DEPARTMENT : Mathematics COURSE : Grade 2

## Curriculum Development Timeline

**School:** Township of Ocean Elementary Schools

**Course:** Mathematics, Grade 2

**Department:** Mathematics

| Board Approval | Supervisor | Notes |
|---|---|---|
| August 2006 | Justine Salvo | Born Date |
| November 2011 | Christine Picerno | Revisions |
| December 2017 | Christine Picerno | Revisions |
| March 2019 | Christine Picerno | Review |
| August 2025 | Rich Steckhahn | Alignment to Standards & Revisions |

# Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

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DEPARTMENT : Mathematics COURSE : Grade 2

| Township of Ocean Pacing Guide | | | | | |
|---|---|---|---|---|---|
| **Week** | **Marking Period 1** | **Week** | **Marking Period 2** | **Week** | **Marking Period 3** |
| 1 | EnVision Topic 1 | 14 | EnVision Topic 6 | 28 | EnVision Topic 11 |
| 2 | EnVision Topic 1 | 15 | EnVision Topic 6 | 29 | EnVision Topic 12 |
| 3 | EnVision Topic 1 | 16 | EnVision Topic 7 | 30 | EnVision Topic 12 |
| 4 | EnVision Topic 2 | 17 | EnVision Topic 7 | 31 | EnVision Topic 12 |
| 5 | EnVision Topic 2 | 18 | EnVision Topic 7 | 32 | EnVision Topic 13 |
| 6 | EnVision Topic 3 | 19 | EnVision Topic 8 | 33 | EnVision Topic 13 |
| 7 | EnVision Topic 3 | 20 | EnVision Topic 8 | 34 | EnVision Topic 14 |
| 8 | EnVision Topic 4 | 21 | EnVision Topic 8 | 35 | EnVision Topic 14 |
| 9 | EnVision Topic 4 | 22 | EnVision Topic 9 | 36 | EnVision Topic 15 |
| 10 | EnVision Topic 4 | 23 | EnVision Topic 9 | 37 | EnVision Topic 15 |
| 11 | EnVision Topic 5 | 24 | EnVision Topic 9 | 38 | EnVision Stepping Up to Grade 3 |
| 12 | EnVision Topic 5 | 25 | EnVision Topic 10 | 39 | EnVision Stepping Up to Grade 3 |
| 13 | EnVision Topic 5 | 26 | EnVision Topic 10 | 40 | EnVision Stepping Up to Grade 3 |
| | | 27 | EnVision Topic 11 | | |

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DEPARTMENT : Mathematics COURSE : Grade 2

| Core Instructional & Supplemental Materials including various levels of Texts |
|---|
| EnVisions Mathematics 2024 Common Core Grade 1; IXL; Reflex Math |

| Time Frame | 7 weeks |
|---|---|

## Topic

Operations and Algebraic Thinking

## Alignment to Standards

**2.OA.A - Represent and solve problems involving addition and subtraction**
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.OA.B - Add and subtract within 20**
2. With accuracy and efficiency, add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

**2.OA.C - Work with equal groups of objects to gain foundations for multiplication**
3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

## Learning Objectives and Activities

***Students will be able to…***

- Add within 100 to solve one-step word problems.
- Add within 100 to solve two-step word problems.
- Subtract within 100 to solve one-step word.
- Subtract within 200 to solve two-step word problems.
- Determine the unknown whole number in an equation relating four or more whole numbers.
- Fluently add within 20 using mental strategies.
- Fluently subtract within 20 using mental strategies.

DEPARTMENT : Mathematics COURSE : Grade 2

- Work with even and odd numbers.
- Write an equation to express an even number as a sum of two equal addends.
- Use addition to find the total number of objects arranged in rectangular arrays.

***Activities***

| Core Instructional Resource | | |
|---|---|---|
| **Standard** | **EnVision Topic** | **EnVision Lesson** |
| 2.OA.A.1 | 1 - Fluently Add and Subtract Within 20 | 9, 10 |
| | 3 - Add Within 100 Using Strategies | 6 |
| | 4 - Fluently Add Within 100 | 8 |
| | 5 - Subtract Within 100 Using Strategies | 7 |
| | 6 - Fluently Subtract Within 100 | 6, 7 |
| | 7 - More Solving Problems Involving Addition and Subtraction | 1, 2, 3, 4, 5, 8 |
| 2.OA.B.2 | 1 - Fluently Add and Subtract Within 20 | 1, 2, 3, 4, 5, 6, 7, 8 |
| 2.OA.C.3 | 2 - Work with Equal Groups | 1, 2 |
| 2.OA.C.4 | 2 - Work with Equal Groups | 3, 4, 5 |

## Assessments

**Diagnostic**

- Beginning of Year Readiness Test
- MDIS Diagnostic Assessment
- Topic Review What You Know
- IXL Diagnostic Assessment

**Formative**

- Convince Me! Prompt (embedded)
- Guided Practice (embedded)
- Lesson Quick Check

**Summative**

- Topic Assessment

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DEPARTMENT : Mathematics COURSE : Grade 2

- Topic Performance Task
- EnVision Cumulative / Benchmark Assessment
- EnVision Progress Monitoring Assessment
- Gr. 2 Math Linkit! NJSLS Form A, Form B, Form C

## Interdisciplinary Connections

## Career Readiness, Life Literacies, and Key Skills

## Technology Integration

- **9.4.2.CT.2**: Identify possible approaches and resources to execute a plan.
- **9.4.2.CT.3**: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

## Career Education

- **CRP2.** Apply appropriate academic and technical skills.
- **CRP4.** Communicate clearly and effectively and with reason.
- **CRP8**. Utilize critical thinking to make sense of problems and persevere in solving them.

| Time Frame | 11 weeks |
|---|---|

## Topic

Number and Operations in Base Ten

## Alignment to Standards

**2.NBT.A - Understand place value**

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. Understand the following as special cases:
   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. Count within 1000; skip-count by 5s, 10s, and 100s.

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

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.

**2.NBT.B - Use place value understanding and properties of operations to add and subtract**

5. With accuracy and efficiency, add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

6. Add up to four two-digit numbers using strategies based on place value and properties of operations.

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.

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

9. Explain why addition and subtraction strategies work, using place value and the properties of operations.

## Learning Objectives and Activities

***Students will be able to…***

- Understand that digits of a three-digit number represent amounts of hundreds, tens, and ones.
- Understand that 100 can be thought of as a bundle of ten tens - called a “hundred”.
- Understand that the numbers 100, 200, …900 refer to one to nine hundreds (and 0 tens and 0 ones).
- Count within 1000.
- Skip-count by 5s, 10s, and 100s.
- Read and write base-ten numerals to 1000.
- Read and write number names to 1000.
- Use expanded form for numbers to 1000.
- Compare two three-digit numbers and use the symbols >, =, and <.
- Fluently add within 100.
- Fluently subtract within 100.

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- Add up to four two-digit numbers.
- Add within 1000.
- Understand place-value concepts for addition within 1000.
- Subtract within 1000.
- Understand place-value concepts for subtraction within 1000.
- Mentally add 10 or 100.
- Mentally subtract 10 or 100.
- Explain why addition strategies work.
- Explain why subtraction strategies work.

***Activities***

| Core Instructional Resource | | |
|---|---|---|
| **Standard** | **EnVision Topic** | **EnVision Lesson** |
| 2.NBT.A.1a | 9 - Numbers to 1,000 | 1 |
| 2.NBT.A.1b | 9 - Numbers to 1,000 | 2, 3 |
| 2.NBT.A.2 | 9 - Numbers to 1,000 | 6, 7 |
| 2.NBT.A.3 | 9 - Numbers to 1,000 | 4, 5 |
| 2.NBT.A.4 | 9 - Numbers to 1,000 | 8, 9 |
| 2.NBT.B.5 | 3 - Add Within 100 Using Strategies | 1, 2, 3, 4, 5 |
| | 4 - Fluently Add Within 100 | 1, 2, 3, 4, 5 |
| | 5 - Subtract Within 100 Using Strategies | 1, 2, 3, 4, 5, 6 |
| | 6 - Fluently Subtract Within 100 | 1, 2, 3, 4, 5 |
| 2.NBT.B.6 | 4 - Fluently Add Within 100 | 6, 7 |
| 2.NBT.B.7 | 10 - Add Within 1,000 Using Models and Strategies | 2, 3, 4, 5, 7 |
| | 11 - Subtract Within 1,000 Using Models and Strategies | 2, 3, 4, 6 |
| 2.NBT.B.8 | 10 - Add Within 1,000 Using Models and Strategies | 1 |
| | 11 - Subtract Within 1,000 Using Models and Strategies | 1 |
| 2.NBT.B.9 | 3 - Add Within 100 Using Strategies | 7 |
| | 5 - Subtract Within 100 Using Strategies | 8 |

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| | | |
|---|---|---|
| | 10 - Add Within 1,000 Using Models and Strategies | 6 |
| | 11 - Subtract Within 1,000 Using Models and Strategies | 5 |

## Assessments

**Diagnostic**

- Beginning of Year Readiness Test
- MDIS Diagnostic Assessment
- Topic Review What You Know
- IXL Diagnostic Assessment

**Formative**

- Convince Me! Prompt (embedded)
- Guided Practice (embedded)
- Lesson Quick Check

**Summative**

- Topic Assessment
- Topic Performance Task
- EnVision Cumulative / Benchmark Assessment
- EnVision Progress Monitoring Assessment
- Gr. 2 Math Linkit! NJSLS Form A, Form B, Form C

## Interdisciplinary Connections

**NJSLS**: **Science**

- **EnVision Topic 11: 3 Act Math: The Chemistry Set** - 2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

## Career Readiness, Life Literacies, and Key Skills

## Technology Integration

- **9.4.2.CT.2**: Identify possible approaches and resources to execute a plan.

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- **9.4.2.CT.3**: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

## Career Education

- **CRP2.** Apply appropriate academic and technical skills.
- **CRP4**. Communicate clearly and effectively and with reason.
- **CRP8**. Utilize critical thinking to make sense of problems and persevere in solving them.

| Time Frame | 6 weeks |
|---|---|

## Topic

Measurement

## Alignment to Standards

**2.M.A - Measure and estimate lengths in standard units**

1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

3. Estimate lengths using units of inches, feet, centimeters, and meters.

4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

**2.M.B - Relate addition and subtraction to length**

5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

**2.M.C - Work with time and money**

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

DEPARTMENT : Mathematics COURSE : Grade 2

8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

## Learning Objectives and Activities

***Students will be able to…***

- Use rulers, yardsticks, meter sticks, and measuring tapes to measure the lengths of objects.
- Describe the relationship between the size of a unit and the number of units needed to measure an object.
- Estimate lengths using units of inches, feet, yards, centimeters, and meters.
- Find how much longer one object is than another in standard units.
- Use addition within 100 to solve word problems involving lengths.
- Use subtraction within 100 to solve word problems involving lengths.
- Represent whole numbers as lengths on a number line.
- Show sums and differences within 100 on a number line.

***Activities***

| Core Instructional Resource | | |
|---|---|---|
| **Standard** | **EnVision Topic** | **EnVision Lesson** |
| 2.M.A.1 | 12 - Measuring Length | 2, 3, 5, 6, 9 |
| 2.M.A.2 | 12 - Measuring Length | 4, 7 |
| 2.M.A.3 | 12 - Measuring Length | 1 |
| 2.M.A.4 | 12 - Measuring Length | 8 |
| 2.M.B.5 | 14 - More Addition, Subtraction, and Length | 1, 2, 3, 5 |
| 2.M.B.6 | 14 - More Addition, Subtraction, and Length | 4 |
| 2.M.C.7 | 8 - Work with Time and Money | 6, 7, 8 |
| 2.M.C.8 | 8 - Work with Time and Money | 1, 2, 3, 4, 5 |

## Assessments

**Diagnostic**

DEPARTMENT : Mathematics COURSE : Grade 2

- Beginning of Year Readiness Test
- MDIS Diagnostic Assessment
- Topic Review What You Know
- IXL Diagnostic Assessment

**Formative**

- Convince Me! Prompt (embedded)
- Guided Practice (embedded)
- Lesson Quick Check

**Summative**

- Topic Assessment
- Topic Performance Task
- EnVision Cumulative / Benchmark Assessment
- EnVision Progress Monitoring Assessment
- Gr. 2 Math Linkit! NJSLS Form A, Form B, Form C

## Interdisciplinary Connections

## Career Readiness, Life Literacies, and Key Skills

## Technology Integration

- **9.4.2.CT.2**: Identify possible approaches and resources to execute a plan.
- **9.4.2.CT.3**: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

## Career Education

- **CRP2**. Apply appropriate academic and technical skills.
- **CRP4.** Communicate clearly and effectively and with reason.
- **CRP8.** Utilize critical thinking to make sense of problems and persevere in solving them.

| | |
|---|---|
| Time Frame | 4 weeks |

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DEPARTMENT : Mathematics COURSE : Grade 2

## Topic

Data Literacy

## Alignment to Standards

### 2.DL.A - Understand concepts of data

1. Understand that people collect data to answer questions. Understand that data can vary.

2. Identify what could count as data (e.g., visuals, sounds, numbers).

### 2.DL.B - Represent and interpret data

3. 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.

4. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.

## Learning Objectives and Activities

***Students will be able to…***

- Measure objects to generate whole-number length data.
- Make repeated measurements of the same object to generate length data.
- Draw a picture graph to represent a data set with up to four categories.
- Draw a bar graph to represent a data set with up to four categories.
- Solve simple put-together, take-apart, and compare problems using data presented in a bar graph.

***Activities***

| Core Instructional Resource | | |
|---|---|---|
| **Standard** | **EnVision Topic** | **EnVision Lesson** |
| 2.DL.A.1 | MDIS Lessons | D43, D44, D45 |
| 2.DL.A.2 | MDIS Lessons | D47, D48, D49, D50, D51, D52, D53 |
| 2.DL.B.3 | 15 - Graphs and Data | 1, 2 |
| 2.DL.B.4 | 15 - Graphs and Data | 3, 4, 5, 6 |

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## Assessments

**Diagnostic**

- Beginning of Year Readiness Test
- MDIS Diagnostic Assessment
- Topic Review What You Know
- IXL Diagnostic Assessment

**Formative**

- Convince Me! Prompt (embedded)
- Guided Practice (embedded)
- Lesson Quick Check

**Summative**

- Topic Assessment
- Topic Performance Task
- EnVision Cumulative / Benchmark Assessment
- EnVision Progress Monitoring Assessment
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## Interdisciplinary Connections

## Career Readiness, Life Literacies, and Key Skills

## Technology Integration

- **9.4.2.CT.2:** Identify possible approaches and resources to execute a plan.
- **9.4.2.CT.3**: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
- **9.4.2.IML.2:** Represent data in a visual format to tell a story about the data.
- **9.4.2.TL.3:** Enter information into a spreadsheet and sort the information.

## Career Education

- **CRP2**. Apply appropriate academic and technical skills.

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DEPARTMENT : Mathematics COURSE : Grade 2

- **CRP4.** Communicate clearly and effectively and with reason.
- **CRP8.** Utilize critical thinking to make sense of problems and persevere in solving them.

| Time Frame | 3 weeks |
|---|---|

## Topic

Geometry

## Alignment to Standards

**2.G.A - Reason with shapes and their attributes**

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

## Learning Objectives and Activities

***Students will be able to…***

- Recognize and draw two- and three- dimensional shapes having specified attributes.
- Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- Partition a rectangle into rows and columns of same-size squares and count the squares.
- Partition circles and rectangles into two, three, or four equal shares, and use related vocabulary.
- Recognize that equal shares of identical wholes need not have the same shape.

***Activities***

| **Core Instructional Resource** | | |
|---|---|---|
| **Standard** | **EnVision Topic** | **EnVision Lesson** |

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*#spartanlegacy*

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| | | |
|---|---|---|
| 2.G.A.1 | 13 - Shapes and Their Attributes | 1, 2, 3, 4 |
| 2.G.A.2 | 13 - Shapes and Their Attributes | 5, 8 |
| 2.G.A.3 | 13 - Shapes and Their Attributes | 6, 7 |

## Assessments

**Diagnostic**

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- MDIS Diagnostic Assessment
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**Formative**

- Convince Me! Prompt (embedded)
- Guided Practice (embedded)
- Lesson Quick Check

**Summative**

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## Interdisciplinary Connections

**NJSLS**: **Science**

- **EnVision Topic 13: 3 Act Math: Straw Shaped** - K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

## Career Readiness, Life Literacies, and Key Skills

## Technology Integration

- **9.4.2.CT.2**: Identify possible approaches and resources to execute a plan.

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- **9.4.2.CT.3**: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

## Career Education

- **CRP2**. Apply appropriate academic and technical skills.
- **CRP4.** Communicate clearly and effectively and with reason.
- **CRP8.** Utilize critical thinking to make sense of problems and persevere in solving them.

## Modifications (ELL, Special Education, At-Risk Students, Gifted & Talented, & 504 Plans)

***ELL***:

- Work toward longer passages as skills in English increase
- Use visuals
- Introduce key vocabulary before lesson
- Teacher models reading aloud daily
- Provide peer tutoring
- Use of Bilingual Dictionary
- Guided notes and/or scaffold outline for written assignments
- Provide students with English Learner leveled readers.

***Supports for Students With IEPs***:

- Allow extra time to complete assignments or tests
- Guided notes and/or scaffold outline for written assignments
- Work in a small group
- Allow answers to be given orally or dictated
- Use large print books, Braille, or books on CD (digital text)
- Follow all IEP modifications

***At-Risk Students***:

- Guided notes and/or scaffold outline for written assignments
- Introduce key vocabulary before lesson
- Work in a small group
- Lesson taught again using a differentiated approach
- Allow answers to be given orally or dictated
- Use visuals / Anchor Charts
- Leveled texts according to ability

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***Gifted and Talented***:

- Create an enhanced set of introductory activities (e.g. advance organizers, concept maps, concept puzzles)
- Provide options, alternatives and choices to differentiate and broaden the curriculum
- Organize and offer flexible small group learning activities
- Provide whole group enrichment explorations
- Teach cognitive and methodological skills
- Use center, stations, or contracts
- Organize integrated problem-solving simulations
- Propose interest-based extension activities
- Expose students to beyond level texts.

***Supports for Students With 504 Plans:***

- Follow all the 504 plan modifications
- Text to speech/audio recorded selections
- Amplification system as needed
- Leveled texts according to ability
- Fine motor skill stations embedded in rotation as needed
- Modified or constrained spelling word lists
- Provide anchor charts with high frequency words and phonemic patterns