Eagleswood Township Elementary School District

Grade: 2	Content Area: Mathematics

Standard Alignment September 2017	NJDOE Adoption Date September 2017
Revise December 2021	ETESD BOE Approved 1/2021

Suggested Pacing Guide

Unit	Unit Length
Unit 1: Operations and Algebraic Thinking	44 Days
Unit 2: Number and Operations in Base Ten	44 Days
Unit 3: Measurement and Data	44Days
Unit 4: Geometry	44 Days

Core Materials:
GoMath
Do The Math
Linkit!

Grade 2 Overview

Operations and Algebraic Thinking
- Represent and solve problems involving addition and subtraction
- Add and subtract within 20
- Work with equal groups of objects to gain foundations for multiplication

Number and Operations in Base Ten
- Understand place value
- Use place value understanding and properties of operations to add and subtract

Measurement and Data
- Measure and estimate lengths in standard units
- Relate addition and subtraction to length
- Work with time and money
- Represent and interpret data

Geometry
- Reason with shapes and their attributes

Mathematical Practices

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.

Unit 1: Operations and Algebraic Thinking	Duration: 44 Days

Career Readiness, Life Literacies, and Key Skills
Addressed In This Unit
9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community.   9.1.2.CR.2: List ways to give back, including making donations, volunteering, and starting a business.   9.1.2.RM.1: Describe how valuable items might be damaged or lost and ways to protect them.   9.1.2.PB.1: Determine various ways to save and places in the local community that help people save and accumulate *money over time.*   *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.   9.4.2.DC.1: Explain differences between ownership and sharing of information.   9.4.2.DC.2: Explain the importance of respecting digital content of others.   9.4.2.DC.7: Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1)   9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.

Career Readiness, Life Literacies, and Key Skills Practices	
Act as a responsible and contributing community members and employee.	Students understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
Consider the environmental, social and economic impacts of decisions.	Students understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.
Demonstrate creativity and innovation.	Students regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

Utilize critical thinking to make sense of problems and persevere in solving them.	Students readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
Model integrity, ethical leadership and effective management.	Students consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.
Plan education and career paths aligned to personal goals.	Students take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

Use technology to enhance productivity, increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.
Work productively in teams while using cultural/global competence.	Students positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

Computer Science and Design Thinking
Computing Systems
By the end of grade 2
Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally.
A computing system is composed of software and hardware.
Describing a problem is the first step toward finding a solution when computing systems do not work as expected.
Networks and the Internet

Computer networks can be used to connect individuals to other individuals, places, information, and ideas. The Internet enables individuals to connect with others worldwide.
Connecting devices to a network or the Internet provides great benefits, but care must be taken to use authentication measures, such as strong passwords, to protect devices and information from unauthorized access.
Impacts of Computing
Computing technology has positively and negatively changed the way individuals live and work (e.g., entertainment, communication, productivity tools).
Data & Analysis
Individuals collect, use, and display data about individuals and the world around them.
Computers store data that can be retrieved later. Data can be copied, stored in multiple locations, and retrieved.
Data can be used to make predictions about the world.
Algorithms & Programming
Individuals develop and follow directions as part of daily life.
A sequence of steps can be expressed as an algorithm that a computer can process.
Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images)
Computers follow precise sequences of steps that automate tasks.
Complex tasks can be broken down into simpler instructions, some of which can be broken down even further.
People work together to develop programs for a purpose, such as expressing ideas or addressing problems.
The development of a program involves identifying a sequence of events, goals, and expected outcomes, and addressing errors (when necessary).

Engineering Design
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions.
Limitations (constraints) must be considered when engineering designs.
Interaction of Technology and Humans
Human needs and desires determine which new tools are developed.
Technology has changed the way people live and work.
Various tools can improve daily tasks and quality of life.
Nature of Technology
Innovation and the improvement of existing technology involves creative thinking.
Effects of Technology on the Natural World
The use of technology developed for the human designed world can affect the environment, including land, water, air, plants, and animals. voiding damage to the environment.
Technologies that use natural sources can have negative effects on the environment, its quality, and inhabitants.
Reusing and recycling materials can save money while preserving natural resources and avoiding damage to the environment.
Ethics & Culture
The availability of technology for essential tasks varies in different parts of the world.

Correlation Key		
Holocaust	Amistad	Financial Literacy

Unit 1: Operations and Algebraic Thinking	Duration: September – November
NJ Student Learning Standard: 2.OA	

Unit Summary

● Represent and solve problems involving addition and subtraction.

● Add and subtract within 20.

● Work with equal groups of objects to gain foundations for multiplication.

Summary: Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Financial Literacy	Students will use addition and subtract to make appropriate financial choices.
Communication and Collaboration	Students will use mathematical arguments to articulate thoughts and ideas with peers and teachers.

NJ Student Learning Standard: 2.OA	
A.	*Represent and solve problems involving addition and subtraction.*
2.OA.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. 1
B.	*Add and subtract within 20.*
2.OA.2	Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.
C.	*Work with equal groups of objects to gain foundations for multiplication.*
2.OA.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.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.
	NJ Student Learning Standard for Introduction
3.OA.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7.
3.OA.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.
	Interdisciplinary Skills
SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.

SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
Computer Science and Design Thinking	
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preference**s.**
8.1.2.CS.2	Explain the functions of common software and hardware components of computing systems.
8.1.2.CS.3	Describe basic hardware and software problems using accurate terminology.
8.1.2.NI.4	Explain why access to devices need to be secured.
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.4	Break down a task into a sequence of steps.
8.2.2.ITH.3	Identify how technology impacts or improves life.

Essential Understandings	Essential Questions
Students will understand that... ● Mathematical expressions represent relationships ● The symbolic language of algebra is used to communicate and generalize the patterns in mathematics ● The magnitude of numbers affects the outcome of operations on them.	● How is an equation like a balance scale? ● How can change be best represented mathematically? ● How do operations affect numbers?

Evidence of Student Learning	
Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
Create a Classroom Store: Students create a classroom store. They choose what to sell. Set prices. Estimate profit.	**Formative Assessments** ● Teacher Observation

Organize store space. Decide what items sell. Keep inventory.	• Performance Assessments • Games • Anecdotal Records • Oral Assessments, Conferencing • Portfolio/Math Journals • Daily Classwork • Pre-assessments **Summative Assessments** • Tests • Quizzes • BOY Benchmark **Benchmark Assessment** • GoMath Benchmark Assessment **Alternative Assessments** • Untimed Fact Practice Assessment • Manipulative Driven Assessment • Modified/Teacher Created Chapter Tests • Modified/Teacher Created Mid-Chapter Quiz • Visual Representation of Skills Assess • Modified Classwork Assignments • Modified Benchmarks • GoMath Reteach Activities and Worksheets • Project Based Assessments with Scoring Rubric
Knowledge and Skills	

Content	Skills
Cluster: ● Represent and solve problems involving addition and subtraction: Chapters 2, 3, 4, 5, ● Add and subtract within 20: Chapter 3 ● Work with equal groups of objects to gain foundations for multiplication: Chapters 1, 3 *Students will know…* ● Representing and solving problems involves addition and subtraction ● Addition and subtraction within 20 ● Foundations for multiplication by working with equal groups of objects	*Students will be able to …* ● Use addition to find the total number of objects ● Know from memory all sums of two one-digit numbers ● Use arrays or pictures to represent multiplication concepts

Instructional Plan

Suggested Activities	Resources	Suggested Options for Differentiation
Beat the Calculator: One student is the brain the other student is the calculator teacher gives math fact and see who gets the answer first.	Calculator, math fact cards	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged) Higher addition facts (Gifted and Talented)

Dice addition/subtraction: Students will roll the dice and use them to add and subtract.	Dice	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged) Multiple Dice (Gifted and Talented)
Students will play addition / subtraction Bingo.	Bingo cards, chips	Addition table Counters (Basic Skills, English Language Learner, Economically Disadvantaged)
Addition war: Flip two cards and add, player with higher sum wins.	Playing cards	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged)
Various learning songs	www.flocabulary.com (addition & subtraction tab)	Print out lyrics (Basic Skills, English Language Learners, Economically Disadvantaged)

Addition Bingo-using a bingo board students put 24 different products on their board. Teacher draws 2 playing cards to create a sum. If students have the sum they mark it on their boards, 1st person to get 5 across/down/or diagonally wins.	Bingo board (or any 5 by 5 graph), Number playing cards, and markers (chips)	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged)
Caterpillar Chase: Basic addition facts to move along game path.	Caterpillar Chase game from Go Math Grab and Go Kit	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged)
On the Ferris Wheel: Basic subtraction facts to move along game board.	On the Ferris Wheel game from Go Math Grab and Go Kit	100s grid Counters (Basic Skills, English Language Learners, Economically Disadvantaged
Soccer Sums: Adding two digit numbers	Soccer Sums game from Go Math Grab and Go Kit	Addition table Counters (Basic Skills, English Language Learners, Economically Disadvantaged)

Subtraction Action: Making and solving two digit subtraction problems.	Subtraction Action game from Go Math Grab and Go Kit	100s grid Counters (Basic Skills, English Language Learners, Economically Disadvantaged)
What is the Difference?: Practice 2-digit subtraction.	What is the Difference? From Go Math Grab and Go Kit	100s grid Counters (Basic Skills, English Language Learners, Economically Disadvantaged)
Addition with money.	https://www.mathgames.com/money	Several math/money games and activities.
Math Literature		

- Each Orange Has Eight Slices by Paul Giganti
- Elevator Magic by Stuart Murphy
- M&M Counting Book by Barbara Barbieri McGrath
- Twelve Ways to Get Eleven by Eve Merriam
- Rooster's Off to See the World by Eric Carle
- Count on Pablo by Barbara DeRubertis and Rebecca McKillip
- Thornburgh Anno's Counting House by Mitsumasa
- Three Billy Goats Gruff by Ellen Appleby
- The Roadside Stand - Math Reader - Tens and Ones
- Doubles Fun on the Farm - Math Reader - Doubles
- Game Time - Math Reader - Addition and Subtraction
- Benny, Bessie, and the Blueberries - Math Reader - equal shares
- Comic Books for Sale - Math Reader - 2 digit subtraction

● Party Plans - Math Reader - 2 digit addition and subtraction with regrouping	
Websites	
www.prodigygame.com	Standard Based Learning Game
www.themathworksheetsite.com	Resource for creating extra practice

Suggested Options for Differentiation

Basic Skills/Economically Disadvantaged

- Teacher modeling
- Vary activities by choice
- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities
- Centers

Gifted and Talented

- GoMath Real World Videos
- GoMath Stem Activities
- GoMath Enrich Activities
- Centers

English Language Learners

- Teacher modeling
- Vary activities by choice

- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities

Special Education

- Provide differentiated instruction as needed
- Follow all IEP modifications
- Provide manipulatives or the opportunity to draw solution strategies
- Preview lesson and pre-teach vocabulary
- Use visual cues
- Teacher modeling

504 Students

- Follow all 504 plan modifications
- Frequently check in with student
- Small group or individual instruction
- Provide math manipulatives and concrete examples
- Modify assignments

Grade 2 Math
Unit 2

Career Readiness, Life Literacies, and Key Skills Practices	
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Correlation Key

Holocaust	Amistad	Financial Literacy

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Addressed In This Unit

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- 9.4.2.DC.7: Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1)
- 9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.

Unit 2: Number and Operations in Base Ten	Duration: December – February, ongoing
NJ Student Learning Standard: 2.NBT	

Unit Summary
● Understand place value ● Use place value understanding and properties of operations to add and subtract. **Unit Summary:** Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in

base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

Primary Interdisciplinary Connections	
Science	science experiments, manipulate data
Social Studies	timelines, reading and interpreting graphs
Language Arts	open ended questions, math literacy stories, math centers
Technology	interactive games/websites and interactive Smartboards

Global Awareness	Students work with word problems containing names of people and locations around the world.
Communication and Collaboration	Students will use mathematical arguments to articulate thoughts and ideas with peers and teachers.
Critical Thinking and Problem Solving	Students use various types of reasoning as appropriate to solve a mathematical problem.

NJ Student Learning Standard: 2.NBT	
A.	*Understand place value.*
2.NBT.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.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.
2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2.NBT.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.
	B. Use place value understanding and properties of operations to add and subtract.

2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.
2.NBT.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.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.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.3
	NJ Student Learning Standards for Introduction
3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction
3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations.
	Interdisciplinary Skills
SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
	Computer Science and Design Thinking
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8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.

8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.2.2.ITH.3	Identify how technology impacts or improves life.

Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
I Spy Numbers: Place numbers around the halls of the school. Numbers can be changed often. Students spy the numbers and give clues.	**Formative Assessments** ● Teacher Observation ● Performance Assessments ● Wipe off boards ● Math Journals ● Daily Classwork **Summative Assessments** ● Quizzes ● GoMath Unit Assessments ● **Benchmark Assessment** ● GoMath Benchmark Assessment ● Linkit assessment A **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess

	● Modified Classwork Assignments ● Modified Benchmarks ● GoMath Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric

Knowledge and Skills	
Content	**Skills**
Cluster: ● Understand place value: Chapters 1, 2, 3 ● Use place value understanding and properties of operations to add and subtract: Chapters 4, 5, 6, *Students will know…* ● Place value and properties of operations to add and subtract	*Students will be able to …* ● Read, write, and compare three digit numbers ● Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction ● Mentally add to 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900 ● Explain why addition and subtraction strategies work, using place value and the properties of operations

Instructional Plan		
Suggested Activities	**Resources**	**Suggested Options for Differentiation**
Students will make a place value monster.	Paper	Teacher sample (English Language Learners, Economically Disadvantaged)

		Lower numbers (Basic Skills, Economically Disadvantaged) Higher numbers (Gifted and Talented)
Build a Number: Pick two number out of a bag and show that number with base ten blocks	Base ten blocks	Picture with number (English Language Learners, Economically Disadvantaged) Lower numbers (Basic Skills, Economically Disadvantaged) Higher numbers (Gifted and Talented)
Pictures with base ten: Use copies of base ten blocks to cut and paste and create a picture. Then add the blocks used	Photocopies of base ten blocks	Use only one type of block (Basic Skills, Economically Disadvantaged) Use predetermined number of blocks (Basic Skills, Economically Disadvantaged) Use blocks with number written (English Language Learners, Economically Disadvantaged)

		Use higher numbers (Gifted and Talented)
Number sense game-players draw 3 cards, place the cards in place value order to try to create the largest 3 digit number. Whoever created the largest 3 digit number wins the round.	Number cards	Play the game to a larger (Gifted and Talented) or smaller (Basic Skills, Economically Disadvantaged) place value
Students will sing Place Value Songs.	https://www.education.com/resources/activity+song/second-grade/math/	Have song lyrics available (Basic Skills, English Language Learners, Economically Disadvantaged)
Students will play Place Value Bingo.	Bingo cards, chips	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
Four in a Row: Practice naming numbers in different ways.	Four in a Row game from Go Math Grab and Go kit	
Fishing For Digits: Practice identifying place value of digits.	Fishing for Digits game from Go Math Grab and Go Kit	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
Climb the Steps: Making and comparing numbers	Climb the Steps game from Go Math Grab and Go Kit	

Two Digit Shuffle: Addition using base ten blocks	Two Digit Shuffle game from Go Math Grab and Go Kit	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
Soccer Sums: Adding two digit numbers	Soccer Sums game from Go Math Grab and Go Kit	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
Subtraction Action: Making and solving two digit subtraction problems	Subtraction Action game from Go Math Grab and Go Kit	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
What is the Difference?: Practice 2-digit subtraction	What is the Difference? From Go Math Grab and Go Kit	Use higher value cards (Gifted and Talented) and lower value cards (Basic Skills, Economically Disadvantaged)
Around the World!: 3 digit subtraction	Around the World game from Go Math Grab and Go Kit	

Math Literature

- 26 Letters and 99 Cents by Tana Hoban
- Each Orange Had Eight Slices: A Counting Book by Paul Giganti
- One Hundred Hungry Ants by Eleanor Pinczes
- Two of Everything: A Chinese Folktale by Lily Toy Hong
- Elevator Magic by Stuart J. Murphy
- A Day With No Math by Marilyn Kaye
- The King's Commissioners by Aileen Friedman

- Rooster's Off to see the World by Eric Carle
- Count on Pablo by Barbara deRubertis
- Margo's Lights - Math Reader - Skip Counting
- The Roadside Stand - Math Reader - Tens and Ones
- Dave and Boots - Math Reader - Place Value
- The Number Machine - Math Reader - Value of Numbers
- Time to Take a Trip - Math Reader - Comparing Numbers
- Nature's Numbers - Math Reader - addition
- Butterfly Farm - Math Reader - addition
- Comic Books for Sale - Math Reader - 2 digit subtraction
- Party Plans - Math Reader - 2 digit addition and subtraction with regrouping
- The If Game - Math Reader - 3 digit numbers
- The Bug Boys - Math Reader - 3 digit subtraction
- **Dear Benjamin Banneker** by Andrea Davis Pinkney and Brian Pinkney

Websites	
www.ABCYA.com	Place value
www.prodigygame.com	Standard Based Learning Game
www.xtramath.com www.math-drills.com	Math drills
www.themathworksheetsite.com	Resource for creating extra practice
Suggested Options for Differentiation	
Basic Skills/Economically Disadvantaged	

- Teacher modeling
- Do the Math Intervention
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities
- Centers

Gifted and Talented

- GoMath Real World Videos
- GoMath Stem Activities
- GoMath Enrich Activities
- Centers

English Language Learners

- Teacher modeling
- Vary activities by choice
- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities

Special Education

- Provide differentiated instruction as needed
- Follow all IEP modifications

- Provide manipulatives or the opportunity to draw solution strategies
- Preview lesson and pre-teach vocabulary
- Use visual cues
- Teacher modeling

504 Students

- Follow all 504 plan modifications
- Frequently check in with student
- Small group
- Provide math manipulatives and concrete examples
- Modify assignments

Grade 2 Math Unit 3

	Career Readiness, Life Literacies, and Key Skills Practices
Act as a responsible and contributing community members and employee.	Students understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

Consider the environmental, social and economic impacts of decisions.	Students understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.
Demonstrate creativity and innovation.	Students regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.
Utilize critical thinking to make sense of problems and persevere in solving them.	Students readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
Model integrity, ethical leadership and effective management.	Students consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.

Plan education and career paths aligned to personal goals.	Students take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.
Use technology to enhance productivity, increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.
Work productively in teams while using cultural/global competence.	Students positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

Computer Science and Design Thinking
Computing Systems
By the end of grade 2
Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices

interpret and follow the instructions they are given literally.
A computing system is composed of software and hardware.
Describing a problem is the first step toward finding a solution when computing systems do not work as expected.
Networks and the Internet
Computer networks can be used to connect individuals to other individuals, places, information, and ideas. The Internet enables individuals to connect with others worldwide.
Connecting devices to a network or the Internet provides great benefits, but care must be taken to use authentication measures, such as strong passwords, to protect devices and information from unauthorized access.
Impacts of Computing
Computing technology has positively and negatively changed the way individuals live and work (e.g., entertainment, communication, productivity tools).
Data & Analysis
Individuals collect, use, and display data about individuals and the world around them.
Computers store data that can be retrieved later. Data can be copied, stored in multiple locations, and retrieved.
Data can be used to make predictions about the world.
Algorithms & Programming
Individuals develop and follow directions as part of daily life.
A sequence of steps can be expressed as an algorithm that a computer can process.
Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images)

Computers follow precise sequences of steps that automate tasks.
Complex tasks can be broken down into simpler instructions, some of which can be broken down even further.
People work together to develop programs for a purpose, such as expressing ideas or addressing problems.
The development of a program involves identifying a sequence of events, goals, and expected outcomes, and addressing errors (when necessary).
Engineering Design
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions.
Limitations (constraints) must be considered when engineering designs.
Interaction of Technology and Humans
Human needs and desires determine which new tools are developed.
Technology has changed the way people live and work.
Various tools can improve daily tasks and quality of life.
Nature of Technology
Innovation and the improvement of existing technology involves creative thinking.
Effects of Technology on the Natural World
The use of technology developed for the human designed world can affect the environment, including land, water, air, plants, and animals. voiding damage to the environment.
Technologies that use natural sources can have negative effects on the environment, its quality, and inhabitants.

Reusing and recycling materials can save money while preserving natural resources and avoiding damage to the environment.
Ethics & Culture
The availability of technology for essential tasks varies in different parts of the world.

Correlation Key		
Holocaust	Amistad	Financial Literacy

Career Readiness, Life Literacies, and Key Skills   *Addressed In This Unit*
9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community.   9.1.2.CR.2: List ways to give back, including making donations, volunteering, and starting a business.   9.1.2.RM.1: Describe how valuable items might be damaged or lost and ways to protect them.   9.1.2.PB.1: Determine various ways to save and places in the local community that help people save and accumulate money over time.   9.1.2. FI.1: Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).   9.1.2.FP.2: Differentiate between financial wants and needs.   9.1.2.FP.3: Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).   *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.

- 9.4.2.DC.1: Explain differences between ownership and sharing of information.
- 9.4.2.DC.2: Explain the importance of respecting digital content of others.
- 9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.

Unit 3: Measurement and Data	Duration: March – April, ongoing
NJ Student Learning Standard: 2.MD	

Unit Summary
● Measure and estimate lengths in standard units. ● Relate addition and subtraction to length. ● Work with time and money. ● Represent and interpret data. **Unit Summary:** Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.

Primary Interdisciplinary Connections	
Science	science experiments, manipulate data, sizes of the planets, measuring plant growth, develop knowledge of temperature and weather patterns in terms of fractions
Social Studies	map skills, geography, scale models
Language Arts	open ended questions, relevant read alouds related to math are used to introduce and reinforce math concepts
Technology	interactive games/websites and interactive Smartboards

NJ Student Learning Standard: 2.MD	
A.	*Measure and estimate lengths in standard units.*
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.MD.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.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.
2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
B.	*Relate addition and subtraction to length.*
2.MD.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.MD.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.
C.	*Work with time and money.*
2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
2.MD.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?
D.	*Represent and interpret data.*
2.MD.9	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.

2.MD.10	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.
NJ Student Learning Standards for Introduction	
3.MD.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
3.MD.7	Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.

	b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters
Interdisciplinary Skills	
SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
Computer Science and Design Thinking	
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preference**s.**
8.1.2.CS.2	Explain the functions of common software and hardware components of computing systems.
8.1.2.CS.3	Describe basic hardware and software problems using accurate terminology.
8.1.2.NI.4	Explain why access to devices need to be secured.
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.2.2.ITH.3	Identify how technology impacts or improves life.
Essential Understandings	**Essential Questions**

Students will understand that... ● Measurement is used to understand and describe the world including sports, construction, and explaining the environment ● The choice of measurement tools depends on the measurable attribute and the degree of precision desired ● We can use our knowledge of addition and subtraction to solve problems involving lengths ● People use data to describe the world and answer questions such as how many classmates are buying lunch today, how much it rained yesterday, or in which month are the most birthdays	● What is the purpose of measurement? ● How do we decide which tool to use to measure something? ● How can number lines and rulers be used to find sum and difference? ● How can information be gathered, recorded, and organized?

Evidence of Student Learning	
Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
Create race car out of various materials: Students measure how far their cars can race. Keep graphs, line plots, etc. of different distances.	**Formative Assessments** ● Oral Assessments, Conferencing ● Portfolio ● Math Journals ● Daily Classwork ● Pre-assessments **Summative Assessments** ● GoMath Unit Tests

	● Quizzes
	Benchmark Assessment ● GoMath Benchmark Assessment ● Linkit Assessment B **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments ● Modified Benchmarks ● GoMath Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric

Knowledge and Skills	
Content	**Skills**
Cluster: ● Measure and estimate lengths in standard units: Chapters 8, 9 ● Relate addition and subtraction to length: Chapters 8, 9 ● Work with time and money: Chapter 7 ● Represent and interpret data: Chapters 8, 10 *Students will know…* ● Lengths can be measured and estimated	*Students will be able to …* ● Measure a common object using the appropriate tool such as ruler to measure a book, etc. ● Measure a common object using two different units of measurement such as measuring a desk using both inches and feet, etc. ● Estimate the length of common objects such as a desk, a book, a chalkboard, etc.. using inches, feet, centimeters, and meters

● Addition and subtraction relate to length and measurement ● Money has value and can be expressed using $ and ● The difference between analog and digital clocks, a.m. and p.m. and understand time increments ● Data can be represented and interpreted	● Measure two objects and express the difference in their lengths ● Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units and equations with a symbol for the unknown number to represent the problem ● Create a number line correctly placing whole numbers starting with 0, and use the number line to express sums and differences of whole numbers ● Tell and write to the nearest minute and measure time intervals in minutes ● Solve word problems involving addition and subtraction of time intervals in minutes ● ==Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and cent symbols appropriately== ● Display the results of measuring objects to the nearest whole number by making a line plot ● Draw a picture graph and bar graph to represent data

Instructional Plan		
Suggested Activities	**Resources**	**Suggested Options for Differentiation**

Students will create Hairy Money Creatures.	Hairy money posters	Lower values (Basic Skills, Economically Disadvantaged) Higher values (Gifted and Talented)
Shopping activity: Students will choose 2 items to shop for, then using plastic coins show the amount they will spend in various ways	Plastic coins, various pictures of items from sale circulars	Pictures with values (English Language Learners, Basic Skills, Economically Disadvantaged) Lower values (Basic Skills, Economically Disadvantaged) Higher values (Gifted and Talented)
PayDay	Board game Pay Day	Students could play in pairs of two for extra support
Money Tic Tac Toe: Students will pick two cards with monetary values. Add the values together. If student gets the correct answer they put an x or an o on the board.	Tic Tac Toe board, plastic coins, money cards	Pictures with values (English Language Learners, Basic Skills, Economically Disadvantaged)

		Lower values (Basic Skills, Economically Disadvantaged) Higher values (Gifted and Talented)
<mark>Students will play Money Bingo.</mark>	Money bingo, chips	Pictures with values (English Language Learners, Basic Skills, Economically Disadvantaged) Lower values (Basic Skills, Economically Disadvantaged) Higher values (Gifted and Talented)
Students will sing various measurement songs.	www.flocbulary.com	Print song lyrics (Basic Skills, English Language Learners, Economically Disadvantaged)
Just in Time: Telling time	Just in Time game from Go Math Grab and Go Kit	Time cards to half hour and hour (Basic Skills, Economically Disadvantaged)

		Time cards to 5 minutes (Gifted and Talented)
Students will play Time Bingo.	Time bingo, chips	Students could play in pairs for extra support Time cards to half hour and hour (Basic Skills, Economically Disadvantaged) Time cards to 5 minutes (Gifted and Talented)
How Long?: Predicting and measuring	How Long? Game from Go Math Grab and Go Kit	
Race to the Finish: reading data on a graph	Race to the Finish game from Go Math Grab and Go Kit	
Math Literature		
- Counting on Frank by Rod Clement - How Big is a Foot by Myller, Rolf - Inch by Inch by Leonni, Leo - Pigs in the Pantry: Fun with Math and Cooking by Amy Axelrod - Twelve Snails to One Lizard: A Tale of Mischief and Measurement by Susan Hightower - Benny, Bessie, and the Blueberries - Math Reader - equal shares - Coin Trick - Math Reader - values of coins		

- ==Time to Go Shopping - Math Reader - money==
- All About Time - Math Reader - time
- All The Time - Math Reader - time
- Is it Time Yet? - Math Reader - time
- Nature Walk - Math Reader - measurement
- A Trip to the Pond - Math Reader - metric measurement
- Wow! Fluffo Sure Can Eat - Math Reader - data collection
- What do You Like? - Math Reader - data collection and display
- ==*Lisette's Angel* by Amy Littlesugar==

Websites	
www.prodigygame./com	Standard Based Learning Game
www.abcya.com	Coin identification/Counting Coins
www.themathworksheetsite.com	Resource for creating extra practice

Suggested Options for Differentiation

Basic Skills/Economically Disadvantaged

- Teacher modeling
- Vary activities by choice
- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities
- Centers
- Anchor charts, visuals

Gifted and Talented

- GoMath Real World Videos

- GoMath Stem Activities
- GoMath Enrich Activities
- Centers
- Anchor charts, visuals
- Multi-step problems

English Language Learners

- Teacher modeling
- Vary activities by choice
- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
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- Anchor charts, visuals

Special Education

- Follow all IEP modifications
- Provide differentiated instruction as needed
- Provide manipulatives or the opportunity to draw solution strategies
- Preview lesson and pre-teach vocabulary
- Use visual cues
- Teacher modeling
- Anchor charts, visuals

504 Students

- Follow all 504 plan modifications
- Frequently check in with student
- Small group

- Provide math manipulatives and concrete examples
- Modify assignments

	Grade 2 Math Unit 4

	Career Readiness, Life Literacies, and Key Skills Practices
Act as a responsible and contributing community members and employee.	Students understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
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Data & Analysis
Individuals collect, use, and display data about individuals and the world around them.
Computers store data that can be retrieved later. Data can be copied, stored in multiple locations, and retrieved.
Data can be used to make predictions about the world.
Algorithms & Programming

Individuals develop and follow directions as part of daily life.
A sequence of steps can be expressed as an algorithm that a computer can process.
Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images)
Computers follow precise sequences of steps that automate tasks.
Complex tasks can be broken down into simpler instructions, some of which can be broken down even further.
People work together to develop programs for a purpose, such as expressing ideas or addressing problems.
The development of a program involves identifying a sequence of events, goals, and expected outcomes, and addressing errors (when necessary).
Engineering Design
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions.
Limitations (constraints) must be considered when engineering designs.
Interaction of Technology and Humans
Human needs and desires determine which new tools are developed.
Technology has changed the way people live and work.
Various tools can improve daily tasks and quality of life.
Nature of Technology
Innovation and the improvement of existing technology involves creative thinking.
Effects of Technology on the Natural World

The use of technology developed for the human designed world can affect the environment, including land, water, air, plants, and animals. voiding damage to the environment.
Technologies that use natural sources can have negative effects on the environment, its quality, and inhabitants.
Reusing and recycling materials can save money while preserving natural resources and avoiding damage to the environment.
Ethics & Culture
The availability of technology for essential tasks varies in different parts of the world.

Correlation Key		
Holocaust	Amistad	Financial Literacy

Career Readiness, Life Literacies, and Key Skills *Addressed In This Unit*
9.1.2.CR.1: Recognize ways to volunteer in the classroom, school and community.   9.1.2.CR.2: List ways to give back, including making donations, volunteering, and starting a business.   9.1.2.RM.1: Describe how valuable items might be damaged or lost and ways to protect them.   *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.   9.4.2.DC.1: Explain differences between ownership and sharing of information.   9.4.2.DC.2: Explain the importance of respecting digital content of others.   9.4.2.DC.7: Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1)

- 9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.

Unit 4: Geometry	Duration: Ongoing
NJ Student Learning Standard: 2.G	
Unit Summary	
Unit Summary: Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.	

Primary Interdisciplinary Connections	
Science	shapes of the planets, experiments, symmetry in nature, timeline of moon phases
Social Studies	geography- state and continents, map skills
Language Arts	open ended questions, math literacy stories, shape journal entry
Technology	interactive games/websites, explore and expand visual patterns using the computer, and interactive Smartboard

NJ Student Learning Standard: 2.G	
A.	*Reason with shapes and their attributes.*
2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2.G.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

2.G.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.
	NJ Student Learning Standards for Introduction
3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
3.G.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.
	Interdisciplinary Skills
SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
	Computer Science and Design Thinking
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. A computing system is composed of software and hardware.
8.1.2.CS.2	Explain the functions of common software and hardware components of computing systems. Describing a problem is the first step toward finding a solution when computing systems do not work as expected.
8.1.2.CS.3	Describe basic hardware and software problems using accurate terminology.
8.1.2.NI.3	Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.
8.1.2.NI.4	Explain why access to devices need to be secured
8.1.2.DA.3	Identify and describe patterns in data visualizations.
8.1.2.AP.4	Break down a task into a sequence of steps.

Essential Understandings	Essential Questions
Students will understand that... • Geometric properties can be used to construct geometric figures • Geometric relationships provide a means to make sense of a variety of phenomena • Use fractions to name parts of groups and find fractional parts of groups	• How can spatial relationships be described by careful use of geometric language? • How can area, perimeter and fractional parts be determined through the use of rows and columns? • How do fractions help you share equally?

Evidence of Student Learning	
Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
Create race car out of various materials and geometric shapes: Race cars will then be used to race and keep track of distances. Students work in teams to create fastest car.	**Formative Assessments** • Teacher Observation • Performance Assessments • Games • Anecdotal Records • Oral Assessments, Conferencing • Portfolio/Math Journals • Daily Classwork • Pre-assessments

	Summative Assessments ● GoMath Unit Tests ● Quizzes **Benchmark Assessment** ● GoMath Benchmark Assessment ● EOY Benchmark ● Linkit Assessment C **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments ● Modified Benchmarks ● GoMath Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric
Knowledge and Skills	
Content	**Skills**
Cluster: ● Reason with shapes and their attributes: Chapter 11 *Students will know…*	*Students will be able to …* ● Analyze shapes by examining their sides and angles

• A given number of angles or a given number of faces on a specified shape • Shapes are classified • Equal shares of identical wholes need not have the same shape	• Decompose and combine shapes to make other shapes • Build, draw and analyze two- and three-dimensional shapes

Instructional Plan		
Suggested Activities	**Resources**	**Suggested Options for Differentiation**
Hershey Bar Fractions, break Hershey Bar into fractions to match parts of a story		Models with numbers (Basic Skills, English Language Learners, Economically Disadvantaged)
My Shape Riddle: Design a shape on a geoboard and give clues about your shape to your partner	Geoboards, rubber bands, http://www.k-5mathteachingresources.com/support-files/my-shape-riddle.pdf	Shape pictures as model (English Language Learners, Basic Skills, Economically Disadvantaged) Difficult shapes (Gifted and Talented)
Fraction Barrier Game work with a partner, color fraction and give partner clues. Take away divider and see how closely fractions match.	http://www.k-5mathteachingresources.com/support	Models with numbers (Basic Skills, English Language Learners,

	-files/fraction-barrier-game.pdf	Economically Disadvantaged)
Happy Helpers: Identifying 2 dimensional shapes	Happy Helpers game from Go Math Grab and Go Kit	Picture models (English Language Learners, Basic Skills, Economically Disadvantaged)
Hidden Figures: Classify 2 dimensional figures	Hidden Figures game from Go Math Grab and Go Kit	Picture models (English Language Learners, Basic Skills, Economically Disadvantaged)

Math Literature		

- The Greedy Triangle by Marilyn Burns
- Grandfather Tang's Story by Ann Tompert
- Lao Lao of Dragon Mountain by Margaret Bateson-Hill
- Shapes, Shapes, Shapes by Tana Hoban
- Gator Pie by Louise Matthews
- Eating Fractions by Bruce McMillan
- Only One by Marc Harshman
- Building a Mini-Park - Math Reader - 3 dimensional shapes
- Square Fair - Math Reader - decomposing 3 dimensional shapes
- Taking Shape - Math Reader - seeing shapes within shapes
- *The Patchwork Path: A Quilt Map to Freedom* by Bette Stroud

Websites	
www.themathworksheetsite.com	Resource for creating extra practice

www.prodigygame.com	Standard Based Learning Game

Suggested Options for Differentiation

Basic Skills/Economically Disadvantaged

- *Do The Math* intervention
- Teacher modeling
- Vary activities by choice
- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities
- Centers
- Anchor charts, visuals

Gifted and Talented

- GoMath Real World Videos
- GoMath Stem Activities
- GoMath Enrich Activities
- Centers
- Anchor charts, visuals
- Multi-step problems

English Language Learners

- Teacher modeling
- Vary activities by choice

- Reminders as needed
- Pre-Teach vocabulary or pre-teach lesson
- GoMath Reteach Activities
- GoMath Intensive and/or Strategic Intervention activities
- Anchor charts, visuals

Special Education

- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Provide manipulatives or the opportunity to draw solution strategies
- Preview lesson and pre-teach vocabulary
- Use visual cues
- Teacher modeling
- Anchor charts, visuals

504

- Follow specific 504 accommodations and modifications
- Preferential Seating
- Extended time on tests and assignments
- Restate directions