Wayne Township Public Schools
Grade 1 Math Curriculum

Curriculum Writers:

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Wayne Township Public Schools
Grade 1 Math Curriculum

Grade Level & Content:	Grade 1 Mathematics
Unit Plan Title:	***Unit 1***: Addition and Subtraction to 20
Time Frame:	11 Weeks (please see pacing calendar)

Anchor Standards/Domain*   *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10

Math:
-   Operations and Algebraic Thinking

Unit Summary

In this unit, students will develop a deep understanding of addition and subtraction by working on *add to*, *put together*, *take from*, *take apart*, and *compare* problems. Then, students will use strategies to develop fluency with adding and subtracting within 20. Strategies include counting on and counting back, doubles and near doubles, adding within 5, adding to 10, adding in any order, making a 10 to subtract, and thinking addition to subtract.

Standard Number(s)

- ● 1.OA.A.1: Represent and solve problems involving addition and subtraction. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- ● 1.OA.B.3: Understand and apply properties of operations and the relationship between addition and subtraction. Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.) (Students need not use formal terms for these properties.)*
- ● 1.OA.B.4: Understand and apply properties of operations and the relationship between addition and subtraction. Understand subtraction as an unknown-addend problem. *For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.*
- ● 1.OA.C. 5: Add and subtract within 20. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- ● 1.OA.C.6: Add and subtract within 20. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).
- ● 1.OA.D.8: Work with addition and subtraction equations. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.*

- Mathematical Practices 1-8
    1. Make sense of problems and persevere in solving them.
    2. Reason abstractly and quantitatively.
    3. Construct viable arguments and critique the reasoning of others.
    4. Model with mathematics.
    5. Use appropriate tools strategically.
    6. Attend to precision.
    7. Look for and make use of structure.
    8. Look for and express regularity in repeated reasoning.
- Career Readiness, Life Literacies, and Key Skills Practices
    o CRP4. Demonstrate creativity and innovation.
    o CRP5. Utilize critical thinking to make sense of problems and persevere in solving them.
    o CRP9. Work productively in teams while using cultural/global competence.
- Career Readiness, Life Literacies, and Key Skills
    o 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.
    o 9.4.2.CT.2: Identify possible approaches and resources to execute a plan.
    o 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
    o 9.4.2.IML.2: Represent data in a visual format to tell a story about the data.
    o
- WIDA
    o ELD Standard 1: The Language of Social and Instructional Language
    o ELD Standard 3: The Language of Mathematics
- Computer Science and Design Thinking
    o 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.
    o 8.1.2.DA.3: Identify and describe patterns in data visualizations.
    o 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.8.2.2.E.4. Debug an algorithm (i.e., correct an error).

Essential Question(s)

- Topic 1: What are ways to think about addition and subtraction?
- Topic 2: What strategies can you use while adding and subtracting?
- Topic 3: What strategies can you use for adding to 20?
- Topic 4: What strategies can you use while subtracting?

Enduring Understandings

Topic 1
- Adding to is one interpretation of addition. Addition equations can be used to show add to addition situations.
- Putting two parts together to make a whole is one interpretation of addition. Addition equations can be used to show situations in which two parts are put together.
- Decomposing numbers can be used to solve addition word problems in which the total is known, but the parts are unknown. Addition equations can be used to show addition situations where both parts are unknown.
- Taking away one part from a whole is one interpretation of subtraction. Subtraction equations can be used to show subtraction situations in which one part is taken from the whole.

- Comparing two groups to find how many more objects are in one group than another group is one interpretation of subtraction. Subtraction equations can be used to show situations in which two quantities are compared.
- Comparing two groups to find how many fewer objects are in one group than another group is one interpretation of subtraction. Subtraction equations can be used to show situations in which two groups are compared.
- Finding a missing part of a whole is an interpretation of both addition and subtraction. Addition or subtraction equations can be used to show situations involving a missing part.
- Good math thinkers use math to explain why they are right. They can talk about the math that others do, too.

Topic 2:
- You can count on to find the sum for addition facts. A number line can help you count on.
- Doubles facts have the same number for both addends and can be used to solve problems involving real-world situations.
- Basic addition facts that are near doubles can be found using a related doubles fact.
- Facts with sums 6 through 10 can be broken into 5 plus some more.
- Two numbers can be added in any order and the sum will stay the same.
- You can count back to find the difference for subtraction facts. A number line can help you count back.
- Addition and subtraction have an inverse relationship. This relationship can be used to solve addition and subtraction facts; every subtraction fact has a related addition fact.
- Drawings and equations can help you solve different types of word problems.
- Good math thinkers look for patterns in math to help solve problems.

Topic 3:
- Students can solve an addition problem by using a number line to count on.
- Students can solve addition problems by counting on an open number line.
- Doubles facts have the same number for both addends and can be used to solve problems involving real-world situations.
- Basic addition facts that are near doubles can be found by using a related doubles fact.
- Some addition facts can be solved by changing them to an equivalent fact with 10.
- There are different ways to solve addition facts. Certain strategies may be easier to use for different facts.
- Objects, drawings, and equations can help you solve different types of word problems.
- Good math thinkers use math to explain why they are right. They can talk about the math that others do, too.

Topic 4:
- When using a number line to subtract, you can count back the number of spaces you are subtracting or find the distance between the two numbers.
- Some subtraction facts can be simplified by making use of the numbers' relationships to 10.
- The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has at least one related addition fact.
- There are different ways to solve subtraction facts. Certain strategies may be easier to use for different facts.
- Objects, drawings, and equations can help you solve different types of word problems.
- Good math thinkers know how to think about words and numbers to solve problems.

Interdisciplinary Connections

Activities to connect math with other disciplines from the enVision 2.0 resources:
- Language Arts (RF.1.1, RI.1.1, W.1.2)
    - Problem solving reading mats and activities (Source: Problem-Solving Reading Activity Guide)
    - Interactive math stories (Source: Teacher's Resource Masters)
    - Topic journal activities (Source: Teacher Manual)
- Science (1-LS3-1, 1-LS1-1, 1-ESS1-1, 1-ESS1-2)
    - Math and science project (Source: Teacher Manual)
    - Math and science activities (Source: Teacher's Resource Masters)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed.

	Check all that apply. **21ˢᵗ Century Themes**		*Check all that apply.* **21ˢᵗ Century Skills**
	Global Awareness		Creativity and Innovation
	Environmental Literacy	X	Critical Thinking and Problem Solving
	Health Literacy	X	Communication
	Civic Literacy	X	Collaboration
	Financial, Economic, Business, and Entrepreneurial Literacy		

Student Learning Targets/Objectives (Students will know/Students will understand)

- Topic 1
    Solve addition problems involving situations of adding one part to another part and putting two parts together.
    Solve addition word problems by breaking apart a total number of objects.
    Solve subtraction problems involving taking from a group.
    Solve subtraction problems that involve comparing to find out how many more objects or how many fewer objects are in one group than another group.
    Solve addition problems by finding a missing addend.
    Solve problems involving putting together or taking apart.
    Construct math arguments in order to solve addition and subtraction problems.
- Topic 2
    Add by counting on from a number.
    Use doubles to solve problems.
    Solve problems using near doubles facts.
    Use a ten-frame to solve addition facts with 5 and 10.
    Use the same addends to write two different equations with the same sum.
    Count back to solve subtraction problems.
    Use addition facts to 10 to solve subtraction problems.
    Solve word problems by drawing pictures and writing equations.
    Use structure and identify patterns in order to solve problems.

- Topic 3
  - Count on to add, using a number line.
  - Count on to add, using an open number line
  - Memorize doubles facts.
  - Use doubles facts to solve doubles-plus-one facts.
  - Use doubles facts to solve doubles-plus-two facts.
  - Make 10 to add numbers to 20.
  - Solve addition problems using different strategies.
  - Solve different types of addition word problems.
  - Critique the reasoning of others by using known information about addition and subtraction.
- Topic 4
  - Use a number line to subtract by counting on or counting back.
  - Make subtraction easier by making a 10 to subtract.
  - Count on to subtract using 10 as a landmark.
  - Make addition and subtraction facts using the same three numbers.
  - Use addition facts to find subtraction facts.
  - Explain strategies used to solve subtraction problems.
  - Solve different types of addition and subtraction problems with unknowns in different positions.
  - Use reasoning to write and solve number stories.

Assessments (Pre, Formative, Summative, Other)	*Denote required common assessments with an **

- Placement Test (Source: Assessment Book or online resources) - Pre-Assessment
- Review, "What You Know" (Source: Student Book at the beginning of each topic) - Pre-Assessment
- *Topic 1 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 2 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 3 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 4 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- Lesson Quick Checks (Source: Online resources) - Formative Assessment
- Quizzes (Source: ExamView, Standards Practice Workbook) - Formative Assessment
- Topics 1-4 Cumulative Benchmark Assessment (Source: Assessment Book or online resources) - Summative Assessment
- Student Self-Assessment Tool (Source: Teacher's Resource Masters, Vol. 2) - Alternative Assessment
- Evaluate student work using the Cognitive Rigor Matrix for Mathematics (Source: Assessment Book) - Alternative Assessment
- Portfolio Assessment of student work - Alternative Assessment

Teaching and Learning Activities	
Activities	enVision 2.0 lessons 1.1-1.9 enVision 2.0 lessons 2.1-2.10 enVision 2.0 lessons 3.1-3.10 enVision 2.0 lessons 4.1-4.9

Differentiation Strategies	- Reteaching Activities in Student Book - Leveled Center Games - Online Resources (today's challenge, accessible student edition of the text, games, another look activities and videos, reteaching activities) - Short Challenge Activities - Long Challenge Activities - Math Diagnosis and Intervention System - ELL Toolkit & ELL Activities within the Teacher Manual - Problem-Solving Reading Mats and Teacher Guide - [Differentiation Strategies for Special Education Students](#) - [Differentiation Strategies for Gifted and Talented Students](#) - [Differentiation Strategies for ELL Students](#) - [Differentiation Strategies for At Risk Students](#) - [Differentiation Strategies for Students with a 504](#)

Resources

- enVision 2.0 Resources
  - Student Book
  - Teacher Manual
  - Teacher Resource Guide
  - Assessment Book
  - Pearsonrealize.com (online platform)
    - Math Games
    - Digital Text
    - Math Videos
    - Virtual Manipulatives
    - Math Diagnosis and Intervention System
  - Problem-Solving Reading Mats & Teacher Guide
  - Center Games
  - ELL Toolkit & ELL Activities within the Teacher Manual
  - Standards Practice Workbook and Teacher Manual
  - ExamView
- Math Manipulatives
- WTPS Assessment Pack (Located in Google Drive Folder)
- Short Challenge Activities (Located in Google Drive Folder)
- Long Challenge Activities (Located in Google Drive Folder)

Grade Level & Content:	Grade 1 Mathematics
Unit Plan Title:	**Unit 2**: Addition and Subtraction, Represent and Interpret Data, Counting, and Place Value
Time Frame:	8 weeks (please see pacing calendar)

Anchor Standards/Domain*   *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10

Math:
- Operations and Algebraic Thinking
- Measurement and Data
- Numbers and Operations in Base Ten

Unit Summary

In this unit, students will focus on the understanding that the equal sign indicates that both sides of an equation represent the same value. They will determine whether the addition and subtraction sentences are true or false, and they will find the missing number in addition and subtraction equations. The associative property of addition is introduced as a way to group numbers flexibly to solve problems with three addends. Students are also introduced to the concept of data analysis involving up to three categories of data. Students collect, organize, and interpret data. Next, students will focus on counting to 120 by tens and ones, reading and writing numbers to 120, and representing a number of objects with a written numeral to 120. Finally, students will develop the concept of tens and ones, which is a key foundation of the base-ten number system.

Standard Number(s)

- 1.OA.A.1: Represent and solve problems involving addition and subtraction. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.A.2: Represent and solve problems involving addition and subtraction. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.B.3: Understand and apply properties of operations and the relationship between addition and subtraction. Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.) (Students need not use formal terms for these properties.)*
- 1.OA.D.7: Work with addition and subtraction equations. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
- 1.OA.D.8: Work with addition and subtraction equations. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.*
- 1.MD.C.4: Represent and interpret data. 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.
- 1.NBT.A.1: Extend the counting sequence. 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.

- 1.NBTB.2: Understand place value. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
    - 1. NBTB.2a: Understand place value. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones — called a "ten."
    - 1.NBTB.2b: Understand place value. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
    - 1.NBTB.2c: Understand place value. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 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).
- Mathematical Practices 1-8
    1. Make sense of problems and persevere in solving them.
    2. Reason abstractly and quantitatively.
    3. Construct viable arguments and critique the reasoning of others.
    4. Model with mathematics.
    5. Use appropriate tools strategically.
    6. Attend to precision.
    7. Look for and make use of structure.
    8. Look for and express regularity in repeated reasoning.
- Career Readiness, Life Literacies, and Key Skills Practices
    o CRP4. Demonstrate creativity and innovation.
    o CRP5. Utilize critical thinking to make sense of problems and persevere in solving them.
    o CRP9. Work productively in teams while using cultural/global competence.
- Career Readiness, Life Literacies, and Key Skills
    o 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.
    o 9.4.2.CT.2: Identify possible approaches and resources to execute a plan.
    o 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
    o 9.4.2.IML.2: Represent data in a visual format to tell a story about the data.
- WIDA
    o ELD Standard 1: The Language of Social and Instructional Language
    o ELD Standard 3: The Language of Mathematics
- Computer Science and Design Thinking
    o 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.
    o 8.1.2.DA.3: Identify and describe patterns in data visualizations.
    o 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

Essential Question(s)

- Topic 5: How can adding and subtracting help you solve or complete equations?
- Topic 6: What are some ways you can collect, show, and understand data?
- Topic 7: How can you use what you already know about counting to count past 100?
- Topic 8: How can you count and add using tens and ones?

Enduring Understandings

Topic 5
- Models and the relationship between addition and subtraction can be used to solve equations with an unknown part.
- An addition or a subtraction equation is true if the values on each side of the equal sign are the same.
- An addition or subtraction equation is false if the values on each side of the equal sign are not the same.
- Models, addition facts, and subtraction facts can be used to solve equations with an unknown part.
- Numbers can be grouped in different ways to solve word problems with three addends.
- Three numbers can be grouped and added in any order.
- Objects, drawings, diagrams, and equations can help you solve different types of word problems.

Topic 6:
- Tally charts are useful in recording and organizing some kinds of data.
- A picture graph uses pictures to show and organize data.
- Some problems can be solved by making, reading, and analyzing a tally chart or picture graph.
- Good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.

Topic 7:
- The decade numbers are built on groups of 10. The oral names are similar, but not the same as the number of tens counted.
- Counting forward by 1s to 120 follows the same place-value counting rules as counting forward by 1s to two-digit numbers.
- Counting and place-value patterns can be seen on a number chart.
- An open number line can be used to show counting by tens and ones.
- The number of objects in a group is determined by the last number said when they are counted. A written numeral represents the number of objects in a group. Counting objects by tens and then ones can help you count objects faster than counting by just ones.
- Good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.

Topic 8:
- Numbers can be used to tell how many. Numbers 11 through 19 can be shown as a group of 10 and up to 9 more; they can be written as a number word.
- The decade numbers to 100 are built on groups of ten. When there are only tens, counting by 10s can be used to find how many there are in all.
- When objects are grouped in sets of tens and leftovers (ones), counting the groups of tens and adding ones tell how many there are in all. Numbers can be used to tell how many. In a standard numeral, the tens are written to the left of the ones.
- A drawing can show how many tens and ones are in a number.
- Good math thinkers look for patterns in math to help solve problems.

Interdisciplinary Connections

Activities to connect math with other disciplines from the enVision 2.0 resources:
- Language Arts (RF.1.1, RI.1.1, W.1.2)
  - Problem solving reading mats and activities (Source: Problem-Solving Reading Activity Guide)
  - Interactive math stories (Source: Teacher's Resource Masters)
  - Topic journal activities (Source: Teacher Manual)
- Science (1-LS1-2, 1-PS4-4, 1-ESS1-2)
  - Math and science project (Source: Teacher Manual)
  - Math and science activities (Source: Teacher's Resource Masters)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed.

	Check all that apply. 21ˢᵗ Century Themes		*Check all that apply.* 21ˢᵗ Century Skills
	Global Awareness		Creativity and Innovation
	Environmental Literacy	X	Critical Thinking and Problem Solving
	Health Literacy	X	Communication
	Civic Literacy	X	Collaboration
	Financial, Economic, Business, and Entrepreneurial Literacy		

Student Learning Targets/Objectives (Students will know/Students will understand)

- Topic 5
  - Find the unknown number in an equation.
  - Determine if addition and subtraction equations are true or false.
  - Find the missing numbers in equations to make them true.
  - Use different strategies to solve word problems with three addends.
  - Use different strategies to add three numbers.
  - Solve word problems involving comparisons.
- Topic 6
  - Organize data into categories.
  - Collect and organize information using a picture graph.
  - Interpret organized data.
  - Use a picture graph to interpret data.
  - Use perseverance to solve problems about sets of data.
- Topic 7
  - Count by 1s and 10s to 120.
  - Count on a number chart to 120.
  - Find number patterns on a number chart.
  - Count to 120 using an open number line.
  - Write numerals to show how many objects are in a group.
  - Find better and faster ways to solve problems.

- Topic 8
  - Read and write numbers 11 to 19.
  - Show groups of 10 with connecting cubes.
  - Group tens to solve problems.
  - Count tens and ones to find a 2-digit number.
  - Use drawings to solve problems with tens and ones.
  - Use tens and ones to make numbers in different ways.

Assessments (Pre, Formative, Summative, Other)	*Denote required common assessments with an **

- Placement Test (Source: Assessment Book or online resources) - Pre-Assessment
- Review, "What You Know" (Source: Student Book at the beginning of each topic) - Pre-Assessment
- *Topic 5 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 6 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 7 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 8 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- Lesson Quick Checks (Source: Online resources) - Formative Assessment
- Quizzes (Source: ExamView, Standards Practice Workbook) - Formative Assessment
- *Topics 1-8 Cumulative Benchmark Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- Topics 1-8 Cumulative Benchmark Assessment (Source: online resources) - Summative Assessment
- Student Self-Assessment Tool (Source: Teacher's Resource Masters, Vol. 2) - Alternative Assessment
- Evaluate student work using the Cognitive Rigor Matrix for Mathematics (Source: Assessment Book) - Alternative Assessment
- Portfolio Assessment of student work - Alternative Assessment

Teaching and Learning Activities	
Activities	enVision 2.0 lessons 5.1-5.7 enVision 2.0 lessons 6.1-6.5 enVision 2.0 lessons 7.1-7.7 enVision 2.0 lessons 8.1-8.6
Differentiation Strategies	- Reteaching Activities in Student Book - Leveled Center Games - Online Resources (today's challenge, accessible student edition of the text, games, another look activities and videos, reteaching activities) - Short Challenge Activities - Long Challenge Activities - Math Diagnosis and Intervention System - ELL Toolkit & ELL Activities within the Teacher Manual - Problem-Solving Reading Mats and Teacher Guide - Differentiation Strategies for Special Education Students - Differentiation Strategies for Gifted and Talented Students - Differentiation Strategies for ELL Students - Differentiation Strategies for At Risk Students - Differentiation Strategies for Students with a 504

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    - Digital Text
    - Math Videos
    - Virtual Manipulatives
    - Math Diagnosis and Intervention System
  - Problem-Solving Reading Mats & Teacher Guide
  - Center Games
  - ELL Toolkit & ELL Activities within the Teacher Manual
  - Standards Practice Workbook and Teacher Manual
  - ExamView
- Math Manipulatives
- WTPS Assessment Pack (Located in Google Drive Folder)
- Short Challenge Activities (Located in Google Drive Folder)
- Long Challenge Activities (Located in Google Drive Folder)

Grade Level & Content:	Grade 1 Mathematics
Unit Plan Title:	**_Unit 3_**: Compare Two-Digit Numbers, Adding Tens and Ones, Subtracting Tens, and Measuring Lengths
Time Frame:	8 weeks (please see pacing calendar)

Anchor Standards/Domain*   *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10

Math:
- Numbers and Operations in Base Ten
- Measurement and Data

Unit Summary

In this unit, students will use their understanding of place-value to compare 2-digit numbers. Students will then focus on adding a 2-digit number to a 1-digit number or a 2-digit number with the sum less than 100. Then, students will focus on subtracting multiples of 10 less than 100. Students will find answers using concrete models, drawings, properties of operations, the relationship between addition and subtraction, and strategies based on place-value. Written methods are related to strategies, with an expectation that students can explain the reasoning used. Finally, students will focus on length, one measurable attribute of an object. Students develop an understanding of length by comparing objects to determine which is shortest and longest. Students also measure the length of objects using nonstandard units.

Standard Number(s)

- 1.NBT.B.3: Understand place value. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
- 1.NBT.C.4: Use place value understanding and properties of operations to add and subtract. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base-ten blocks) 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 and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- 1.NBT.C.5: Use place value understanding and properties of operations to add and subtract. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- 1.NBT.C.6: Use place value understanding and properties of operations to add and subtract. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.
- 1.MD.A.1: Measure lengths indirectly and by iterating length units. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- 1.MD.A.2: Measure lengths indirectly and by iterating length units. 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. _Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps_.

- Mathematical Practices 1-8
  1. Make sense of problems and persevere in solving them.
  2. Reason abstractly and quantitatively.
  3. Construct viable arguments and critique the reasoning of others.
  4. Model with mathematics.
  5. Use appropriate tools strategically.
  6. Attend to precision.
  7. Look for and make use of structure.
  8. Look for and express regularity in repeated reasoning.
- Career Readiness, Life Literacies, and Key Skills Practices
  o CRP4. Demonstrate creativity and innovation.
  o CRP5. Utilize critical thinking to make sense of problems and persevere in solving them.
  o CRP9. Work productively in teams while using cultural/global competence.
- Career Readiness, Life Literacies, and Key Skills
  o 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.
  o 9.4.2.CT.2: Identify possible approaches and resources to execute a plan.
  o 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
  o 9.4.2.IML.2: Represent data in a visual format to tell a story about the data.
- WIDA
  o ELD Standard 1: The Language of Social and Instructional Language
  o ELD Standard 3: The Language of Mathematics
- Computer Science and Design Thinking
  o 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.
  o 8.1.2.DA.3: Identify and describe patterns in data visualizations.
  o 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

Essential Question(s)

- Topic 9:   What are ways to compare numbers to 120?
- Topic 10: What are ways to use tens and ones to add?
- Topic 11: How can I use what I know about subtraction to subtract tens?
- Topic 12: What are ways to measure how long an object is?

Enduring Understandings

Topic 9:
- one more, one less, 10 more, and 10 less, express a relationship between two numbers.
- Place-value relationships can be represented on a hundreds chart.
- For two two-digit numbers, the number with more 10s is greater. If the two numbers have an equal number of 10s, then the number with more ones is greater.
- For any two-digit number shown on a number line, the numbers to its left are less than the number and the numbers to its right are greater than the number.
- Good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.

Topic 10:
- Adding groups of 10 is similar to adding numbers less than 10.
- When adding tens to a two-digit number, the 10s digit changes. The ones digit remains unchanged.
- When a two-digit number is added to a one-digit number, the ones are added to the ones. When a two-digit number is added to a multiple of ten, the tens are added to the ones.
- When a two-digit number is added to a one-digit number, the ones are added to the ones and sometimes it is necessary to compose a ten. The tens are added to the tens.
- You can use different strategies to solve addition problems.
- Good math thinkers use math they know to show and solve problems.

Topic 11:
- Subtracting a multiple of 10 from another multiple of 10 is similar to subtracting numbers less than 10.
- Subtracting multiples of 10 is like counting back by 10s. You can show how to subtract a multiple of 10 from another multiple of 10 on a hundreds chart or open-number-line.
- Addition and subtraction have an inverse relationship. This relationship can be used to solve addition and subtraction equations; every subtraction equation has a related addition equation.
- When subtracting 10s from a two-digit number, the 10s digit changes. The ones-digit remains unchanged.
- You can use different strategies to solve subtraction problems.
- Good math thinkers use math they know to show and solve problems.

Topic 12:
- Objects can be compared and ordered by length.
- Two objects can be compared indirectly by comparing both to a third object.
- Measurement is a process of comparing a unit to the object being measured. The length of any object can be used as a measurement unit for length.
- Objects can be measured to compare and order their lengths and heights.
- Good math thinkers know how to pick the right tools to solve math problems.

Interdisciplinary Connections

Activities to connect math with other disciplines from the enVision 2.0 resources:
- Language Arts (RF.1.1, RI.1.1, W.1.2)
  - Problem solving reading mats and activities (Source: Problem-Solving Reading Activity Guide)
  - Interactive math stories (Source: Teacher's Resource Masters)
  - Topic journal activities (Source: Teacher Manual)
- Science (1-PS4-2, 1-PS4-3, 1-LS1-1, 1-ESS1-1)
  - Math and science project (Source: Teacher Manual)
  - Math and science activities (Source: Teacher's Resource Masters)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed.

Check all that apply. **21ˢᵗ Century Themes**		*Check all that apply.* **21ˢᵗ Century Skills**	
	Global Awareness		Creativity and Innovation
	Environmental Literacy	X	Critical Thinking and Problem Solving
	Health Literacy	X	Communication
	Civic Literacy	X	Collaboration
	Financial, Economic, Business, and Entrepreneurial Literacy		

Student Learning Targets/Objectives (Students will know/Students will understand)

- Topic 9
    - Find numbers that are more or less than a given number.
    - Use a hundreds chart to find one more, one less, and 10 more, or 10 less.
    - Use place-value blocks to compare two two-digit numbers.
    - Compare two numbers using a greater than, a less than, or an equal to sign.
    - Compare and write two-digit numbers that are greater than or less than other two-digit numbers.
    - Make sense of a problem and find the best way to solve it.
- Topic 10
    - Add two multiples of 10.
    - Use mental math to add tens to two-digit numbers.
    - Use a hundred chart to add 10s and ones.
    - Use a number line to solve addition problems.
    - Solve addition problems by using different strategies, including blocks or drawings.
    - Make a ten to help solve addition problems.
    - Add two two-digit numbers.
    - Model and solve problems by drawing a picture and writing an equation.
- Topic 11
    - Use models to subtract tens.
    - Use a hundreds chart to subtract a multiple of 10 from another multiple of 10.
    - Use an open number line to solve subtraction problems.
    - Use addition to subtract tens.
    - Use mental math to subtract ten from a two-digit number.
    - Use different strategies to subtract.
    - Model thinking to solve problems.
- Topic 12
    - Order objects by length.
    - Indirectly compare objects by length.
    - Use objects to measure length.
    - Use cubes and other units to compare lengths and heights of objects.
    - Choose an appropriate tool and use it to measure a given object.

Assessments (Pre, Formative, Summative, Other)	*Denote required common assessments with an **

- Placement Test (Source: Assessment Book or online resources) - Pre-Assessment
- Review, "What You Know" (Source: Student Book at the beginning of each topic) - Pre-Assessment
- *Topic 9 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 10 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 11 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 12 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- Lesson Quick Checks (Source: Online resources) - Formative Assessment
- Quizzes (Source: ExamView, Standards Practice Workbook) - Formative Assessment
- Topics 1-12 Cumulative Benchmark Assessment (Source: Assessment Book or online resources) - Summative Assessment
- Student Self-Assessment Tool (Source: Teacher's Resource Masters, Vol. 2) - Alternative Assessment
- Evaluate student work using the Cognitive Rigor Matrix for Mathematics (Source: Assessment Book) - Alternative Assessment
- Portfolio Assessment of student work - Alternative Assessment

Teaching and Learning Activities	
Activities	enVision 2.0 lessons 9.1-9.6 enVision 2.0 lessons 10.1-10.9 enVision 2.0 lessons 11.1-11.7 enVision 2.0 lessons 12.1-12.5
Differentiation Strategies	- Reteaching Activities in Student Book - Leveled Center Games - Online Resources (today's challenge, accessible student edition of the text, games, another look activities and videos, reteaching activities) - Short Challenge Activities - Long Challenge Activities - Math Diagnosis and Intervention System - ELL Toolkit & ELL Activities within the Teacher Manual - Problem-Solving Reading Mats and Teacher Guide - Differentiation Strategies for Special Education Students - Differentiation Strategies for Gifted and Talented Students - Differentiation Strategies for ELL Students - Differentiation Strategies for At Risk Students - Differentiation Strategies for Students with a 504

Resources
- enVision 2.0 Resources   - Student Book   - Teacher Manual   - Teacher Resource Guide   - Assessment Book   - Pearsonrealize.com (online platform)   - Math Games   - Digital Text   - Math Videos   - Virtual Manipulatives   - Math Diagnosis and Intervention System   - Problem-Solving Reading Mats & Teacher Guide   - Center Games   - ELL Toolkit & ELL Activities within the Teacher Manual   - Standards Practice Workbook and Teacher Manual   - ExamView   - Math Manipulatives   - WTPS Assessment Pack (Located in Google Drive Folder)   - Short Challenge Activities (Located in Google Drive Folder)   - Long Challenge Activities (Located in Google Drive Folder)

Grade Level & Content:	Grade 1 Mathematics
Unit Plan Title:	**Unit 4**: Time, Geometry, and Exposure to Money
Time Frame:	8 weeks (please see pacing calendar)

Anchor Standards/Domain*   *i.e: ELA: reading, writing i.e.: Math: Number and Operations in Base 10

Math:
- Measurement and Data
- Geometry

Unit Summary

 In this unit, students will learn how to tell time to the hour and half hour using digital and analog clocks. Students will also gain a deeper understanding of the defining and non-defining attributes of two-dimensional shapes. Students will put various shapes together to create composite shapes. Finally, students will partition circles and rectangles into 2 or 4 equal shares to build a conceptual foundation for fractions.

Standard Number(s)

- 1.MD.B.3: Tell and write time. Tell and write time in hours and half-hours using analog and digital clocks.
- 1.G.A.1: Reason with shapes and their attributes. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
- 1.G.A.2: Reason with shapes and their attributes. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
- 1.G.A.3: Reason with shapes and their attributes. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *f ourths*, and *quarters*, and use the phrases *half of*, *f ourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand, for these examples, that decomposing into more equal shares creates smaller shares.
- Mathematical Practices 1-8
    1. Make sense of problems and persevere in solving them.
    2. Reason abstractly and quantitatively.
    3. Construct viable arguments and critique the reasoning of others.
    4. Model with mathematics.
    5. Use appropriate tools strategically.
    6. Attend to precision.
    7. Look for and make use of structure.
    8. Look for and express regularity in repeated reasoning.
- Career Readiness, Life Literacies, and Key Skills Practices
    o CRP4. Demonstrate creativity and innovation.
    o CRP5. Utilize critical thinking to make sense of problems and persevere in solving them.
    o CRP9. Work productively in teams while using cultural/global competence.
- Career Readiness, Life Literacies, and Key Skills
    o 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives.
    o 9.4.2.CT.2: Identify possible approaches and resources to execute a plan.
    o 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
    o 9.4.2.IML.2: Represent data in a visual format to tell a story about the data.

- Personal Financial Literacy
  - 9.1.2. FI.1: Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).
- WIDA
  - ELD Standard 1: The Language of Social and Instructional Language
  - ELD Standard 3: The Language of Mathematics
- Computer Science and Design Thinking
  - 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.
  - 8.1.2.DA.3: Identify and describe patterns in data visualizations.
  - 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

Essential Question(s)

- Topic 13: What are different ways to tell time?
- Topic 14: How can you define shapes and compose new shapes?
- Topic 15: What are some different names for equal shares?

Enduring Understandings

Topic 13:
- The hour hand tells the hour, and the minute hand tells the number of minutes, before or after the hour when telling time on a clock.
- Time to the hour can be shown on an analog clock or on a digital clock and can be written in two ways: ___ o'clock or ___:00.
- Time can be given to the half hour.
- Good math thinkers know how to think about words and numbers to solve problems.

Topic 14:
- Two-dimensional shapes have attributes that define them and make them different from one another.
- These properties can be used to create shapes.
- Two-dimensional shapes can be combined to make new two-dimensional shapes.
- Three-dimensional shapes have attributes that define them and make them different from one another.
- Three-dimensional shapes can be combined to form other three-dimensional shapes or the shapes of common, everyday objects.
- Good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.

Topic 15:
- A shape can be divided into equal-sized shares in different ways.
- Shapes can be divided into equal parts called halves and quarters, or fourths.
- When dividing a whole into equal pieces, the smaller the pieces, the greater the number of pieces; the larger the pieces, the fewer the number of pieces.
- Good math thinkers use math they know to show and solve problems.

Interdisciplinary Connections

Activities to connect math with other disciplines from the enVision 2.0 resources:
- Language Arts (RF.1.1, RI.1.1, W.1.2)
    - Problem solving reading mats and activities (Source: Problem-Solving Reading Activity Guide)
    - Interactive math stories (Source: Teacher's Resource Masters)
    - Topic journal activities (Source: Teacher Manual)
- Science (1-PS4-1)
    - Math and science project (Source: Teacher Manual)
    - Math and science activities (Source: Teacher's Resource Masters)

In this unit plan, the following 21ˢᵗ Century themes and skills are addressed.

Check all that apply. **21ˢᵗ Century Themes**		*Check all that apply.* **21ˢᵗ Century Skills**	
	Global Awareness		Creativity and Innovation
	Environmental Literacy	X	Critical Thinking and Problem Solving
	Health Literacy	X	Communication
	Civic Literacy	X	Collaboration
	Financial, Economic, Business, and Entrepreneurial Literacy		

Student Learning Targets/Objectives (Students will know/Students will understand)

- Topic 13
    - Tell time to the hour.
    - Tell time to the hour using analog and digital clocks.
    - Tell time to the half hour.
    - Use reasoning to tell and write time.
- Topic 14
    - Use attributes to match shapes.
    - Define 2-D shapes by their attributes.
    - Use materials to build and draw 2-D shapes.
    - Combine 2-D shapes to make another 2-D shape.
    - Define 3-D shapes by their number of edges, vertices, faces, or flat surfaces.
    - Choose defining attributes of 3-D shapes.
    - Combine 3-D shapes to make another 3-D shape.
    - Find differences among various shapes.
- Topic 15
    - Determine whether shapes are divided into equal shares.
    - Divide shapes into 2 and 4 equal shares and use words to describe those shares.
    - Understand that more equal shares of the same whole create smaller shares.
    - Make a drawing or a diagram to show a problem about equal shares.

Assessments (Pre, Formative, Summative, Other)	*Denote required common assessments with an **

- Placement Test (Source: Assessment Book or online resources) - Pre-Assessment
- Review, "What You Know" (Source: Student Book at the beginning of each topic) - Pre-Assessment
- *Topic 13 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- *Topic 14 Assessment (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- Topic 15 Assessment (Source: Assessment Book or online resources) - Summative Assessment
- Lesson Quick Checks (Source: Online resources) - Formative Assessment
- Topics 1-15 Cumulative Benchmark Assessment (Source: Assessment Book or online resources) - Summative Assessment
- Quizzes (Source: ExamView, Standards Practice Workbook) - Formative Assessment
- *End of Year Test (Source: WTPS Assessment Pack in Google Folder) - Summative Assessment
- End of Year Test (Source: Online resources) - Summative Assessment
- Student Self-Assessment Tool (Source: Teacher's Resource Masters, Vol. 2) - Alternative Assessment
- Evaluate student work using the Cognitive Rigor Matrix for Mathematics (Source: Assessment Book) - Alternative Assessment
- Portfolio Assessment of student work - Alternative Assessment

	Teaching and Learning Activities
Activities	enVision 2.0 lessons 13.1-13.4 enVision 2.0 lessons 14.1-14.9 enVision 2.0 lessons 15.1-15.4 **Lesson 13.2 - Supplement Activity (Located in the Google Drive Folder)** **Lesson 13.3 - Supplement Activity (Located in the Google Drive Folder)** **Lesson 13.4 - Supplement Activity (Located in the Google Drive Folder)** **Money Pages & Packet (Located in the Google Drive Folder)**
Differentiation Strategies	- Reteaching Activities in Student Book - Leveled Center Games - Online Resources (today's challenge, accessible student edition of the text, games, another look activities and videos, reteaching activities) - Short Challenge Activities - Long Challenge Activities - Math Diagnosis and Intervention System - ELL Toolkit & ELL Activities within the Teacher Manual - Problem-Solving Reading Mats and Teacher Guide - [Differentiation Strategies for Special Education Students](#) - [Differentiation Strategies for Gifted and Talented Students](#) - [Differentiation Strategies for ELL Students](#) - [Differentiation Strategies for At Risk Students](#) - [Differentiation Strategies for Students with a 504](#)

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