<b>A. GEOMETRY</b>		
<p>CC.2.3.K.A.1 Identify and describe two- and three-dimensional shapes.</p>	<ul style="list-style-type: none"> <li>• Songs: Kites; Get Over the Bugs; Shapes, Shapes, Shapes; Up in the Air</li> <li>• Books: The Shape of Things; Imagination Shapes</li> <li>• Solid Shapes</li> <li>• Space Shapes</li> <li>• World Shapes</li> <li>• Circle, Square, Triangle, Rectangle</li> <li>• Star, Semicircle, Octagon, Oval, Diamond</li> </ul>	<ul style="list-style-type: none"> <li>• K.G.2.pdf: Correctly name shapes regardless of their orientations or overall size.                             <ul style="list-style-type: none"> <li>- Shapes Scavenger Hunt</li> <li>- Shapes and Positioning</li> <li>- Shapes Flashcards</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>A. GEOMETRY</b> <i>continued</i>		
CC.2.3.K.A.2 Analyze, compare, create, and compose two- and three-dimensional shapes.	<ul style="list-style-type: none"> <li>• Space Shapes</li> <li>• Tangrams</li> <li>• Similar Figures</li> <li>• Congruence</li> <li>• Story Problem Strategies: Similar Figures</li> <li>• Geoboard</li> </ul>	
<b>2.4 MEASUREMENT, DATA, AND PROBABILITY</b>		
<b>A. MEASUREMENT AND DATA</b>		
CC.2.4.K.A.1 Describe and compare attributes of length, area, weight, and capacity of everyday objects.	<ul style="list-style-type: none"> <li>• Songs: Measuring Plants; Savanna Size</li> <li>• Size</li> <li>• Order Size</li> <li>• Length</li> <li>• Capacity</li> <li>• Big and Little</li> <li>• Tall and Short</li> <li>• Heavy and Light</li> </ul>	<ul style="list-style-type: none"> <li>• K.MD.1.pdf: Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.                             <ul style="list-style-type: none"> <li>- Filling Table</li> <li>- Order It Up</li> <li>- Straw Rulers</li> <li>- Measuring Walk</li> <li>- Heavy or Light</li> <li>- Make A Balance</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Measurable Attributes</li> <li>- Size Scavenger Hunt</li> <li>- Big and Little Sort</li> <li>- Boxes in a Line</li> <li>- Teddy Bear Line-Up</li> <li>- Magazine Sorting</li> <li>- Tall and Short</li> <li>- Big and Little</li> <li>- Heavy and Light</li> <li>- Small, Medium, Large</li> <li>- Measuring Length</li> <li>- Measurable Attributes</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>A. MEASUREMENT AND DATA</b> <i>continued</i>		
CC.2.4.K.A.4 Classify objects and count the number of objects in each category	<ul style="list-style-type: none"> <li>• Songs: Same and Different; All Sorts of Laundry</li> <li>• Book: Buttons, Buttons</li> <li>• Match</li> <li>• Matching</li> <li>• Sort</li> <li>• Logic Game</li> </ul>	<ul style="list-style-type: none"> <li>• K.MD.3.pdf: Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.                             <ul style="list-style-type: none"> <li>- Let's Sort</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Sort</li> </ul> </li> </ul>
<b>GRADE 1</b>		
<b>2.1 NUMBERS AND OPERATIONS</b>		
<b>B. NUMBERS AND OPERATIONS IN BASE TEN</b>		
CC.2.1.1.B.1 Extend the counting sequence to read and write numerals to represent objects.	<ul style="list-style-type: none"> <li>• Song: Counting On</li> <li>• Book: Hooray, Hooray for the One Hundredth Day!</li> <li>• Number Recognition and Sense</li> <li>• Number Chart</li> <li>• Count On</li> </ul>	<ul style="list-style-type: none"> <li>• 1.NBT.1.pdf: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.                             <ul style="list-style-type: none"> <li>- Mystery Numbers</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- I Can Write Numbers to 99</li> <li>- Numbers 20-29</li> <li>- Numbers 30-39</li> <li>- Numbers 40-49</li> <li>- Numbers 50-59</li> <li>- Numbers 60-69</li> <li>- Counting to 89</li> </ul> </li> <li><i>Counting Charts:</i> <ul style="list-style-type: none"> <li>- I Can Count to 50</li> <li>- I Can Count to 100</li> <li>- I Can Count to 99</li> <li>- I Can Count to 120</li> </ul> </li> </ul>
CC.2.1.1.B.2 Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.	<ul style="list-style-type: none"> <li>• Place Value</li> <li>• Expanded Notation</li> <li>• Greater Than, Less</li> <li>• You Be The Teacher: Greater Than, Less Than</li> </ul>	<ul style="list-style-type: none"> <li>• 1.NBT.2a.pdf: 10 can be thought of as a bundle of ten ones—called a “ten.”                             <ul style="list-style-type: none"> <li>- Popsicles to Ten</li> </ul> </li> </ul>





PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>B. NUMBERS AND OPERATIONS IN BASE TEN</b> <i>continued</i>		
<p>CC.2.1.1.B.3 Use place-value concepts and properties of operations to add and subtract within 100.</p>	<ul style="list-style-type: none"> <li>• Addition</li> <li>• Add Tens</li> <li>• Kingdom of Counting</li> <li>• Doubles</li> <li>• Add with Manipulatives</li> <li>• Add Vertical Squares</li> <li>• Add with Beads</li> <li>• Flower Story Problems</li> <li>• Story Problem Strategies</li> <li>• Mental Math Games</li> <li>• Speed Games</li> <li>• Add without Regrouping</li> <li>• Add with Regrouping</li> <li>• Subtraction</li> <li>• Subtraction Sentences</li> <li>• Subtraction Patterns</li> <li>• Subtract without Regrouping</li> <li>• Subtract with Regrouping</li> </ul>	<ul style="list-style-type: none"> <li>• 1.NBT.4.pdf: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).                         <ul style="list-style-type: none"> <li>- Drawing Tens</li> <li>- Beans, Beans, and More Beans</li> <li>- The Kingdome of Popsicle Stick-Filled Purses</li> <li>- Straws and Macaroni</li> <li>- Bean Addition</li> </ul> </li> <li>• 1.NBT.5.pdf: Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.                         <ul style="list-style-type: none"> <li>- Ten-O</li> <li>- Toss It</li> <li>- Make a Number</li> </ul> <p><i>Practice Pages:</i></p> <ul style="list-style-type: none"> <li>- Subtract 10</li> <li>- Flashcards</li> <li>- Bingo</li> <li>- Addition of Tens</li> </ul> </li> <li>• 1.NBT.6.pdf: Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90.                         <ul style="list-style-type: none"> <li>- Ten-O</li> <li>- Practice Pages: Bingo Subtract Multiples of 10</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>2.2 ALGEBRAIC CONCEPTS</b>		
<b>A. OPERATIONS AND ALGEBRAIC THINKING</b>		
<p>CC.2.2.1.A.1 Represent and solve problems involving addition and subtraction within 20</p>	<ul style="list-style-type: none"> <li>• Facts About Families book</li> <li>• Fact Families song</li> <li>• Addition and Subtraction Fact Families</li> <li>• Addition Sentences</li> <li>• Subtraction Sentences</li> <li>• Missing Addends</li> <li>• Missing Minuends and Subtrahends</li> <li>• Subtraction Patterns</li> <li>• Kingdom of Counting</li> <li>• Mental Math Games</li> <li>• Speed Games</li> <li>• Make 10 Addition Strategy</li> <li>• Make 10 Subtraction Strategy</li> <li>• Commutative Property of Addition</li> <li>• Doubles</li> </ul>	<ul style="list-style-type: none"> <li>• 1.OA.6.pdf: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.                             <ul style="list-style-type: none"> <li>- The Three Little Bears</li> <li>- Fact Family Bingo</li> <li>- A Graph of Fact Families</li> <li>- Bean Facts</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Draw a Picture</li> <li>- Addition</li> <li>- Number Pyramid</li> <li>- Subtraction Sentences</li> <li>- Model the Story</li> <li>- Fact Families</li> <li>- Add _ and 1-5</li> <li>- Add _ and 6-10</li> <li>- Order Property of Addition</li> <li>- Add Doubles +1 to 11</li> <li>- Add Doubles to 20</li> <li>- Add Doubles +1 to 21)</li> <li>- Make 10 Subtract _ from</li> <li>- Subtract Subtraction Patterns</li> <li>- Fact Families to 10</li> <li>- Fact Families to 20</li> <li>- Add and Subtract Doubles to 10</li> <li>- Add and Subtract Doubles to 20</li> </ul> </li> <li><i>Flashcards:</i> <ul style="list-style-type: none"> <li>- Addition—horizontal</li> <li>- Subtraction—horizontal</li> <li>- Addition—vertical</li> <li>- Subtraction—horizontal</li> </ul> </li> </ul>
<p>CC.2.2.1.A.2 Understand and apply properties of operations and the relationship between addition and subtraction</p>	<ul style="list-style-type: none"> <li>• Addition and Subtraction Relationship</li> <li>• Subtraction Patterns</li> <li>• Commutative Property of Addition</li> <li>• Kingdom of Counting</li> <li>• Mental Math Games</li> </ul>	



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>2.3 GEOMETRY</b>		
<b>A. GEOMETRY</b>		
CC.2.3.1.A.1 Compose and distinguish between two- and three-dimensional shapes based on their attributes.	<ul style="list-style-type: none"> <li>• Songs: Corners and Sides; Kites</li> <li>• Space Shapes</li> <li>• Geoboard</li> <li>• Tangrams</li> <li>• Story Problem Strategies; Space Shapes</li> </ul>	
CC.2.3.1.A.2 Use the understanding of fractions to partition shapes into halves and quarters.	<ul style="list-style-type: none"> <li>• Halves and Fourths and Thirds</li> <li>• Equal Part Fractions</li> <li>• Label Parts of Fractions</li> </ul>	
<b>2.4 MEASUREMENT, DATA, AND PROBABILITY</b>		
<b>A. MEASUREMENT AND DATA</b>		
CC.2.4.1.A.1 Order lengths and measure them both indirectly and by repeating length units	<ul style="list-style-type: none"> <li>• Nonstandard Units</li> <li>• Nonstandard Units of Length</li> </ul>	<ul style="list-style-type: none"> <li>• 1.MD.2.pdf: Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.                             <ul style="list-style-type: none"> <li>- Measures of Me</li> <li>- Measure a Handful</li> <li>- Estimating Length</li> <li>- A Fruit and Vegetable</li> </ul> <i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Measure Up!</li> <li>- Inches/Centimeters Rulers</li> </ul> </li> </ul>
CC.2.4.1.A.2 Tell and write time to the nearest half hour using both analog and digital clocks.	<ul style="list-style-type: none"> <li>• Mr. Romano's Secret: A Time Story</li> <li>• How Long is a Minute?</li> <li>• Tell Time to the Hour</li> <li>• Tell Time to the Half-Hour</li> <li>• Compare Minutes to Hours</li> <li>• Story Problem Strategies: Time</li> <li>• Clock Hands</li> </ul>	<ul style="list-style-type: none"> <li>• 1.MD.3.pdf: Tell and write time in hours and half-hours using analog and digital clocks.                             <ul style="list-style-type: none"> <li>- What Comes After, Before, Or Between?</li> <li>- Make Your Own Clock</li> <li>- Learning to Tell Time</li> <li>- Matching Time</li> </ul> <i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- What Numbers are Missing?</li> <li>- What Time Is It?</li> <li>- Time of Day</li> <li>- Clock flashcards</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>A. MEASUREMENT AND DATA</b> <i>continued</i>		
CC.2.4.1.A.4 Represent and interpret data using tables/charts.	<ul style="list-style-type: none"> <li>• Venn Diagrams</li> <li>• Tally Marks</li> <li>• Make a Table</li> <li>• Story Problem Strategies: Graphs</li> <li>• Problem Solving Strategies: Make a Table; Make a Graph</li> </ul>	<ul style="list-style-type: none"> <li>• 1.MD.4.pdf: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.                             <ul style="list-style-type: none"> <li>- Ice Cream Sundae</li> <li>- Make A Real Object Graph</li> <li>- Make a Weather Bar Graph</li> <li>- Weather Flashcards</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Our Favorite Foods</li> <li>- Make a Graph</li> <li>- Make a table</li> <li>- How Many?</li> <li>- Bugs!</li> <li>- Use Graphs and Tables</li> <li>- How Big is Your Family?</li> </ul> </li> </ul>
<b>GRADE 2</b>		
<b>2.1 NUMBERS AND OPERATIONS</b>		
<b>B. NUMBERS AND OPERATIONS IN BASE TEN</b>		
CC.2.1.2.B.1 Use place-value concepts to represent amounts of tens and ones and to compare three digit number	<ul style="list-style-type: none"> <li>• Place Value song</li> <li>• Place Value</li> <li>• Place Value of 3-digit numbers</li> <li>• Greater Than, Less Than</li> <li>• Sequences of 3-digit numbers</li> </ul>	<ul style="list-style-type: none"> <li>• 2.NBT.1a.pdf: 100 can be thought of as a bundle of ten tens—called a “hundred.”                             <ul style="list-style-type: none"> <li>- The Kingdom of Popsicle Stick-Filled Purses</li> </ul> </li> <li>• 2.NBT.1b.pdf: The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).                             <ul style="list-style-type: none"> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- My Three-Digit Numbers</li> </ul> </li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>B. NUMBERS AND OPERATIONS IN BASE TEN</b> <i>continued</i>		
<p>CC.2.1.2.B.2 Use place-value concepts to read, write, and skip count to 1000.</p>	<ul style="list-style-type: none"> <li>• Place Value song</li> <li>• Place Value</li> <li>• Place Value of 3-digit numbers</li> <li>• Skip Counting</li> <li>• Skip Count by 10</li> <li>• Skip Count by 5</li> <li>• Number Sequences and Patterns</li> </ul>	<ul style="list-style-type: none"> <li>• 2.NBT.2.pdf: Count within 1,000; skip-count by 5s, 10s, and 100s.                             <ul style="list-style-type: none"> <li>- Chart Patterns</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- My 199 Picture</li> <li>- My 200 Picture</li> <li>- My 299 Picture</li> <li>- My 300 Picture</li> <li>- My 399 Picture</li> <li>- My 400 Picture</li> <li>- My 499 Picture</li> <li>- My 500 Picture</li> <li>- My 599 Picture</li> <li>- My 600 Picture</li> <li>- My 699 Picture</li> <li>- My 700 Picture</li> <li>- 900 Chart</li> </ul> </li> </ul>
<p>CC.2.1.2.B.3 Use place-value understanding and properties of operations to add and subtract within 1000.</p>	<ul style="list-style-type: none"> <li>• Add 2-digit numbers with Regrouping</li> <li>• Add 3-digit numbers with Regrouping</li> <li>• Add three 2-digit numbers with Regrouping</li> <li>• Subtract With Regrouping Concept</li> <li>• Subtract 2-digit numbers with Regrouping</li> <li>• Subtract 3-digit numbers with Regrouping</li> </ul>	<ul style="list-style-type: none"> <li>• 2.NBT.7.pdf: Add and subtract within 1,000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.                             <ul style="list-style-type: none"> <li>- Choose and Add</li> <li>- Mix and Match Addition</li> <li>- Expanded Subtraction</li> <li>- Subtracting Repeats</li> <li>- 999</li> <li>- Prediction</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Up and Away</li> <li>- Regrouping Treasure Hunt</li> <li>- Play Ball</li> <li>- Squirrel Facts</li> <li>- Number Cards</li> </ul> </li> </ul>



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>2.2 ALGEBRAIC CONCEPTS</b>		
<b>A. OPERATIONS AND ALGEBRAIC THINKING</b>		
CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.	<ul style="list-style-type: none"> <li>• Painting by Number</li> <li>• Story Problem Strategies</li> <li>• Patterns of 2-digit Numbers</li> <li>• Patterns of 3-digit Numbers</li> <li>• Place Value of 2-digit Numbers</li> <li>• Place Value of 3-digit Numbers</li> <li>• Greater Than, Less Than 3-digit</li> <li>• Add 2-digit without Regrouping</li> <li>• Add 3-digit without Regrouping</li> <li>• Subtract 2-digit without Regrouping</li> <li>• Subtract 3-digit without Regrouping</li> <li>• 2-digit plus 1-digit with Regrouping</li> <li>• Add 2-digit with Regrouping</li> <li>• Add 3 Two-digit with Regrouping</li> <li>• Add 3-digit with Regrouping</li> <li>• 2-digit Minus 1-digit with Regrouping</li> <li>• Subtract 2-digit with Regrouping</li> <li>• Subtract 3-digit with Regrouping</li> <li>• Add with Regrouping; Subtract with Regrouping</li> </ul>	<ul style="list-style-type: none"> <li>• 2.OA.1.pdf: Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.                             <ul style="list-style-type: none"> <li>- Animal Math</li> <li>- Picture Problems</li> </ul> <i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Act it Out</li> <li>- Guess and Check</li> </ul> </li> </ul>
CC.2.2.2.A.2 Use mental strategies to add and subtract within 20.	<ul style="list-style-type: none"> <li>• Mental Math Games</li> <li>• Commutative Property of Addition</li> <li>• Subtraction Patterns</li> <li>• Addition Strategy</li> <li>• Subtraction Strategy</li> </ul>	<ul style="list-style-type: none"> <li>• 2.OA.2.pdf: Fluently add and subtract within 20 using mental strategies. By end of grade 2, know from memory all sums of two one-digit numbers.                             <i>Flashcards:</i> <ul style="list-style-type: none"> <li>- Addition—horizontal</li> <li>- Subtraction—horizontal</li> <li>- Addition—vertical</li> <li>- Subtraction—vertical</li> <li>- Addition and subtraction—horizontal and vertical</li> </ul> </li> </ul>
CC.2.2.2.A.3 Work with equal groups of objects to gain foundations for multiplication.	<ul style="list-style-type: none"> <li>• Multiply Using Repeated Addition</li> <li>• Multiply Using Arrays</li> </ul>	



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
<b>2.3 GEOMETRY</b>		
<b>A. GEOMETRY</b>		
CC.2.3.2.A.1 Analyze and draw two- and three-dimensional shapes having specified attributes.	<ul style="list-style-type: none"> <li>• The Shape of Things book</li> <li>• Shapes, Shapes, Shapes song</li> <li>• Space Shapes</li> <li>• World Shapes</li> </ul>	
CC.2.3.2.A.2 Use the understanding of fractions to partition shapes into halves, quarters, and thirds.	<ul style="list-style-type: none"> <li>• Song: Fractions</li> <li>• Books: The Fraction Twins; Halves and Fourths and Thirds</li> <li>• Fractions</li> <li>• Fractions of Regions</li> <li>• Fractions of Groups</li> <li>• Label Parts of Fractions</li> <li>• Halves and Fourths and Thirds</li> </ul>	
<b>2.4 MEASUREMENT, DATA, AND PROBABILITY</b>		
<b>A. MEASUREMENT AND DATA</b>		
CC.2.4.2.A.1 Measure and estimate lengths in standard units using appropriate tools.	<ul style="list-style-type: none"> <li>• Measurement Tools</li> <li>• Song: Measuring Plants</li> <li>• Standard Units of Length</li> </ul>	<ul style="list-style-type: none"> <li>• 2.MD.1.pdf: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.                             <ul style="list-style-type: none"> <li>- Ready, Set, Measure</li> <li>- Treasure Hunt</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Centimeter ruler</li> <li>- Inch Ruler</li> <li>- Let's Measure in Centimeters!</li> <li>- Let's Measure in Inches</li> </ul> </li> </ul>
CC.2.4.2.A.2 Tell and write time to the nearest five minutes using both analog and digital clocks.	<ul style="list-style-type: none"> <li>• Song: Telling Time; Clock Hands</li> <li>• Tell Time</li> <li>• Tell Time to the Minute</li> <li>• Tell Time to Five Minutes</li> <li>• Tell Time to the Quarter Hour</li> <li>• Tell Time to the Half-hour</li> <li>• Tell Time to the Hour</li> <li>• You Be the Teacher; Tell Time</li> </ul>	



PENNSYLVANIA STANDARDS	WATERFORD DIGITAL RESOURCES	WATERFORD PRINT RESOURCES
A. MEASUREMENT AND DATA <i>continued</i>		
<p>CC.2.4.2.A.3 Solve problems and make change using coins and paper currency with appropriate symbols.</p>	<ul style="list-style-type: none"> <li>• Money</li> <li>• Count Coins</li> <li>• Count Bills and Coins</li> <li>• Make Change</li> </ul>	<ul style="list-style-type: none"> <li>• 2.MD.8.pdf: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.                             <ul style="list-style-type: none"> <li>- Supermarket Hunt</li> <li>- Shopping for My Family</li> <li>- Money Combinations</li> <li>- Money Sums</li> <li>- Pizza Parlor</li> <li>- How Much Back?</li> <li>- Coin Count</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Bills and Coins</li> <li>- Let's Count Coins</li> <li>- Money Addition</li> <li>- Change is Good!</li> <li>- Make 45¢</li> </ul> </li> </ul>
<p>CC.2.4.2.A.4 Represent and interpret data using line plots, picture graphs, and bar graphs.</p>		<ul style="list-style-type: none"> <li>• 2.MD.9.pdf: Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.                             <ul style="list-style-type: none"> <li>- Measuring Inches</li> <li>- Ready, Set, Measure</li> </ul> </li> <li><i>Practice Pages:</i> <ul style="list-style-type: none"> <li>- Let's Measure in Centimeters!</li> <li>- Let's Measure in Inches</li> </ul> </li> </ul>
<p>CC.2.4.2.A.6 Extend the concepts of addition and subtraction to problems involving length.</p>	<ul style="list-style-type: none"> <li>• Number Line</li> <li>• Problem Solving Song</li> <li>• Standard Units of Length</li> </ul>	





## **MATH & SCIENCE LEVEL ONE**

### **Math Books**

One Day on the Farm; Two Feet; Look for Three; Four Fine Friends; Grandpa's Great Athlete: A Book About 5; Hide and Seek Six; Just Seven; Eight at the Lake; 9 Cat Night; Ten for My Machine; The Search for Eleven; The Tasty Number Twelve; Thirteen in My Garden; Fourteen Camel Caravan; Fifteen on a Spring Day; Dinner for Sixteen; The Seventeen Machine; Eighteen Carrot Stew; Nineteen Around the World; Twenty Clay Children; Poor Wandering 1; Snowy Twos Day; 1, 2, 3, 4 in the Jungle; Give Me 5; Suzy Ladybug; 7 Train; 8 Octopus Legs; Highway 9; 10 Astronauts; When I Saw 11; I Love the Number 12; 13 Clues; 14 Camels; Fun 15; 16 Ants; Counting to 17; 18 Carrot Stew; 19 Around the World; 20 Fingers and Toes

### **Science Books**

That's What I Like: A Book about Seasons; I Want to Be a Scientist Like Jane Goodall; Mr. Mario's Neighborhood; Mela's Water Pot; I Want to Be a Scientist Like Wilbur and Orville Wright; Follow the Apples!; I Want to Be a Scientist Like George Washington Carver; Guess What I Am; Where in the World Would You Go Today?; Star Pictures; I Wish I Had Ears Like a Bat; Creepy Crawlers

### **Counting Songs**

Asian Counting, Marching Band Counting, Flower Counting, Country Counting, Dixieland Counting, Funky Counting, Reggae Counting, Salsa Counting, Techno Counting, Bagpipe Counting, Counting on the Mountain

## **Number Songs**

Count to 31; Hotel 100; Poor Wandering 1; Snowy Twos Day; 1, 2, 3, 4 in the Jungle; Give Me 5; Suzy Ladybug; 7 Train; 8 Octopus Legs; Highway 9; 10 Astronauts; When I Saw 11; I Love the Number 12; 13 Clues; 14 Camels; Fun 15; 16 Ants; Counting to 17; 18 Carrot Stew; 19 Around the World; 20 Fingers and Toes

## **MATH & SCIENCE LEVEL TWO**

### **Math & Science Books**

One More Cat; Can You Guess? A Story for Two Voices; I Want to Be a Scientist Like Carl Linnaeus; I Want to Be a Scientist Like Antoni van Leeuwenhoek; Whatever the Weather; I Want to Be a Mathematician Like Sophie Germain; Water Is All Around; Mr. Romano's Secret: A Time Story; A Seed Grows; How Long is a Minute?; Marty's Mixed-up Mom; I Want to Be a Scientist Like Louis Pasteur; Pancakes Matter; Jump Rope Rhymes; Facts About Families; Fifteen Bayou Band; Hooray, Hooray for the One Hundredth Day!; Symmetry and Me; Animal Bodies; Everybody Needs to Eat; The Circus Came to Town; I Want to Be a Mathematician Like Thales; Bugs for Sale; Heads or Tails; Your Backyard; The Birds, the Beasts and the Bat; Halves and Fourths and Thirds; We All Exercise; Circus 20; Red Rock, River Rock; Painting by Number; I Want to Be a Scientist Like Joanne Simpson; Navajo Beads; Where in the World Would You Go Today?; I Want to Be a Scientist Like Wilbur and Orville Wright

## **MATH & SCIENCE LEVEL THREE**

### **Math & Science Books**

The Snow Project; Chloe's Cracker Caper; What Sounds Say; Fossils Under Our Feet; The Boonville Nine; I Want to Be a Scientist Like Alexander von Humboldt; I Want to Be a Scientist Like Marie Curie; I Want to Be a Scientist Like Stephen Hawking; George and Jack; The Old Maple Tree; A Dinosaur's First Day; I Want to Be a Scientist Like Isaac Newton; My Family Campout; I Want to Be a Scientist Like Thomas Edison; Warm Soup for Dedushka; How Did the Chicken Cross the Road?; Inventions All Around; The Beginning of Numbers; I Want to Be a Mathematician Like Ada Byron Lovelace; Lightning Bells; Tyrannosaurus X 1; Halves and Fourths and Thirds; Navajo Beads; Red Rock, River Rock; I Want to Be a Mathematician Like Srinivasa Ramanujan; The Fraction Twins; Yangshi's Perimeter; I Want to Be a Mathematician Like Archimedes; Birds at My House; Painting by Number; The Fable Fair