Course: BES Mathematics Grade 2

Unit # 1 : Numbers Within 20: Addition, Subtraction, and Data

Grade Level(s): 2	**Length of Unit:** 29 days Lesson 0: 5 days Lesson 1: 4 days Lesson 2: 4 days Lesson 3: 4 days Unit 1 Mid-Unit Assessment: 1 day Lesson 4: 4 days Lesson 5: 4 days Math in Action: 2 days Unit 1 Unit Assessment: 1 day

Unit Rationale:

Students will extend their understanding of adding and subtracting within 20. They will know different strategies, such as making a ten and doubles plus one, which will help them add and subtract.

Stage 1 - Desired Results

Enduring Understandings:	**Essential Questions:**
Students will understand that… ● Knowing different strategies, such as making a ten and doubles plus one, will help you add and subtract ● You can use what you know about the relationship between addition and subtraction to help you solve problems ● You can organize data into graphs to help you answer questions about the data ● Knowing how to model a problem with pictures or diagrams can help you solve the problem	● What are different strategies to help add and subtract? ● How can you use what you know about the relationship between addition and subtraction to help you solve problems? ● How can you organize data to answer questions? ● How can you model a problem to help you solve it?
Content:	**Skills:**
Students will know… Lesson 1: ● Use the strategies of counting on, making a ten, and doubles plus one to add two one digit numbers ● Interpret models such as pictures, equations, and	*Students will be able to…* ● Count on to add and subtract ● Use fact families to add and subtract ● Make a ten to add and subtract ● Solve a one-step word problem ● Draw and find information from picture graphs

open number lines that represent the reasoning behind various strategies ● Use addition strategies to represent and solve word problems Lesson 2: ● Use mental math strategies to subtract one digit numbers within 20 ● Understand and use the relationship between addition and subtraction to subtract one digit numbers within 20 Lesson 3: ● Analyze one step addition and subtraction word problems and write equations to represent the problems ● Use fact families as a strategy to solve one step problems and build number sense ● Interpret models that represent one-step problems Lesson 4: ● Compare data in tally chart, table, picture graph, and bar graph ● Interpret graphs by reading and comparing the data shown in the graph ● Complete a picture graph and bar graph ● Draw a bar graph from a given set of data ● Solve addition and subtraction word problems within 20, based on data Lesson 5: ● Analyze two step word problems to determine the steps and operations needed to solve them ● Interpret models that represent a two-step problem Math In Action: ● Understand repeated subtraction ● Understand writing and solving addition and subtraction equations ● Understand equal groups ● Read a bar graph and picture graph ● Write comparison statements about the data in a graph ● Know that addition and subtraction are inverse operations ● Draw a picture to help solve a subtraction problem	and bar graphs ● Use addition and subtraction to solve a problem with more than one step ● LIsten carefully during discussion in order to understand another person's ideas and ask questions about what they do not understand

NJ Student Learning Standards - Mathematics

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.OA.B.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.DL.A.1 Understand that people collect data to answer questions. Understand that data can vary.
2.DL.B.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.

Content Standards: 2023 NJSLS-Mathematics (K-12)
Mathematics: New Jersey Student learning standards (NJSLS)

The Standards for Mathematical Practice:

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 Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

CLKS Practices:

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

Connected Careers:

Careers connection to this unit on Numbers within 20: Addition, Subtraction, and Data include:

- Elementary Teacher
- Cashier/Retail Sales Associate
- Store Manager

Explanation of how CLKSs connect to the unit:

This unit on Numbers within 20: Addition, Subtraction, and Data connects to the standard “Demonstrate

creativity and innovation" because students need to develop and apply mental math strategies, which requires creativity in finding the best method to help them solve problems. Students also need to create and interpret bar and picture graphs which involves creativity in representing data. Students need to decide how to display data to share information clearly and effectively.

Explanation of how Connected Careers connect to the unit:

Elementary teachers work with students on many math strategies, including mental math strategies, simple word problems, and basic graphing. They need to understand and teach concepts like addition, subtraction, and interpreting simple graphs.

Cashiers/Retail Sales Associate careers involve handling cash, making change, and performing basic mental math for transactions. Understanding simple addition and subtraction is very important for this job.

Keeping track of inventory is an important part of managing a store or restaurant. Businesses must make sure that they have enough merchandise, food, or supplies to operate. For example, a store manager may decide if they need to order more of a certain product by adding how many are still on the shelf and how many are in the warehouse. Utilizing mental math to add numbers can help people in charge of inventory reach decisions quickly.

Interdisciplinary Standards

NJSLS ELA: L.RF.2.4.A. Read with sufficient accuracy and fluency to support comprehension. Read grade-level text with purpose and understanding.

NJSLS Social Studies: • 6.1.2.CivicsPD.1: Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions.

Explanation of how interdisciplinary standards connect to the unit:

The ELA standard "Read with sufficient accuracy and fluency to support comprehension. Read grade-level text with purpose and understanding" connects to this unit because in order to solve one- and two-step word problems effectively, students must accurately read and understand what the problem is about and what it is asking. This involves understanding the language and identifying what mathematical operations (addition or subtraction) are required. Fluency in reading helps students grasp these concepts quickly and accurately, allowing them to focus on solving the problem rather than struggling with reading. Students need to recognize keywords, as well as numbers within the text to help them understand the operations needed.

The Social Studies standard "Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions" connects to this unit because engaging in discussions allows students to listen to different approaches and solutions from their peers. While one student might use one strategy for solving an addition problem, another student may use a different strategy. Listening to different strategies can provide new insights and perspectives for students. When students share how they solved a problem or understood data, they articulate their thought processes. This helps students get a better

grasp on their understanding and allows them to receive feedback on their thinking. Students can also ask questions to clarify their understanding of the problem or of the strategies used by a classmate which will help to help clarify their understanding even further.

Technology Integration /9.4 Standards:

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
- 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives
- 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

Explanation of how 9.4 standards connect to the unit:

- The Technology Literacy standard "Identify the basic features of a digital tool and explain the purpose of the tool" will be addressed when students utilize the i-ready platform and its navigation on their Chromebooks. Key features such as interactive practice with technology-enhanced items, digital math tools, student bookshelf, digital assessments, and learning games will be highlighted, with explanations on how each helps in learning Math.
- The standard "Demonstrate openness to new ideas and perspectives" connects to this math unit because when working with addition and subtraction within 20, students will be exposed to a variety of strategies for solving problems. Some students may use counting on, while others use number lines or mental math to help them solve their equation. Being open to new ideas allows students to understand different strategies, broadening their flexibility and problem-solving skills. When working with data, students might use different types of graphs (e.g., bar graphs, picture graphs) to represent the same information.
- The standard "Use a variety of types of thinking to solve problems" connects to this math unit because effective problem solving often involves a combination of reasoning skills. For instance, when solving a word problem involving addition and subtraction, students might first use one strategy to identify patterns in problems and then apply a different strategy to solve the problem.

Stage 2- Assessment Evidence:	
Assessment:	
Formative	Lesson Quizzes Digital Comprehension Checks Small Group Assessment Conferring Sessions Independent Practice Additional Practice Pages Exit Ticket
Summative	Mid-Unit Assessments End of Unit Assessments Independent Practice
Alternative	Conferring Sessions
Benchmark	iReady Diagnostic Test (Beginning of Year, Middle of Year, End of Year)

	Lesson Quiz (print) or Comprehension Check (digital) Mid-Unit Assessment Unit Assessment
Other	Assessment Practice (found in "Teacher Digital Experience>Teacher Toolbox")

Stage 3 - Learning Plan

Learning Activities:

- **iReady diagnostic (2 Days)**
- **Lesson 0: Lessons for the First Five Days (5 days)**
- **Lesson 1: Mental Math Strategies for Addition (4 days)**
  Session 1: Explore-Using mental math strategies for addition
  Session 2: Develop-Adding by counting on and making a ten
  Session 3: Develop-Using doubles and doubles plus one
  Session 4: Refine-Using mental math strategies for addition
  Lesson 1 Quiz or Digital Comprehension Check
- **Lesson 2: Mental Math Strategies for Subtraction (4 days)**
  Session 1: Explore-Using mental math strategies for subtraction
  Session 2: Develop-Counting on and making a ten to subtract
  Session 3: Develop-Using fact families to help subtract
  Session 4: Refine-Using mental math strategies for subtraction
  Lesson 2 Quiz or Digital Comprehension Check
- **Lesson 3: Solve One Step Word Problems (5 days)**
  Session 1: Explore-Solving one-step word problems
  Session 2: Develop-Solving take-apart word problems
  Session 3: Develop-Solving comparison word problems

Differentiation:

English Language Learners:
The ELL Math Resources Folder is located **here**

- Point out key ideas and vocabulary
- Limit the number of items on tests or homework
- Give verbal as well as written directions / clarify direction
- Use pictures, props, and realia (real objects)
- Use alternative grading system, if appropriate
- Create a word wall that includes definitions and examples
- Draw pictures to illustrate each term
- Create and label math problems that illustrate each term

Gifted and Talented:

- Provide enriching problems for fast finishers
- Extend mathematical learning opportunities through after school clubs
- Selected 'problems of the month' from www.insidemathematics.org
- Selected problems from *Challenging Word Problems* for each grade level

Special Education Students:

- Provide manipulatives to support grade level topics
- Give verbal as well as written directions
- Group students together by ability level to complete examples
- Additional time to complete tasks/long-term projects with adjusted due dates
- Modified homework assignments (modify content, modify amount, as appropriate)
- Additional time to complete tasks / long-

Session 4: Refine-Solving different kinds of word problems
Lesson 3 Quiz or Digital Comprehension Check

- **Mid Unit Assessment (1 day)**

- **Lesson 4: Draw and Use Bar Graphs and Picture Graphs (4 days)**
  Session 1: Explore-Drawing and using bar graphs and picture graphs
  Session 2: Develop-Using bar graphs and picture graphs
  Session 3: Develop-Making Bar Graphs and Picture Graphs
  Session 4: Refine-Drawing and Using Graphs
  Lesson 4 Quiz or Digital Comprehension Check

- **Lesson 5: Solve Two-Step Word Problems (4 days)**
  Session 1: Explore-Solving two-step word problems
  Session 2: Develop-Ways to solve two-step problems
  Session 3: Develop-More ways to solve two-step problems
  Session 4: Refine-Solving two-step word problems
  Lesson 5 Quiz or Digital Comprehension Check

- **Math In Action: Solve Addition and Subtraction Problems (2 days)**
  Session 1: Robot Motors-Study an example problem and solution, Try another approach; Rock Collection-Discuss models and strategies
  Session 2: Nuts and Bolts-Persevere on your own; Science Project-Persevere on your own

- **Unit Assessment (1 day)**

term projects with adjusted due dates

Students with 504 plans:

- Flexible Grouping
- Additional time to complete tasks / long-term projects with adjusted due dates
- Give verbal as well as written directions
- Calculation device
- Provide manipulatives
- Break down complex problems into smaller tasks

Students at Risk of school failure:

- Encourage "Mathematical Mindset" by pointing out successes
- Provide one-on-one instruction when needed
- Use models to show related facts
- Create and solve new stories for paris of related problems
- Select activities that go back to the appropriate stage of the Concrete-Pictorial-Abstract spectrum.

Links to Math Differentiation Chart and Accommodations Chart

Core and Supplementary Instructional Materials

Teacher Pedagogical Resources:

Print Resources:
Teacher's Guide-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4705-8)
Teacher's Guide-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-7406-5)
Digital Resources:
Ready Classroom Mathematics Teacher Toolbox
PowerPoint Slides
Diagnostic
Lesson, Mid-Unit, and Unit Comprehension Checks
Prerequisites Report
Comprehension Check Reports
Digital Math Tools

Student Materials:

Print Resources:
Student Worktext-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4666-2)
Student Worktext-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-4667-9)
Digital Resources:
Student eBook
Interactive Tutorials
Digital Math Tools
Learning Games
Interactive Practice
Other:
Hands-on math manipulatives

Notes:
Inclusion of Climate Change Opportunities

In this unit Numbers Within 20: Addition, Subtraction, and Data, climate change can be addressed through · students drawing a bar graph having a single-unit scale to represent a data set about a climate change related issue at school, such as food waste, recycling, reusing, or reducing the consumption of goods. Children can graph the amount of plastic bags used during a set time-frame and can graph the amount of reusable containers used in school by classmates for a set period of time.

Course: Math

Unit # 2 : Numbers Within 100: Addition, Subtraction, Time, and Money

Grade Level(s): 2

Length of Unit: 31 days
Lesson 6: 5 days
Lesson 7: 5 days
Lesson 8: 4 days
Unit 2 Mid-Unit Assessment: 1 day
Lesson 9: 5 days
Lesson 10: 5 days
Lesson 11: 3 days
Math in Action: 2 days
Unit 2 Unit Assessment: 1 day

Unit Rationale:

Students will use place value to add and subtract, will use strategies to break numbers apart, and will do so while learning about time, money, and word problems.

Stage 1 - Desired Results

Enduring Understandings:

Students will understand that…

- You can use what you know about tens and ones to help add numbers by place value
- Adding or subtracting from a tens number can make the problem easier. Knowing how to break apart numbers to get you to the nearest ten can help you solve addition and subtraction problems.
- Models help you represent word problems. Knowing how to create a good model will help you solve one or two step word problems.
- You can use what you know about skip counting by fives to help you tell time to the nearest five minutes.

Essential Questions:

- What can you use with what you know about tens and ones to help add numbers?
- How can you make the problem easier by breaking apart the numbers?
- How can I create a good model to help me solve problems?
- What can skip counting do to help me tell time?

Content:

Students will know…

Lesson 6
- Break apart two-digit numbers into tens and ones

Skills:

Students will be able to…

- Add two digit numbers
- Add tens and add ones

as a place-value strategy for adding
- Recognize that in adding, tens are added to tens and ones to ones
- Determine when grouping a ten is necessary and carry out the regrouping to find a sum
- Estimate sums of two-digit numbers by using easier numbers close to one or both addends

Lesson 7:
- Decompose a ten as a strategy for subtracting
- Recognize that addition can be used to solve a subtraction problem
- Evaluate mental strategies for subtracting a number from a two-digit number
- Estimate differences of two-digit numbers by using easier numbers close to one or both numbers being subtracted

Lesson 8:
- Fluently break apart two-digit numbers into tens and ones as a place-value strategy for addition and subtraction
- Fluently determine when regrouping a ten is necessary and carry out regrouping to find a sum
- Fluently determine when decomposing a ten is necessary and carry out the decomposition to find a difference
- Use addition to solve a subtraction problem
- Use addition to check the solution to a subtraction problem

Lesson 9:
- Analyze word problems to determine the operation needed to solve them
- Apply the use of fact families as a strategy to solve one-step problems and build number sense
- Interpret models that represent a one-step problem with two-digit numbers

Lesson 10:
- Recognize and name the coins penny, nickel, dime and quarter
- Know the value of coins and paper denominations
- Count the amount of money represented by a set of coins or bills

Lesson 11:
- Read time to the nearest 5-minute interval
- Write time to 5-minute intervals using proper notation
- Show time on an analog clock to 5-minute intervals using proper hour-hand and minute-hand placement
- Determine when a digital clock should read AM

- Regroup ones as a ten and decompose a ten
- Subtract two digit numbers
- Solve one step and two step word problems by adding or subtracting two digit numbers
- Solve word problems involving money
- Tell and write time to the nearest five minutes

or PM Math In Action: ● Add 4 two-digit numbers ● Break a two-digit number into four smaller numbers ● Subtract 2 two-digit numbers ● Using model to show how to break a number into four smaller numbers ● Add 3 two-digit numbers ● Subtract 2 two-digit numbers ● Add two-digit numbers with and without regrouping ● Subtract a two-digit number from a three-digit number ● Solve a two-step word problem ● Solve a two-step word problem about dollar bills ● Add one- and two-digit numbers ● Subtract one- and two-digit numbers ● Show time on an analog clock ● Write time in the correct format	

NJ Student Learning Standards - Mathematics
Content Standards: 2023 NJSLS-Mathematics (K-12)

- 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.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.
- 2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. (Clarification: Explanations should be supported by drawings or objects.)
- 2.M.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- 2.M.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

The Standards for Mathematical Practice:

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 Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

9.2.2.CAP.2: Explain why employers are willing to pay individuals to work.

CLKS Practices:

1. Utilize critical thinking to make sense of problems and persevere in solving them
2. Work productively in teams while using cultural/global competence

Connected Careers:
Careers connection to this unit on Numbers within 100: Addition, Subtraction, Time, and Money include:

- Cashier
- Bank Teller
- Restaurant Server
- Meteorologist

Explanation of how 9.2 standards connect to the unit:

This unit on Numbers within 100: Addition, Subtraction, Time, and Money connects to the standard "Explain why employers are willing to pay individuals to work" because employers often pay employees based on the number of hours worked or tasks completed. To determine wages, employees and employers use addition and subtraction to calculate total earnings. Understanding how to manage and budget earnings involves addition and subtraction. Employees need to know how to handle their earnings, along with saving, and spending wisely.

Explanation of how CLKSs connect to the unit:

This unit on Numbers within 100: Addition, Subtraction, Time, and Money connects to the standard "Utilize critical thinking to make sense of problems and persevere in solving them" because solving problems involving addition and subtraction requires students to think critically about how to regroup in two and three-digit numbers, and how to check their work. Students need to practice perseverance by trying different strategies, checking their work, and changing their approach if they have struggles along the way.

This unit also connects to the standard "Work productively in teams while using cultural/global competence" when students work in groups to solve addition and subtraction problems, they will need to discuss different strategies used and things they did that they found helpful and useful. With regard to learning about time, they can also work together to create schedules or solve real-life problems involving time along with collaborative activities involving budgeting, spending, and saving which can help students understand concepts about money better. Collaborative problem-solving allows students to share ideas, learn from each other, and develop a deeper understanding of concepts and strategies.

Explanation of how Connected Careers connect to the unit:

Cashiers are responsible for handling transactions, giving change, and managing the cash register. They need to understand addition and subtraction for calculating totals and making change.

Bank Tellers are responsible for assisting customers with transactions, processing deposits and withdrawals, and managing account balances. They need to understand basic arithmetic for balancing accounts and handling cash.

Restaurant Servers are responsible for taking orders, handling payments, and providing change. They need to understand simple arithmetic for adding up bills, calculating tips, and processing payments.

Some meteorologists are weather forecasters and use math to report on the weather and prepare daily forecasts. They record information and use subtraction of two-digit numbers to find the difference of temperatures or amounts of precipitation, such as rain or snow. These differences can help them see Trends in the weather over the years.

Interdisciplinary Standards

NJSLS ELA: L.RF.2.4.A. Read with sufficient accuracy and fluency to support comprehension. Read grade-level text with purpose and understanding.

NJSLS ELA: RI.CR.2.1. Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers.

NJSLS Social Studies: • 6.1.2.EconET.4: Explain the impact that decisions about savings, debt, and investment can have on individuals' lives.

Explanation of how interdisciplinary standards connect to the unit:

The ELA standards " Read with sufficient accuracy and fluency to support comprehension" and "Ask and answer questions to demonstrate understanding of key details in an informational text" connect to this unit because in order to solve word problems with two-digit numbers or involving money, students must accurately read and understand what the problem is asking. This involves understanding the language and identifying what mathematical operation (addition or subtraction) is required. Fluency in reading helps students grasp these concepts quickly and accurately, allowing them to focus on solving the problem rather than struggling with reading. Students need to recognize keywords / key details, as well as numbers within the text that indicate what operation is needed.

The Social Studies standard "Explain the impact that decisions about savings, debt, and investment can have on individuals' lives" connects to this unit because students learn to use addition and subtraction to manage and track savings. Students can learn to use addition to understand how investments grow over time. Students can also use addition and subtraction to understand how debt accumulates and is paid off.

Technology Integration (9.4 Standards):

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
- 9.4.2.CI.2: Demonstrate originality and inventiveness in work
- 9.4.2.CT.3: Use a variety of types of thinking to solve problems

Explanation of how 9.4 standards connect to the unit:

The Technology Literacy standard "Identify the basic features of a digital tool and explain the purpose of the tool" will be addressed when students utilize the i-ready platform and its navigation on their Chromebooks. Key features such as interactive practice with technology-enhanced items, digital math tools, student bookshelf, digital assessments, and learning games will be highlighted, with explanations on how each helps in learning Math.

The standard "Demonstrate originality and inventiveness in work" connects to this unit because students may develop their own tools, like number lines or visual models, to help them solve addition and subtraction problems more effectively. They can also demonstrate their original thoughts by developing a variety of strategies for solving addition and subtraction problems. Students could invent games or activities that involve solving time-related problems, such as matching times on an analog and digital clock or scheduling events. Students could also develop shopping lists and calculate totals that show their own way of thinking and working with numbers.

The standard "Use a variety of types of thinking to solve problems" connects to this unit when students use one type of thinking to identify patterns in addition and subtraction problems along with recognizing patterns in time, such as the intervals of hours and minutes on a clock. By solving multiple problems, students can develop strategies for adding or subtracting. For example, they might see that subtracting smaller numbers from larger ones often requires regrouping and apply this understanding to different problems. Deductive thinking involves using known mathematical rules or properties to solve problems which students do when they break a problem into smaller, manageable steps (e.g., subtracting the tens and then the ones). Students also use deductive thinking to solve problems like calculating total expenses when given a list of items with prices, applying addition and subtraction methods to find the final amount.

Stage 2- Assessment Evidence:	
Assessment:	
Formative	Lesson Quizzes Digital Comprehension Checks Small Group Assessment Conferring Sessions Independent Practice Additional Practice Pages Exit Ticket
Summative	Mid-Unit Assessments End of Unit Assessments Independent Practice

Alternative	Conferring Sessions
Benchmark	iReady Diagnostic Test (Beginning of Year, Middle of Year, End of Year) Lesson Quiz (print) or Comprehension Check (digital) Mid-Unit Assessment Unit Assessment
Other (optional)	Assessment Practice (found in "Teacher Digital Experience>Teacher Toolbox")

Stage 3 - Learning Plan

Learning Activities:

Lesson 6: Add Two-Digit Numbers (5 days)

- Session 1: Explore- Adding Two-Digit Numbers
- Session 2: Develop-Different Ways to Show Addition
- Session 3: Develop-More Ways to Show Addition
- Session 4:Develop- Estimating with Addition
- Session 5: Refine-Adding Two-Digit Numbers

Lesson 7: Subtract Two-Digit Numbers (5 days)

- Session 1: Explore-Subtracting Two-Digit Numbers
- Session 2: Develop-Subtracting by Adding Up
- Session 3: Develop-Subtracting by Regrouping
- Session 4: Develop-Estimating with Subtraction
- Session 5: Refine-Subtracting Two-Digit Numbers

Lesson 8: Use Addition and Subtraction Strategies with Two digit Numbers (4 days)

- Session 1: Explore-Using Addition and Subtraction Strategies with Two-Digit Numbers
- Session 2: Develop-Strategies to Find a Missing Addend
- Session 3: Develop-Using Subtraction Strategies with Two-Digit Numbers
- Session 4: Refine-Using Addition and Subtraction Strategies with Two-Digit

Differentiation:

English Language Learners:

The ELL Math Resources Folder is located **here**

- Point out key ideas and vocabulary
- Limit the number of items on tests or homework
- Give verbal as well as written directions / clarify direction
- Use pictures, props, and realia (real objects)
- Use alternative grading system, if appropriate
- Create a word wall that includes definitions and examples
- Draw pictures to illustrate each term
- Create and label math problems that illustrate each term

Gifted and Talented:

- Provide enriching problems for fast finishers
- Extend mathematical learning opportunities through after school clubs
- Selected 'problems of the month' from www.insidemathematics.org
- Selected problems from *Challenging Word Problems* for each grade level

Special Education Students:

- Provide manipulatives to support grade level topics
- Give verbal as well as written directions
- Group students together by ability level to

Numbers

Unit 2 Mid-Unit Assessment (1 day)

Lesson 9: Solve word Problems with Two Digit Numbers (5 days)

- Session 1: Explore-Solving Word Problems With Two-Digit Numbers
- Session 2: Develop-Ways to Model Word Problems
- Session 3: Develop-More Ways to Model Word Problems
- Session 4: Develop-More Ways to Model Word Problems
- Session 5: Refine-Solving Word Problems with Two-Digit Numbers

Lesson 10: Solve Word Problems Involving Money (5 days)

- Session 1: Explore-Solving Word Problems Involving Money
- Session 2: Develop-Finding the Value of Sets of Like Coins
- Session 3: Develop-Finding the Value of Sets of Mixed Coins
- Session 4: Develop-Solving Word Problems About Money
- Session 5: Refine-Solving Word Problems Involving Money

Lesson 11: Tell and Write Time (3 days)

- Session 1: Explore-Telling and Writing Time
- Session 2: Develop-Telling and Writing Time
- Session 3: Refine-Telling and Writing Time

Math In Action: Work with Two Digit Numbers, Time, and Money (2 days)

- Session 1: Nature Walks-Study an example problem and solution, Try another approach; Butterfly Garden-Discuss models and strategies
- Session 2: The Birdhouse Builders-Persevere on your own; Frog Class-Persevere on your own

Unit Assessment (1 day)

complete examples
- Additional time to complete tasks/long-term projects with adjusted due dates
- Modified homework assignments (modify content, modify amount, as appropriate)
- Additional time to complete tasks / long-term projects with adjusted due dates

Students with 504 plans:

- Flexible Grouping
- Additional time to complete tasks / long-term projects with adjusted due dates
- Give verbal as well as written directions
- Calculation device
- Provide manipulatives
- Break down complex problems into smaller tasks

Students at Risk of school failure:

- Encourage "Mathematical Mindset" by pointing out successes
- Provide one-on-one instruction when needed
- Use models to show related facts
- Create and solve new stories for paris of related problems
- Select activities that go back to the appropriate stage of the Concrete-Pictorial-Abstract spectrum.

Links to Math Differentiation Chart and Accommodations Chart

Core and Supplementary Instructional Materials

Teacher Pedagogical Resources:

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Teacher's Guide-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-7406-5)
Digital Resources:
Ready Classroom Mathematics Teacher Toolbox
PowerPoint Slides
Diagnostic
Lesson, Mid-Unit, and Unit Comprehension Checks
Prerequisites Report
Comprehension Check Reports
Digital Math Tools

Student Materials:

Print Resources:
Student Worktext-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4666-2)
Student Worktext-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-4667-9)
Digital Resources:
Student eBook
Interactive Tutorials
Digital Math Tools
Learning Games
Interactive Practice
Other:
Hands-on math manipulatives

Notes:
Inclusion of Climate Change Opportunities

In this unit Numbers within 100: Addition, Subtraction, Time, and Money students can work with and solve two-step word problems involving climate change related issues at school, such as food waste, recycling, reusing, or reducing the consumption of goods. Students may add and subtract within 100 while using drawings or equations to represent the climate change related issue. Children could also track the high and low temperatures in a week and subtract to find the difference between them or record rainfall or snow amount and develop word problems and/or subtraction or addition problems related to the information they obtained.

Course: Math

Unit # 3 : Numbers within 1000: Place Value, Addition, and Subtraction

Grade Level(s): 2	**Length of Unit: 34 days** Lesson 12: 3 days Lesson 13: 4 days Lesson 14: 4 days Lesson 15: 4 days Unit 3 Mid-Unit Assessment: 1 day Lesson 16: 4 days Lesson 17: 4 days Lesson 18: 4 days Lesson 19: 3 days Math In-Action: 2 days Unit 3 Unit Assessment: 1 day

Unit Rationale:

Students will use place value to help add and subtract three digit numbers. They will use place value to compare numbers and to break numbers apart.

Stage 1 - Desired Results

Enduring Understandings:	**Essential Questions:**
Students will understand that… ● The value of a digit in a number depends on its place in the number. Knowing about place value will help you determine the total value of a number and will help you read, write and compare numbers. ● You can use what you know about place value to mentally add 10 or 100 to numbers or subtract 10 or 100 from numbers. ● Knowing about place value will help you break apart numbers as a strategy for adding and subtracting.	● What do the different places in a number mean? How are they important? ● How can you easily add 10 or 100 to a number? ● How can you use place value to break apart numbers to help you add and subtract? ●
Content:	**Skills:**
Students will know… Lesson 12: ● How to identify ones, tens, and hundreds in a three digit number ● Interpret models to determine the combinations of hundreds, tens and ones in a number	*Students will be able to…* ● Build three digit numbers in different ways ● Read and write three digit numbers ● Compare three digit numbers ● Add 10 or 100 to a number ● Add three digit numbers

● Write a three digit number in terms of varied combinations of hundreds, tens, and ones Lesson 13: ● Identify the place value of each digit in a three-digit number ● Model three-digit numbers ● Interpret a model and write the number value Lesson 14: ● Evaluate models of three-digit numbers to determine whether numbers are greater than, less than, or equal to each other ● Express equalities and inequalities using proper notation. ● Solve problems involving inequalities and justify solutions Lesson 15: ● Skip count by hundreds within 1,000 to add and subtract ● Skip count by fives and tens from two- and three-digit numbers ● Mentally add 10 or 100 to a given number 100-900 ● Mentally subtract 10 or 100 from a given number 100-900 Lesson 16: ● Break apart three digit numbers as a place-value strategy for adding ● Recognize that in addition, hundreds are added to hundreds, tens are added to tens, and ones are added to ones ● Determine when regrouping a hundred or a ten is necessary and carry out the regrouping to find the sum Lesson 17: ● Determine when regrouping a ten or a hundred is necessary to subtract, and carry out the regrouping to find the difference ● Recognize that in subtraction, hundreds are subtracted from the hundreds, tens are subtracted from tens, and ones are subtracted from ones. ● Explore subtraction as a process of taking away or adding up. Lesson 18: ● Fluently break apart three digit numbers as a strategy for addition and subtraction ● Fluently determine when regrouping ones or tens	● Subtract three digit numbers ● Use different strategies to add and subtract three digit numbers ● Add more than 2 two digit numbers

is necessary and carry out the regrouping to find a sum ● Fluently determine when decomposing tens or hundreds is necessary and carry out the decomposition to find a difference ● Subtract from three digit numbers with zeros in the ones and/or tens places ● Use addition to check the solution to a subtraction problem Lesson 19: ● Break apart three or more numbers as a place-value strategy for adding ● Develop strategies for adding more than two numbers ● Apply the commutative and associative properties of addition Math In Action: ● Compare three-digit numbers ● Understand equal groups ● Recognize how a quick drawing shows place value ● Add one- and two- digit numbers ● Subtract two- and three- digit numbers ● Add three digit numbers with and without regrouping ● Subtract three digit numbers with and without regrouping ● Write subtraction and addition equations	

NJ Student Learning Standards - Mathematics

2.NBT.A.1.a 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: 100 can be thought of as a bundle of ten tens — called a “hundred.”
2.NBT.A.1.b 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: 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.
2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.
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 operations. (Clarification: Explanations should be supported by drawings or objects.)

The Standards for Mathematical Practice:

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 Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

CLKS Practices:

1. Act as a responsible and contributing community members and employee
2. Utilize critical thinking to make sense of problems and persevere in solving them

Connected Careers:

Careers connected to this unit on Numbers Within 1,000: Place Value, Addition, and Subtraction include:

- Biologist
- Bank Teller
- Map Maker
- Production Manager

Explanation of how CLKSs connect to the unit:

This unit on Numbers Within 1,000: Place Value, Addition, and Subtraction connects to the standard “Act as a responsible and contributing community member and employee” because students need to understand three-digit numbers in order to manage personal finances, budgeting, and tracking expenses. Reading and writing three-digit numbers accurately is necessary for communication in written reports, and financial documents along with working with three-digit numbers accurately.

This unit also connects to the standard “Utilize critical thinking to make sense of problems and persevere in solving them” since this standard emphasizes approaching problems thoughtfully, applying logical reasoning, and persistence until a solution is found and these are skills needed when working with place value and three-digit numbers. Place value helps students understand the significance of each digit in a number, which is necessary for understanding and solving problems. By having a solid understanding of place value, addition, and subtraction, students develop the ability to think critically about relationships among numbers, select

appropriate strategies, and work with complex problems.

Explanation of how Connected Careers connect to the unit:

Some biologists specialize in the study of endangered species, which are plants and animals that are at risk of extinction. The populations of some endangered species can be estimated using three digit-numbers. Biologists analyze how many endangered species are left to determine the level of risk of extinction. Biologists can also be involved in breeding programs, genetic research, and ecological research to determine why the species is at risk of extinction and what can be done to fix the problem.

Bank tellers provide services to customers, such as depositing money and cashing checks. A bank teller will often count out the money in front of the customer to make sure there are no mistakes. A bank teller will first count out any $100 bills, then count any smaller bills such as $10 bills, and finally count $1 bills last. This way of grouping bills makes it easier to count the total amount.

When people travel, they often use paper or digital maps. Map makers make maps that show the distance and possible routes between locations. Sometimes there are multiple options for ways to get somewhere. Drivers can compare the distances and roots and make choices on which roads they think are best.

Productivity goals are an important part of the manufacturing industry. Production managers set quantifiable goals for their team to ensure orders can be fulfilled on time and on budget. Productivity goals for a team member might be hourly, daily, or weekly, such as producing 5 units per hour, 10 units per day, or 100 units per week. After setting these goals, production managers can skip count by fives, tens, or hundreds to determine the total number of units their team is expected to produce in an hour, day, or week.

Interdisciplinary Standards

NJ SLS ELA: RI.CR.2.1. Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers.

•NJ SLS Social Studies: 6.1.2.CivicsPD.1: Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions.

Explanation of how interdisciplinary standards connect to the unit:

The standard “Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers” connects to this math unit by emphasizing the importance of understanding and applying math concepts based on information found in problems. Students need to identify key details and information, and ask and answer questions to fully understand and solve mathematical problems.

The standard “Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions” relates to this math unit because students can ask questions to clarify their understanding of place value, addition, and subtraction as well as ask questions about different strategies for solving problems. In a group activity, students might discuss the accuracy of different answers to an addition or subtraction problem by thinking about place value and regrouping strategies. Listening to other student’s explanations and strategies can provide new insights into understanding place value and solving addition and subtraction problems.

Technology Integration /9.4 Standards:

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool.
- 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives
- 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

Explanation of how 9.4 standards connect to the unit:

The Technology Literacy standard “Identify the basic features of a digital tool and explain the purpose of the tool” will be addressed when students utilize the i-ready platform and its navigation on their Chromebooks. Key features such as interactive practice with technology-enhanced items, digital math tools, student bookshelf, digital assessments, and learning games will be highlighted, with explanations on how each helps in learning Math.

The standard “Demonstrate openness to new ideas and perspectives” connects to this unit because when working with addition, subtraction and place value, students will be exposed to various strategies for solving problems. Some students may use counting on, while others use number lines or mental math to help them solve their problem. Being open to different strategies allows students to find the best approach for different situations. Working with classmates allows students to hear different perspectives and strategies.

This math unit connects to the standard “Use a variety of types of thinking to solve problems” because it Encourages students to use reasoning along with strategies to understand and apply place value concepts, and to think about ways to represent and work with numbers. Students will also have concrete, pictorial and abstract methods to solve addition and subtraction problems.

Stage 2- Assessment Evidence:	
Assessment:	
Formative	Lesson Quizzes Small Group Assessment Conferring Sessions Independent Practice Additional Practice Pages

	Exit Ticket
Summative	Mid-Unit & Unit Assessments Independent Practice
Alternative	Conferring Sessions
Benchmark	iReady Diagnostic Test (Beginning of Year, Middle of Year, End of Year) Lesson Quiz (print) or Comprehension Check (digital) Mid-Unit Assessment Unit Assessment
Other (optional)	Assessment Practice (found in "Teacher Digital Experience>Teacher Toolbox")

Stage 3 - Learning Plan

Learning Activities:

- **Lesson 12: Understand Three-Digit Numbers (3 days)**
  Session 1: Explore-Three-digit numbers
  Session 2: Develop-Understanding of Three-Digit numbers
  Session 3: Refine-Ideas about Three-Digit numbers
- **Lesson 13: Read and Write Three Digit Numbers (4 days)**
  Session 1: Explore-Reading and Writing Three-Digit numbers
  Session 2: Develop-Finding the Value of Three-Digit Numbers
  Session 3: Develop-Writing Three-Digit Numbers
  Session 4: Refine-Reading and Writing Three-Digit numbers
- **Lesson 14: Compare Three Digit Numbers (4 days)**
  Session 1: Explore-Comparing Three-Digit Numbers
  Session 2: Develop-Ways to Compare Three-Digit Numbers
  Session 3: Develop-More Ways to Compare Three-Digit Numbers
  Session 4: Refine-Comparing Three-Digit Numbers

Differentiation:

English Language Learners:
The ELL Math Resources Folder is located **here**

- Point out key ideas and vocabulary
- Limit the number of items on tests or homework
- Give verbal as well as written directions / clarify direction
- Use pictures, props, and realia (real objects)
- Use alternative grading system, if appropriate
- Create a word wall that includes definitions and examples
- Draw pictures to illustrate each term
- Create and label math problems that illustrate each term

Gifted and Talented:

- Provide enriching problems for fast finishers
- Extend mathematical learning opportunities through after school clubs
- Selected 'problems of the month' from www.insidemathematics.org
- Selected problems from *Challenging Word Problems* for each grade level

- **Lesson 15: Mental Addition and Subtraction (4 days)**
  Session 1: Explore-Mental Addition and Subtraction
  Session 2: Develop-Skip Counting by Fives, Tens, and Hundreds
  Session 3: Develop-Adding and Subtracting 10 and 100
  Session 4: Refine-Using Mental Addition and Subtraction

- **Mid Unit Assessment (1 day)**

- **Lesson 16: Add Three Digit Numbers (4 days)**
  Session 1: Explore-Adding Hundreds, Tens, and Ones
  Session 2: Develop-Adding and Regrouping Ones
  Session 3: Develop-Adding and Regrouping Tens
  Session 4: Refine-Adding Three-Digit Numbers

- **Lesson 17: Subtract Three Digit Numbers (4 days)**
  Session 1: Explore-Subtracting Hundreds, Tens, and Ones
  Session 2: Develop-Regrouping Tens to Ones
  Session 3: Develop-Regrouping Hundreds to Tens
  Session 4: Refine-Subtracting Three-Digit Numbers

- **Lesson 18: Use Addition and Subtraction Strategies with Three-Digit Numbers (4 days)**
  Session 1: Explore-Using Addition and Subtraction Strategies with Three-Digit Numbers
  Session 2: Develop-Using Addition Strategies with Three-Digit Numbers
  Session 3: Develop-Using Subtraction Strategies with Three-Digit Numbers
  Session 4: Refine-Using Addition and Subtraction Strategies with Three-Digit Numbers

- **Lesson 19: Add Several Two-Digit Numbers (3 days)**

Special Education Students:

- Provide manipulatives to support grade level topics
- Give verbal as well as written directions
- Group students together by ability level to complete examples
- Additional time to complete tasks/long-term projects with adjusted due dates
- Modified homework assignments (modify content, modify amount, as appropriate)
- Additional time to complete tasks / long-term projects with adjusted due dates

Students with 504 plans:

- Flexible Grouping
- Additional time to complete tasks / long-term projects with adjusted due dates
- Give verbal as well as written directions
- Calculation device
- Provide manipulatives
- Break down complex problems into smaller tasks

Students at Risk of school failure:

- Encourage "Mathematical Mindset" by pointing out successes
- Provide one-on-one instruction when needed
- Use models to show related facts
- Create and solve new stories for paris of related problems
- Select activities that go back to the appropriate stage of the Concrete-Pictorial-Abstract spectrum.

Links to Math Differentiation Chart and Accommodations Chart

Session 1: Explore-Adding Several Two-Digit Numbers Session 2: Develop-Adding Four Two-Digit Number Session 3: Refine-Adding Several Two-Digit Numbers • **Math In Action: Add Subtract and Compare numbers (2 days)** Session 1: Grilled Kabobs-Study an example problem and solution; Kabob Trays-Discuss models and strategies Session 2: Fruits and Vegetables-Persevere on your own; Fruit Kabobs-Persevere on your own • **Unit Assessment (1 day)** • **iReady Diagnostic Assessment (2 days)**	

Core and Supplementary Instructional Materials

Teacher Pedagogical Resources:

Print Resources:
Teacher's Guide-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4705-8)
Teacher's Guide-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-7406-5)
Digital Resources:
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Digital Resources:
Student eBook

Interactive Tutorials
Digital Math Tools
Learning Games
Interactive Practice
Other:
Hands-on math manipulatives

Course: Math

Unit # 4 : Length: Measurement, Addition, Subtraction, and Line Plots

Grade Level(s): 2	**Length of Unit: 33 days** Lesson 20: 3 days Lesson 21: 4 days Lesson 22: 3 days Lesson 23: 3 days Lesson 24: 4 days Mid-Unit Assessment: 1 day Lesson 25: 4 days Lesson 26: 4 days Lesson 27: 4 days Math in Action: 2 days Unit 4 Unit Assessment: 1 day

Unit Rationale:

Students will use measurement tools to compare and contrast different data, they will apply addition and subtraction skills to find differences between lengths. Line plots are used as a strategy to find the difference between objects.

Stage 1 - Desired Results

Enduring Understandings: *Students will understand that…* ● There are different tools and different units that can be used to measure length. Knowing about measurement will help you to estimate and compare lengths ● You can use addition or subtraction to find the difference between the lengths of objects	**Essential Questions:** ● What tools and units can we use to measure? ● How can we estimate to compare lengths? ● How can I use addition or subtraction to find the difference between lengths of objects?
Content: *Students will know…* Lesson 20: ● Understand that the lengths of objects can be measured by using different standard units ● Represent and measure the lengths of object using different tools, such as inch and centimeter rulers ● Compare measuring the length of an object in inches with measuring the length of an object in	**Skills:** *Students will be able to…* ● Use a ruler to measure the length of an object ● Choose the correct tool for measuring an object ● Measure the same object using different units ● Estimate the length of an object ● Compare lengths to tell which of two objects is longer and how much longer that object is. ● Add and subtract lengths to solve problems

centimeters. Lesson 21: ● Choose a tool for measuring the length of a given object ● Measure lengths by using rulers, yardsticks, meter sticks, and measuring tapes ● Use a ruler repeatedly to measure a length Lesson 22: ● Compare lengths measured in different units ● Understand the relationship between feet and inches and between feet and yards ● Understand the relationship between centimeters and inches and between centimeters and meters ● Explore how the number of units in a measurement is related to the size of the units used Lesson 23: ● Estimate length in inches, centimeters, feel and meters ● Use benchmark objects when estimating Lesson 24: ● Compare the length of objects by determining which measure is greater than or less than the other ● Use addition and subtraction to compare lengths, finding how much greater or less the measure of one object is than the other Lesson 25: ● Use addition and subtraction to solve problems involving lengths ● Recognize the importance of working within a single unit when adding or subtracting lengths ● Interpret and apply models that represent measurement problems involving addition and subtraction Lesson 26: ● Represent a whole number as a length from 0 on a number line ● Use a number line to represent and solve addition problems ● Use a number line to represent and solve subtraction problems ● Use a number line to solve addition and subtraction word problems	● Add and subtract lengths on a number line ● Measure lengths and show data on a line plot

Lesson 27: ● Interpret marks on a line plot as data ● Understand that the numbers on a ruler or number line can be used to represent a given length ● Represent data on a line plot Math In Action: ● Understand addition equations ● Understand how to draw a diagram to represent a situation ● Use a ruler to measure length ● Compare length measurements ● Make an interpret a line plot or bar graph ● Add money amounts ● Determine coins with a given value ● Add and subtract length measurements ● Write an addition or subtraction equation to represent a situation	

NJ Student Learning Standards - Mathematics

2.M.A.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.M.A.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.
2.M.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.
2.M.A.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.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.
2.M.B.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.DL.B.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.

Content Standards: 2023 NJSLS-Mathematics (K-12)
Mathematics: New Jersey Student learning standards (NJSLS)

The Standards for Mathematical Practice:

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 Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

9.2.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.

CLKS Practices:

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them
3. Work productively in teams while using cultural/global competence

Connected Careers:

Careers connected to this unit on Length: Measurement, Addition and Subtraction, Line Plots include:

- Marine Biologists
- Home Stagers
- Paleontologist
- Firefighter

Explanation of how 9.2 standards connect to the unit:

The standard “Make a list of different types of jobs and describe the skills associated with each job” connects with this unit because many jobs require measurement skills. Examples include engineers, architects, carpenters, and laboratory technicians. These professions often involve different types of measurements including length and weight. Many jobs also require addition and subtraction skills, which students will learn in this unit. Line plots are another topic studied in this unit and are needed in jobs to display data, along with showing trends.

Explanation of how CLKSs connect to the unit:

The standard “Demonstrate creativity and innovation” connects to this unit because students can come up with a variety of ways to measure objects or solve measurement problems. Students can use creative problem-solving strategies, such as developing a variety of approaches to word problems or creating visual aids to understand addition and subtraction problems. Innovation comes into play when students create line plots to represent data in new ways.

The standard “Utilize critical thinking to make sense of problems and persevere in solving them” connects to this unit because critical thinking is essential when interpreting measurement results. Solving addition and subtraction problems requires students to think critically about the best strategies and approaches to use. Interpreting line plots requires critical thinking to analyze trends and draw conclusions based on the representation of data.

The standard “Work productively in teams while using cultural/global competence” connects to this unit

because teamwork is important in projects involving measurement where students collaborate to measure objects, compare results, and discuss measurement techniques. Problem-solving in teams helps students share different strategies and perspectives for solving addition and subtraction problems. Working in groups to create and interpret line plots involves sharing data, discussing findings, and being open to different perspectives on how to represent and think about data.

Explanation of how Connected Careers connect to the unit:

Marine biologists are scientists who study life in the oceans and seas. One job of a marine biologist is to measure and keep track of the sizes of different animals in the ocean.

When a house is being sold, furniture and artwork can be arranged, or staged, in rooms to make the space more appealing. The person staging the room might need to measure the furniture and artwork in the room to figure out how to make it look the best that it can. For some pieces, like a small painting, a ruler can be used. For other pieces, like a couch or table, a yardstick or measuring tape can be used.

Paleontologists study fossils of plants and animals that lived long ago. They keep detailed records of the fossils they find.The size of a fossil helps paleontologists determine the species it belonged to. Paleontologists use different units of length to measure fossils. For example, a paleontologist May measure a large dinosaur bone in feet or yards. Paleontologists also study fossil tracks. The length and width of a footprint may be measured in inches or centimeters.

A firefighter puts out fires and helps in emergencies. They estimate lengths when they decide how close to park to a building or when setting up a ladder. They do not have time to find an exact measurement of a building, so they estimate the length. They also estimate the length of the fire hoses they will need to reach from a fire hydrant to the fire. Sometimes the hydrant is closer to the fire and they only need one hose. If the hydrant is farther away, then they may need to connect two or more hoses together. If they estimate that the hydrant is too far away, they can call in special trucks that hold water and can drive close to the firefighters.

Interdisciplinary Standards

NJSLS ELA: SL.ES.2.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

NJSLS Science: • K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

Explanation of how interdisciplinary standards connect to the unit:

The standard “Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue” connects to this unit because when working in groups, students can ask clarifying questions to ensure they fully understand the topic being discussed. Students might need to gather additional information about different measurement tools, units, or techniques. Asking questions can help them obtain the necessary information in order to use these tools effectively. Students might also ask questions to deepen their understanding of other concepts related to length, such as why different units are used or when to use certain units.

The standard “Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs” connects to this unit because when students compare the effectiveness of two different measurement tools or methods, students need to be able to study how each performs in measuring length. For example, students might compare a ruler and a measuring tape or a yardstick for measuring various objects. After measuring the same set of objects with different tools, students can create line plots to show the measurement results.

Students use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally (connection with measurements and online math games)

Technology Integration /9.4 Standards:

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
- 9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
- 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives
- 9.4.2.CT.2: Identify possible approaches and resources to execute a plan

Explanation of how 9.4 standards connect to the unit:
Digital tools have a purpose. The Technology Literacy standards will be addressed when students utilize the i-ready platform and its navigation, as well as other various digital tools on their Chromebooks. Key features such as interactive practice with technology-enhanced items, digital math tools, student bookshelf, digital assessments, and learning games will be highlighted, with explanations on how each helps in learning Math.

The standard “Demonstrate openness to new ideas and perspectives” connects to this unit on Length: Measurement, Addition and Subtraction, and Line Plots because students will come across different tools and methods to measure. Openness to trying different tools and methods helps students understand the advantages and drawbacks or certain tools in different situations. When solving addition and subtraction problems, students can use multiple strategies. Openness to different strategies allows students to choose the most effective method for solving different types of problems. When working with line plots, students may explore various ways to represent data.

The standard “Identify possible approaches and resources to execute a plan” connects to this unit because when measuring lengths, students need to identify and select the appropriate tool based on the specific requirements of the task. They must also consider factors such as accuracy and ease of use. When solving addition and subtraction problems, students need to identify and choose appropriate strategies based on the problem along with their understanding of the concepts. When creating line plots, students need to identify the best approach for representing their data clearly and effectively.

Stage 2- Assessment Evidence:	
Assessment:	
Formative	Lesson Quizzes Small Group Assessment Conferring Sessions Independent Practice Additional Practice Pages Exit Ticket
Summative	Mid-Unit & Unit Assessments Independent Practice
Alternative	Conferring Sessions
Benchmark	iReady Diagnostic Test (Beginning of Year, Middle of Year, End of Year) Lesson Quiz (print) or Comprehension Check (digital) Mid-Unit Assessment Unit Assessment
Other (optional)	Assessment Practice (found in "Teacher Digital Experience>Teacher Toolbox")

Stage 3 - Learning Plan

Learning Activities:

Lesson 20: Measure in Inches and Centimeters (3 days)

- Session 1: Explore-Measuring in Inches and Centimeters
- Session 2: Develop-Measuring in Inches and Centimeters
- Session 3: Refine-Measuring in Inches and Centimeters

Lesson 21: Measure in Feet and Meters (4 days)

- Session 1: Explore-Measuring in Feet and Meters
- Session 2: Develop-Measuring in Inches and Feet
- Session 3: Develop-Measuring in Centimeters and Meters
- Session 4: Refine-Measuring in Feet and Meters

Lesson 22: Understand Measurement with

Differentiation:

English Language Learners:

The ELL Math Resources Folder is located **here**

- Point out key ideas and vocabulary
- Limit the number of items on tests or homework
- Give verbal as well as written directions / clarify direction
- Use pictures, props, and realia (real objects)
- Use alternative grading system, if appropriate
- Create a word wall that includes definitions and examples
- Draw pictures to illustrate each term
- Create and label math problems that illustrate each term

Gifted and Talented:

Different Units (3 days)
- Session 1: Explore-Measurement with Different Units
- Session 2: Develop-Understanding of Different Units of Length
- Session 3: Refine-Ideas about Measurement with Different Units

Lesson 23: Estimate and Measure Length (3 days)
- Session 1: Explore-Estimating and Measuring Length
- Session 2: Develop-Using Different Units to Estimate Length
- Session 3: Refine-Estimating and Measuring Length

Lesson 24: Compare Lengths (4 days)
- Session 1: Explore-Comparing Lengths
- Session 2: Develop-Finding Differences Between Lengths
- Session 3: Develop-Ways to Compare Lengths
- Session 4: Refine-Comparing Lengths

Mid Unit Assessment (1 day)

Lesson 25: Add and Subtract Lengths (4 days)
- Session 1: Explore-Adding and Subtracting Lengths
- Session 2: Develop-Solving Problems About Length
- Session 3: Develop-Solving Two Step Problems About Length
- Session 4:Refine- Adding and Subtracting Lengths

Lesson 26: Add and Subtract on the Number Line (4 days)
- Session 1: Explore-Adding and Subtracting on the Number Line
- Session 2: Develop-Adding on the Number Line
- Session 3: Develop-Subtracting on the Number Line
- Session 4: Refine-Adding and Subtracting on the NumberLine

Lesson 27: Read and Make Line Plots (4 days)
- Session 1: Explore-Sorting and Organizing Data

- Provide enriching problems for fast finishers
- Extend mathematical learning opportunities through after school clubs
- Selected 'problems of the month' from www.insidemathematics.org
- Selected problems from *Challenging Word Problems* for each grade level

Special Education Students:
- Provide manipulatives to support grade level topics
- Give verbal as well as written directions
- Group students together by ability level to complete examples
- Additional time to complete tasks/long-term projects with adjusted due dates
- Modified homework assignments (modify content, modify amount, as appropriate)
- Additional time to complete tasks / long-term projects with adjusted due dates

Students with 504 plans:
- Flexible Grouping
- Additional time to complete tasks / long-term projects with adjusted due dates
- Give verbal as well as written directions
- Calculation device
- Provide manipulatives
- Break down complex problems into smaller tasks

Students at Risk of school failure:
- Encourage "Mathematical Mindset" by pointing out successes
- Provide one-on-one instruction when needed
- Use models to show related facts
- Create and solve new stories for paris of related problems
- Select activities that go back to the appropriate stage of the Concrete-Pictorial-Abstract spectrum.

Links to Math Differentiation Chart and Accommodations Chart

• Session 2: Develop-Reading and Making Line Plots • Session 3: Develop-Reading and Making Line Plots • Session 4: Refine-Reading and Making Line Plots **Math In Action: Use Measurement (2 days)** • Model with mathematics • Use a ruler to measure length • Critique a given solution • Make sense of a problem, look for structure **Unit Assessment (1 day)**	

Core and Supplementary Instructional Materials

Teacher Pedagogical Resources:

Print Resources:
Teacher's Guide-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4705-8)
Teacher's Guide-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-7406-5)
Digital Resources:
Ready Classroom Mathematics Teacher Toolbox
PowerPoint Slides
Diagnostic
Lesson, Mid-Unit, and Unit Comprehension Checks
Prerequisites Report
Comprehension Check Reports
Digital Math Tools

Student Materials:

Print Resources:
Student Worktext-i-Ready Classroom Mathematics Volume 1 (ISBN: 978-1-7280-4666-2)
Student Worktext-i-Ready Classroom Mathematics Volume 2 (ISBN: 978-1-7280-4667-9)
Digital Resources:
Student eBook
Interactive Tutorials
Digital Math Tools
Learning Games
Interactive Practice
Other:
Hands-on math manipulatives

Notes:
Inclusion of Climate Change Opportunities

Students may add and subtract within 100 to solve word problems about a climate change issue that involves length. To solve these problems, they may use drawings or equations to represent a climate change related issue in their school, such as food waste, recycling, reusing, or reducing the consumption of goods. They may measure the amount of plastic garbage used within a day in their classroom or see how long of a line they can create with recyclable items. They can also create line plots to show the different types of reusable containers students have in the classroom.

Course: Math

Unit # 5 : Shapes and Arrays: Partitioning and Tiling Shapes, Arrays, Evens and Odds

Grade Level(s): 2

Length of Unit: 19 days
Lesson 28: 4 days
Lesson 29: 3 days
Lesson 30: 3 days
Lesson 31: 3 days
Lesson 32: 3 days
Math In Action: 2 days
Unit 5 Unit Assessment: 1 day

Unit Rationale:

Students will use attributes of a shape to help identify the shape. They will divide shapes into equal parts and use proper language to describe those parts, as well understand the size of those parts. Students will use arrays as a strategy to help count items.

Stage 1 - Desired Results

Enduring Understandings:

Students will understand that…

- Knowing the number of sides and angles a shape has can help you identify that shape
- You can use what you know about dividing a shape into equal parts to show halves, thirds, and fourths
- An array is an arrangement of objects in equal rows and columns. You can use what you know about addition and skip-counting to find the number of objects in an array.

Essential Questions:

- How can I use what I know to identify a shape?
- How can I divide a shape into equal parts to show halves, thirds and fourths?
- What is an array? How can it be used to find a total?

Content:

Students will know…

Lesson 28:

- Identify triangles, quadrilaterals, pentagons, and hexagons based on the number of sides and angles they have
- Identify cubes based on the number and shape of faces that are the same
- Distinguish among triangles, quadrilaterals,

Skills:

Students will be able to…

- Recognize and draw different shapes
- Break up a rectangle into squares
- Divide shapes into equal parts
- Find the total number of squares used to tile a rectangle by counting them
- Use addition to find the total number of objects in an array

pentagons, and hexagons based on their attributes ● Draw a shape based on specific attributes Lesson 29: ● Identify and name halves, thirds, and fourths as parts into which a shape is divided ● Recognize that fractional parts are equal in size ● Understand that the more part a whole is divided into, the smaller the size of each part Lesson 30: ● Analyze an array of squares with no gaps or overlaps ● Determine the number of squares used to partition a rectangle ● Create an array of squares to fit a rectangular shape Lesson 31: ● Describe an array of up to 5 rows and 5 columns ● Calculate the number of items in an array using repeated addition and skip counting ● Write an equation to express the sum of items in an array Lesson 32: ● Identify odd and even numbers ● Relate doubles and doubles + 1 facts to odd and even numbers ● Use counting on by twos, to identify even numbers Math In Action: ● Understand halves as two equal parts, thirds as 3 equal parts, and fourths as 4 equal parts. ● Know how to name equal parts of a whole ● Draw a model to represent equal parts ● Know a square has four equal sides ● Measure length with a ruler ● Draw a triangle, a square, and a rhombus ● Organize data ● Know that shapes can be composed from other shapes ● Identify odd and even numbers ● Show an even number as 2 equal groups ● Show an odd numbers 2 equal groups and 1 left over	● Find even and odd numbers

NJ Student Learning Standards - Mathematics

2.OA.C.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.
2.OA.C.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.
2.G.A.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. (Clarification: sizes are compared directly or visually, not compared by measuring)
2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
2.G.A.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. For example, students partition a rectangle (i.e. the whole) into three equal shares, identify each of the shares as a 'third' and describe the rectangle as three 'thirds'.

The Standards for Mathematical Practice:

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 Education (Career Readiness, Life Literacies, and Key Skills Practices and 9.2 Standards)

CLKS Practices:

1. Demonstrate creativity and innovation
2. Utilize critical thinking to make sense of problems and persevere in solving them

Connected Careers:

Careers connected to this unit on Shapes and Arrays: Partitioning and Tiling Shapes, Arrays, Evens and Odds include:

- Design Engineers
- Landscape Architect
- Mural Painter
- Computer Coder

Explanation of how CLKSs connect to the unit:

The math unit Shapes and Arrays: Partitioning and Tiling Shapes, Arrays, Evens and Odds connects to the standard “Demonstrate creativity and innovation” through students exploring and developing different ways to divide shapes, along with creating and working with arrays in new and different ways, using creative methods to solve problems and design patterns. Students will also represent the properties of even and odd numbers through creative visual representations and problem-solving activities.

This math unit also connects to the standard “utilize critical thinking to make sense of problems and persevere in solving them” by encouraging students to look at properties of shapes, experiment with different partitioning and tiling strategies, and be persistent in finding solutions. It also requires students to think critically about arrays by looking at and thinking about relationships between rows and columns, and solve problems involving arrays. Students will also look at and think about number patterns and properties, and apply these insights to solve problems.

Explanation of how Connected Careers connect to the unit:

Designs for mechanical equipment are important so that the equipment can be made correctly. Design Engineers can use CAD, or computer-aided design software to make things such as electric generators, wind turbines to make electricity, and even elevators. The designs use many shapes, such as squares, circles and cubes. Knowing where the vertices, edges, and other details are on a shape can help mechanical design engineers determine where to place screws and bolts or where to have pieces welded together.

One area of landscape design is the development of sports complexes and fields. many sports use fields or spaces that are divided into equal parts. Landscape Architects must make sure this is accurately shown in their designs and then built correctly. for example, a soccer field is shaped like a rectangle, and it has a line dividing it into two equal parts. A circle that appears in the middle of the field is also divided into halves by this line. Many swimming pools are rectangles that can be divided into smaller same size rectangles called lanes. Tennis courts have nets placed such that they divide the court into equal parts.

Mural painters are a kind of artist that make very large paintings on walls, ceilings, or sidewalks. When a mural painter is planning a mural, they usually make a smaller painting. If the smaller painting is a rectangle, they might partition the rectangle into squares. Then they draw a large rectangle on the side of the wall or building and partition the large rectangle into the same number of rows, columns, and squares. They copy what is in each small square to the matching large section on the wall. This helps them to paint the exact painting they planned.

Everyday devices like phones, computers, televisions, and even washing machines are controlled by computer programs. A computer program follows a code, or a step-by-step set of instructions, to operate. Computer coders are responsible for writing code so that the device will operate correctly. Computer codes use 0s and 1s and it can be easy to make one small error. Coders can sometimes use odd and even numbers to identify an error. For example if they expect an odd number of 1s in their code but the code comes back as having an even number of 1s, then they know there is an error.

Interdisciplinary Standards

NJSLS ELA: SL.ES.2.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

NJSLS Science: 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.

Explanation of how interdisciplinary standards connect to the unit:

The standard "Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue" connects to this unit because when working in groups, students can ask clarifying questions to ensure they fully understand the topic being discussed. Having students ask and answer questions helps them gain a better understanding of geometric concepts and enhance their strategies for partitioning, tiling and working with arrays. Also, providing the opportunity for discussion about different array configurations can lead to a deeper understanding of multiplication.

The standard "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" connects to this math unit because arrays are used to represent repeated addition by arranging objects in rows and columns, this leads to multiplication and division concepts. Developing a sketch or model helps students to see how arrays can represent these operations. Partitioning and tiling shapes involve dividing a shape into smaller parts or covering a surface with a pattern. Developing sketches or using physical models helps students show different shapes and their configurations. Students can illustrate or use manipulatives to show how grouping objects into pairs helps with understanding the concept of even numbers and how odd numbers always have one leftover when divided into pairs.

Technology Integration / 9.4 Standards:

- 9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
- 9.4.2.CI.2: Demonstrate originality and inventiveness in work
- 9.4.2.CT.2: Identify possible approaches and resources to execute a plan

Explanation of how 9.4 standards connect to the unit:

Digital tools have a purpose. The Technology Literacy 9.4.2.TL.1 standard will be addressed when students utilize the i-ready platform and its navigation on their Chromebooks. Key features such as interactive practice with technology-enhanced items, digital math tools, student bookshelf, digital assessments, and learning games will be highlighted, with explanations on how each helps in learning Math.

This math unit on Shapes and Arrays: Partitioning and Tiling Shapes, Arrays, Evens and Odds connects to the standard "Demonstrate originality and inventiveness in work" because when students are partitioning shapes, students are demonstrating their thinking by showing and creating different ways to divide a shape into smaller parts. Also, when creating arrays, students are using a variety of ways to arrange objects in rows and columns. Students can also explore and represent odd and even numbers in different ways, and use various strategies to solve problems involving even and odd numbers.

The standard “Identify possible approaches and resources to execute a plan” connects to this unit because when partitioning and tiling shapes, students need to explore different ways to divide a shape into smaller parts. Students also explore various ways to arrange objects in rows and columns when solving problems involving arrays. Students explore different ways to solve problems involving even and odd numbers. They notice patterns and come up with strategies for working with these numbers.

Stage 2- Assessment Evidence:	
Assessment:	
Formative	Lesson Quizzes Digital Comprehension Checks Small Group Assessment Conferring Sessions Independent Practice Additional Practice Pages Exit Ticket
Summative	Mid-Unit Assessments End of Unit Assessments Independent Practice
Alternative	Conferring Sessions
Benchmark	iReady Diagnostic Test (Beginning of Year, Middle of Year, End of Year) Lesson Quiz (print) or Comprehension Check (digital) Mid-Unit Assessment Unit Assessment
Other (optional)	Assessment Practice (found in “Teacher Digital Experience>Teacher Toolbox”)

Stage 3 - Learning Plan	
Learning Activities: **Lesson 28: Recognize and Draw Shapes (4 days)** ● Session 1: Explore: Recognizing and Drawing	**Differentiation:** **English Language Learners:**

Shapes
- Session 2: Develop: Recognizing and Drawing Shapes
- Session 3: Develop: Recognizing and Describing Cubes
- Session 4: Refine: Recognizing and Drawing Shapes

Lesson 29: Understand Partitioning Shapes into Halves, Thirds, and Fourths (3 days)
- Session 1: Explore: Partitioning Shapes into Halves, Thirds, and Fourths
- Session 2: Develop: Understanding of Partitioning Shapes into Equal Parts
- Session 3: Refine: Ideas About PartitioningShapes into Halves, Thirds and Fourths

Lesson 30: Partition Rectangles (3 days)
- Session 1: Explore: Partitioning Rectangles
- Session 2: Develop: Partitioning a Rectangle into Squares
- Session 3: Refine: Partitioning rectangles

Lesson 31:Add Using Arrays (3 days)
- Session 1: Explore: Adding Using Arrays
- Session 2: Develop: Adding Using Arrays
- Session 3: Refine: Adding Using Arrays

Lesson 32: Even and Odd Numbers (3 days)
- Session 1: Explore: Even and Odd Numbers
- Session 2: Develop: Modeling Even and Odd Number
- Session 3: Refine: Identifying Even and Odd Numbers

Math In Action: Use Shapes and Even and Odd Numbers (2 days)
- Session 1: Felt Shapes-Study an example problem and solution, Try another approach; Cutting Felt-Discuss models and strategies
- Session 2: Make a Fish-Persevere on your own; Making Bean Bags-Persevere on your own

Unit Assessment (1 day)

iReady Diagnostic Assessment (2 days)

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Students with 504 plans:
- Flexible Grouping
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- Give verbal as well as written directions
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- Break down complex problems into smaller tasks

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- Encourage "Mathematical Mindset" by pointing out successes
- Provide one-on-one instruction when needed
- Use models to show related facts
- Create and solve new stories for paris of related problems
- Select activities that go back to the appropriate stage of the Concrete-Pictorial-Abstract spectrum.

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Interactive Tutorials
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Learning Games
Interactive Practice
Other:
Hands-on math manipulatives