TOWNSHIP OF UNION PUBLIC SCHOOLS

Grade 2 Mathematics

Adopted Month Day, Year

Mission Statement

The mission of the Township of Union Public Schools is to build on the foundations of honesty, excellence, integrity, strong family, and community partnerships. We promote a supportive learning environment where every student is challenged, inspired, empowered, and respected as diverse learners. Through cultivation of students' intellectual curiosity, skills and knowledge, our students can achieve academically and socially, and contribute as responsible and productive citizens of our global community.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Unit 1 - Module A

Unit Title: Mathematics Place Value and Three Digit Addition and Subtraction Strategies – Unit 1 – Module A

Grade level: Grade 2
Timeframe: Marking Period 1

Rationale

Grade 2 – Place Value and Three Digit Addition and Subtraction Strategies – Unit 1

The primary focus of Unit 1 is building place value understanding for three digit numbers and working with numbers within 1000. Learners extend the counting sequence mastered in grade 1 to count within 1000. Learners build place value understanding for three digit numbers, understanding that the three digits represent amounts of hundreds, tens, and ones.

Building upon grade 1 work adding within 100 using concrete models, drawings, and strategies, grade 2 learners use addition and subtraction within 100 to solve both one- and two-step word problems for a variety of situations. They use concrete models and drawings to develop conceptual understanding of addition and subtraction within 1000. The unit concludes as learners begin to explain why addition and subtraction strategies work, and pursue fluency for addition and subtraction within 20 using mental strategies.

Essential Questions

Standards

Standards (Taught and Assessed):

2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.
2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.

a. 100 can be thought of as a bundle of ten tens — called a "hundred."
b. 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).

2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.

2.NBT.A.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

- Self-Awareness
- Self-Management
- Social Awareness
- Relationship Skills
- Responsible Decision-Making

Instructional Plan

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
2.NBT.A.2 – WALT count within ~~1000~~ 100	• *Recall and apply number sequence*	*Use hundreds chart with missing numbers*	*Hundreds chart (counting by ones within the chart)* *Around the World Counting Game* *Highlighting counting by 10's columns on a hundreds chart* *Highlighting by 5's boxes on a hundreds chart* *Using manipulatives (snap cubes, legos, pennies, cereal, beans, etc.) in groups of 5 and 10 to make a connection to the numbers highlighted on a hundreds chart* *Practice skip counting by 10's and 5's using hands and feet* *Use jumps on a number line or make a beaded number line*	• *General and Special Education teachers will work together to provide students with the support they need as written in their individualized education plan*
2.NBT.A.2 – WALT skip count by tens	• *Recognize and apply number patterns*	*Color in boxes counting by 10's on a hundreds chart*		
2.NBT.A.2 – WALT skip count by fives	• *Recognize and apply number patterns*	*Color in boxes counting by 5's on a hundreds chart*		
2.NBT.A.3 – WALT read numbers to ~~1000~~	• *Recall the value of a digit based upon a place*	*Roll a die 2x to create a 2-digit*	• *Practice connecting a digit's place in a 2-digit*	

100 using base-ten numerals	*in a number*	*number - read number aloud, write in standard, expanded, and word form.*	*number to its value (highlighted or underlined digit)* • *Draw base-ten blocks to represent a 2 digit number - practice writing values of each digit as an addition sentence (expanded form)* • *Utilize number spellings reference sheet to assist in a 2-digit # being written in word form*	
2.NBT.A.3 – WALT write numbers to ~~1000~~ 100 using base-ten numerals	• *Recall the value of a digit based upon a place in a number and transfer the values into a number sentence*			
2.NBT.A.1 – WALT a three-digit number is made up of hundreds, tens, and ones	• *Recall that the first number in a 3-digit number is the hundreds place, the second number is the tens place, and the third number is the ones place*	*Exit ticket-Write how many hundreds, tens, and ones for a given three-digit number*	*Utilize base ten blocks to model numbers as hundreds, tens, and ones in a chart* *Draw hundreds, tens, and ones to model three-digit numbers* *Use a graphic organizer to show the value of a number in different ways (example: 452 can be shown as 4 hundreds, 5 tens, and 2 ones or as 45 tens and 2 ones)*	
2.NBT.A.1 – WALT the three digits of a three-digit number represent amounts of hundreds, amounts of tens, and amounts of ones	• *Demonstrate that the first number in a 3-digit number represents a group of hundreds, the second number represents a group of tens, and the third number represents a group of ones*	*Exit ticket: Draw the hundreds, tens, and ones of a given three-digit number* *Exit ticket: Give students two ways to represent a three-digit number; students have to explain why the two ways show the same number*		
2.NBT.A.1 – WALT 100 is a bundle of ten tens called a "hundred"	• *Recall and apply number pattern knowledge to recognize that each group of 10 tens is equivalent to 100*	*Exit ticket: Circle tens blocks to show a hundred*	*Use manipulatives to model ten of the ten sticks and one hundreds block to show that ten tens equal one hundred*	
2.NBT.A.1 – WALT the numbers 100, 200, 300, 400, 500, 600,	• *Recognize that a three-digit number can represent a group of*	*Exit ticket: Have students highlight the digit that increases*	*Model three-digit numbers in expanded form to show the value of the hundreds, tens, and ones*	

700, 800, and 900 refer to 1, 2, 3, 4, 5, 6, 7, 8, or 9 hundreds (and 0 tens and 0 ones)	*hundreds*	*in the hundreds place; represent a group of 100 in expanded form*		
2.NBT.A.2 – WALT skip count by hundreds	• *Recognize and apply number patterns*	*Continue a list of numbers counting by hundreds*	*Use a number line to show the addition of hundreds as an increase in the hundreds place only*	
2.NBT.A.3 – WALT read numbers to 1000 using expanded form	• *Recall the value of a digit based upon a place in a number*	*Roll a die 3x to create a 3-digit number - read number aloud, write in standard, expanded, and word form.*	• *Model with manipulatives, draw, and write numbers to make it easier to read three-digit numbers in expanded form* • *Use online base-ten blocks* • *Make place value "snakes" out of egg cartons. Play a game of naming a 3-digit number and have students place some type of marker in each place to represent the 3-digit number* • *Use a graphic organizer to show ways to make a number (example: standard form, word form, expanded form, and drawing base ten blocks)*	
2.NBT.A.3– WALT write numbers to 1000 using expanded form	• *Recall the value of a digit based upon a place in a number and transfer the values into a number sentence*			
2.NBT.A.4 – WALT compare two three-digit numbers using place value understanding and record the results	• *Solve problems involving number comparisons by utilizing knowledge of place value*	*Determine if comparison sentences are true or false*	*Use a YouTube video to model alligator strategy for greater than and less than* *Compare numbers using the symbols >, >, = after learning the alligator strategy* *Model/draw the value of each*	

using the symbols >, =, <			*digit in each number one under the other to compare starting with the greatest place value position* *Encourage verbal explanations of the comparisons (example: 550 is greater than 325 because 5 hundreds is greater than 3 hundreds)* *War Game: Partners use three-digit number cards to compare the values of numbers (greater number wins)*	

Benchmark Assessment 1

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
	Modifications per students' IEP

Benchmark Assessment 2

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
	Modifications per students' IEP

Summative Assessments (add rows as needed)

Summative Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
	Modifications per students' IEP

Interdisciplinary Connections

Interdisciplinary Connections	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
	Modifications per students' IEP

Unit 1 - Module B

Unit Title: Mathematics Place Value and Three Digit Addition and Subtraction Strategies – Unit 1 – Module B

Grade level: Grade 2
Timeframe: Marking Period 1

Rationale

Grade 2 – Place Value and Three Digit Addition and Subtraction Strategies – Unit 1

The primary focus of Unit 1 is building place value understanding for three digit numbers and working with numbers within 1000. Learners extend the counting sequence mastered in grade 1 to count within 1000. Learners build place value understanding for three digit numbers, understanding that the three digits represent amounts of hundreds, tens, and ones.

Building upon grade 1 work adding within 100 using concrete models, drawings, and strategies, grade 2 learners use addition and subtraction within 100 to solve both one- and two-step word problems for a variety of situations. They use concrete models and drawings to develop conceptual understanding of addition and subtraction within 1000. The unit concludes as learners begin to explain why addition and subtraction strategies work, and pursue fluency for addition and subtraction within 20 using mental strategies

Essential Questions

Standards

Standards (Taught and Assessed):

2.OA.A.1 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.

2.NBT.B.7 Add and subtract within 1000, 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.

2.NBT.B.8 Mentally add 10 or 100 to a given number 100 – 900, and mentally subtract 10 or 100 from a given number 100 – 900.

2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operation.

2.OA.B.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

- Self-Awareness
- Self-Management
- Social Awareness
- Relationship Skills
- Responsible Decision-Making

Instructional Plan

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
2.OA.A.1 – WALT represent a word problem with drawings and equations using a symbol for the unknown	• *Assess information in a word problem, decide what question is to be solved, and develop a plan for finding a solution*	• *Exit ticket: Have students draw to solve solve word problems*	*Students create their own addition and subtraction word problems and model solving the problems by drawing a picture and writing a number sentence*	• *General and Special Education teachers will work together to provide students with the support they need as written in their individualized education plan*
2.OA.A.1 – WALT solve one and two-step addition and subtraction word problems within 20 involving situations of adding to, taking from, putting together, taking apart, and comparing	• *Recognize which operation to utilize in order to solve word problems based on knowledge of key vocabulary found in the problem*	• *Operation-key vocabulary matching worksheet* • *Exit ticket - solve problem using C.U.B.E.S strategy*	*Practice identifying key vocabulary words in order to identify which operation to utilize in order to solve a word problem* *Provide students with an anchor chart with key vocabulary listed for each operation* *Utilize the C.U.B.E.S. strategy to solve word problems (Circle numbers, Underline the question, Box in key words, Examine the information, Solve the problem)*	
2.NBT.B.7 – WALT when adding and subtracting three-digit numbers, only digits in the	• *Apply knowledge of place value based on the understanding of hundreds, tens, and ones representing*	• *Exit ticket: Solve problems with regrouping*	*Students practice lining up the 2 three-digit numbers in a hundreds, tens, and one T-Chart to help understand that only numbers in the same column can be added or subtracted*	

same place value can be added or subtracted to or from each other	*different values*			
2.NBT.B.7 – WALT when adding and subtracting three-digit numbers, sometimes it is necessary to compose or decompose tens and/or hundreds	• *Develop an understanding of when regrouping is required in an addition or subtraction problem*	• *Student/teacher conferencing: student explains in words whether regrouping is needed and why/why not* • *Students create individual anchor charts that model when to regroup and how*	*Through the use of base ten blocks or drawings, students correlate 10 ones creating a new group of 10 when adding the ones place, as well as a group of 10 tens creating a new group of 100 when adding the tens place* *Through the use of base ten blocks or drawings, students represent the larger of two 3-digit numbers as the top number in a subtraction problem* *Through the use of base ten blocks or drawings, students practice identifying a smaller digit on the bottom in the ones and/or tens place, which then requires regrouping* *Create anchor charts modeling each step of regrouping in both addition and subtraction* *Provide checklist for solving subtraction problems with regrouping* *Use the following poem:* *If there is more on top, that means stop. If there is more on the floor, go next door.*	
2.NBT.B.7 – WALT use concrete models and a place value strategy to add and subtract within 1000, and relate the written strategy to the model	• *Solve problems by quickly using manipulatives or drawing pictures to solve problems* • *Explain how the manipulatives or pictures show the math needed to solve the problem*	• *ECR in which students model, solve, and explain in written word*	*Demonstrate regrouping using base ten blocks and drawings to model how to solve problems* *Utilize the Go Math Interactive Lessons to model regrouping*	

2.NBT.B.7 – WALT use drawings and a place value strategy to add and subtract within 1000, and relate the written strategy to the drawing	• *Apply model reasoning to standard algorithm*			
2.NBT.B.7 – WALT use concrete models and a strategy based on properties of operations and/or the relationship between addition and subtraction to add and subtract within 1000, and relate the written strategy to the model		• *Have students model or draw how to solve a subtraction problem and then use addition to check their work*		
2.NBT.B.7 – WALT use drawings and a strategy based on properties of operations and/or the relationship between addition and subtraction to add and subtract within 1000, and relate the written strategy to the				

drawing				
2.NBT.B.8 – WALT mentally add or subtract 10 to or from any given number between 100 and 900	• *Apply knowledge of number patterns to mentally add or subtract a digit from the tens place*	• *Give students a number and have them provide the number for 10 more or 10 less*	*Practice addition and subtraction of tens with games* *Practice adding or subtracting 10 by continuing a list of numbers (e.g. 12, 22)*	
2.NBT.B.8 – WALT mentally add or subtract 100 to or from any given number between 100 and 900	• *Apply knowledge of number patterns to mentally add or subtract a digit from the hundreds place*	• *Give students a number and have them provide the number for 100 more or 100 less*	*Practice addition and subtraction of hundreds with games* *Practice adding or subtracting 100 by continuing a list of numbers (e.g. 200, 300)*	
2.NBT.B.9 – WALT explain why addition and subtraction strategies work based on place value	• *Apply understanding of place value to explain what they are doing during each step of an addition or subtraction problem*	• *Student/teacher conferencing*	• *Use ECR's to practice explaining how to solve a given problem* • *Peer Partner "Turn and Talk"*	
2.NBT.B.9 – WALT explain why addition and subtraction strategies work based on properties of operations	• *Apply understanding of the part/part/whole concept through drawings, equations, or written explanation*	• *Exit ticket: Students solve a problem by filling in bar model*	*Use a Bar Model to model and solve addition and subtraction problems based on Part, Part, Whole*	
2.OA.B.2 – WALT know from memory all sums of two one-digit	• *Utilize mental math strategies within 10 to memorize sums*	• *Quiz students using flashcards or timed interactive fact game*	*Practice addition and subtraction facts using flash cards or Xtra Math online* https://xtramath.org/#/home/index *Fact Champ game*	

numbers within ten				
2.OA.B.2 add and subtract within 20 using mental strategies, working towards accuracy and efficiency	• *Utilize mental math strategies within 20 to memorize sums*	• *Quiz students using flashcards or timed interactive fact game*	*Practice addition and subtraction facts using flash cards or Xtra Math online https://xtramath.org/#/home/index* *Fact Champ game*	

Benchmark Assessment 1

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
	Modifications per IEPs

Benchmark Assessment 2

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
	Modifications per IEPs

Summative Assessments (add rows as needed)

Summative Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
	Modifications per IEPs

Interdisciplinary Connections

Interdisciplinary Connections	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
	Modifications per IEPs