## **NEPTUNE CITY SCHOOL DISTRICT**

# Math Curriculum Grade 2



## NEPTUNE CITY SCHOOL DISTRICT

Office of the Chief School Administrator, Principal 210 West Sylvania Avenue Neptune City, NJ 07753

The Neptune City School District is appreciative and proud to accept and align the curriculum of the Neptune Township School District to properly prepare the Neptune City students for successful integration into the Neptune Township High School Educational Program.

August 2024

Document \*

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## SCHOOL DISTRICT MISSION STATEMENT

The Neptune City School District, in partnership with the parents and the community, will support and sustain an excellent system of learning, promote pride in diversity, and expect all students to achieve the New Jersey Student Learning Standards at all grade levels to become responsible and productive citizens.

## NEPTUNE CITY SCHOOL DISTRICT

## MATH CURRICULUM GRADE 2

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## **Suggested Pacing Guide**

<u>Topic/Unit</u>	<u>Number of</u> <u>Lessons</u>	<u>Total Days</u>
Topic 1: Fluently Add and Subtract Within 20	10	September/ 14 days
Topic 2: Work with Equal Groups	5	September/ 9 days
Topic 3: Add Within 100 Using Strategies	9	October/ 13 days
Topic 4: Fluently Add Within 100	8	October-November/ 12 days
Topic 5: Subtract Within 100 Using Strategies	9	November/ 13 days
Topic 6: Fluently Subtract Within 100	9	December/ 13 days
Topic 7: More Solving Problems Involving Addition and Subtraction	6	December/ 10 days
Topic 8: Work with Time and Money	8	January/ 12 days
Topic 9: Numbers to 1,000	10	January-February/ 14 days
Topic 10: Add Within 1,000 Using Models and Strategies	7	March/ 11 days
Topic 11: Subtract Within 1,000 Using Models and Strategies	7	March/ 11 days
Topic 12: Measuring Lengths	9	April/ 12 days
Topic 13: Shapes and Their Attributes	8	April-May/ 12 days
Topic 14: More Addition, Subtraction, and Length	5	May/ 9 days
Topic 15: Graphs and Data	6	June/ 10 days

Topic 1	Fluently Add and Subtract Within 20
Suggested Time Frame	September / 14 days

### **Overview/ Rationale of Unit**

Topic 1 focuses on using strategies to achieve fluency with addition and subtraction within 20.

#### **Desired Results**

## Established Goals:

#### New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.

#### **Essential Questions:**

• What are strategies for finding addition and subtraction facts?

#### **Enduring Understandings:**

Students will understand that...

- Counting on is a strategy that can be used to find sums.
- The order of the addends does not change the sum.
- Basic addition facts that are near doubles can be found using related doubles fact.
- Some addition can be found by changing to an equivalent fact with 10.
- Patterns in a 0-10 addition facts table are useful for adding numbers and for developing mental math strategies and number sense.
- A number line is a tool you can use to help you count on or count back to subtract.
- Some subtraction facts can be simplified by making use of the numbers' relationships to 10.
- The addends determine efficient strategies, such as making 10 or using doubles facts, for finding addition facts.
- "Think of a related addition fact" is an efficient strategy for finding a subtraction fact.
- Objects, diagrams, and equations can help you solve different types of word problems.
- Good math thinkers use math to explain why they are right.
- They can talk about the math that others do, too.

#### Skills:

Students will be able to...

• Use counting on to add numbers in any order.

- Use doubles and near doubles to add quickly and accurately.
- Use the strategy of making a ten to add quickly and accurately.
- Use number patterns on an addition facts table to complete addition equations.
- Count on and count back on a number line to subtract.
- Think addition to subtract quickly and accurately.
- Make a 10 to subtract quickly and accurately.
- Add and subtract quickly and accurately using mental math strategies.
- Use addition and subtraction to solve word problems.
- Use words, pictures, numbers and symbols to construct viable math arguments.

Topic Vocabulary			
Key Vocabulary:	Equation		
	• Addend		
	• Sum		
	• Doubles		
	• Near doubles		
	• Difference		
	Bar diagram		

Assessment Evidence		
Formative Assessment(s) and Evidence of	Summative Assessment(s) and	
Learning:	Performance Task(s):	
Assessment Check-In	• End of Topic Assessment	
Informal Observations	Benchmark Assessments	
Convince Me! Practice Questions	• Pick a Project	
Guided Practice Problems	Student Work Products	
Independent Practice Problems		
<ul> <li>Problem Solving Problems</li> </ul>		
Quick Check Problems		
• Games		
Questioning		

Learning Plan			
	Suggested Learning Activities	5	
For Each Topic			
• Pick a Project			
• 3-Act Math			
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandii</li> <li>Build Mathematical Literacy period</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below		
Matarialas Canadina antes (an	Math Centers and Games	ahina Taal () Manahan linaa	
(Tagahing Tagl 12)	Teaching Tool 5), Counters (or Tea	icning 1001 6), Number lines	
Intervention Activities	Technology Center	Activity Center	
<ul> <li>Windmill Facts 1-1</li> <li>Clap-Clap-Stomp Near Doubles 1-2</li> <li>Stacking and Making a 10 1-3</li> <li>Count on Counters 1-4</li> <li>Counting on Connecting Cubes 1-5</li> <li>Subtraction Stories 1-6</li> <li>Use Ten on a Number Line 1-7</li> <li>Reviewing Basic Facts 1-8</li> <li>Using Bar Diagrams to Solve Compare Problems 1-9</li> <li>Words, Pictures and Numbers 1, 10</li> </ul>	<ul> <li>Www.SavvasRealize.com</li> <li>Fancy Flea-Missing Parts 1-1, 1-9</li> <li>Flying Cow Incident 1-4, 1-6, 1-7, 1-8</li> <li>Fluency- Add and Subtract Within 20 1-10</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>A Trip to the Zoo 1-1</li> <li>Adding with Paper 1-2</li> <li>Backyard Bugs 1-9</li> </ul> <u>Topic 1 Pick a Project</u> Projects should be worked on during lessons without other Activity Center option from list above. <ul> <li>Make an Insect and Spider Poster</li> <li>Collect Water Data</li> <li>Create a Shape Collage</li> </ul>	

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply –		Indicate whether these skills are:		
			• E – encouraged		
	21 <sup>st</sup> Century Themes		• T – taught		
			•	A – assessed	
				<b>Career Ready Practices</b>	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
	and Preparation			leadership and effective management.	
X	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
Interdisciplinary Connections					

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

#### **Technology Integration**

#### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

### 8.2 Technology Integration, Engineering, Design and Computational Thinking -Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

\_\_\_\_\_Recognize one's own feelings and thoughts

- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations

\_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

<u>x</u> Recognize the skills needed to establish and achieve personal and educational goals

<u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- <u>x</u> Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- \_\_\_\_\_Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- \_\_\_\_\_Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 2	Work with Equal Groups
Suggested Time Frame	September / 9 days

## **Overview/ Rationale of Unit**

Topic 2 focuses on determining whether a number is even or odd, and on finding the total number of objects in situations involving equal groups of objects.

#### **Desired Results**

#### Established Goals: New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.

#### **Essential Questions:**

- How can you show even and odd numbers?
- How do arrays relate to repeated addition?

## **Enduring Understandings:**

Students will understand that...

- Numbers can be classified as even or odd by showing numbers as two equal parts.
- A group of objects (or a number) can also be classified as even or odd by analyzing skip-counting patterns.
- An even number can be written as a sum of equal addends.
- An array shows equal groups, so you can write equations using repeated addition to find the total number of objects in an array.
- You can make arrays and write equations using repeated addition to help solve problems.
- Good math thinkers use math they know to show and solve problems.

#### Skills:

Students will be able to...

- Tell if a group of objects is even or odd.
- Use different ways to tell if a group of objects shows an even or odd number.
- Find the total number of objects in a set of rows and columns.
- Make arrays with equal rows or equal columns to solve addition problems.
- Model problem using equations, drawings and arrays.

Topic Vocabulary			
Key Vocabulary:	• Even		
	• Odd		
	• Array		
	• Rows		
	Columns		

Assessment Evidence		
Formative Assessment(s) and Evidence of	Summative Assessment(s) and	
Learning:	Performance Task(s):	
• Assessment Check-In	• End of Topic Assessment	
<ul> <li>Informal Observations</li> </ul>	Benchmark Assessments	
Convince Me! Practice Questions	• Pick a Project	
Guided Practice Problems	Student Work Products	
Independent Practice Problems		
<ul> <li>Problem Solving Problems</li> </ul>		
Quick Check Problems		
• Games		
• Questioning		

## Learning Plan

## **Suggested Learning Activities**

## For Each Topic...

- Topic Opener Activity
- Pick a Project
- 3-Act Math

## For each lesson...

- Daily Review
- Solve and Share
- Visual Learning Bridge
- Convince Me
- Guided Practice
- Independent Practice
- Problem Solving
- Quick Check
- Reteach to Build Understanding pages
- Build Mathematical Literacy pages
- Enrichment pages
- Additional Practice Pages
- Math Centers and Games from lists below

Math Centers and Games			
Materials: Connecting cubes (or Teaching Tool 5), Counters (or Teaching Tool 6)			
Intervention Activities	<b>Technology Center</b>	Activity Center	
<ul> <li>Odd and Even Towers 2-1</li> <li>Even Rectangles 2-2</li> <li>Count on Counters! 2-3</li> <li>Hooray Arrays! 2-4</li> <li>Pictures and Equations! 2-5</li> </ul>	<ul> <li>www.SavvasRealize.com</li> <li>Fluency- Add and Subtract within 20 math game 2-5</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>Go Fish 2-2</li> <li>Frogs and Lily Pads 2-3</li> <li>Fish in School 2-4</li> <li>Underwater Groups 2-5</li> <li>Pick a Project</li> <li>Projects should be worked on during lessons without other</li> <li>Activity Center option from list above.</li> <li>Collect Bird Data</li> <li>Make a Scutes Poster</li> <li>Create an Orchard Model</li> <li>Draw a Picture of Flowers</li> </ul>	

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply –		Indicate whether these skills are:		
			•	E – encouraged	
	21 <sup>st</sup> Century Themes		•	T – taught	
			•	A – assessed	
				Career Ready Practices	
9.1	Personal Financial Literacy		E	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
X	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	

9.2	Career Awareness, Exploration, and Preparation			CRP9. Model integrity, ethical leadership and effective management.
Х	Career Awareness			CRP10. Plan education and career paths aligned to personal goals.
	Career Exploration		Е	CRP11. Use technology to enhance productivity.
	Career Preparation			CRP12. Work productively in teams while using cultural global competence.
Interdisciplinary Connections				

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

## **Technology Integration**

## x\_\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

\_Recognize one's own feelings and thoughts

- Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
  - \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

### Self-Management

 $\underline{x}$  Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

#### **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
  - \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- \_\_\_\_\_Identify the consequences associated with one's action in order to make constructive choices
- \_\_\_\_\_Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- Establish and maintain healthy relationships
- \_\_\_\_\_Utilize positive communication and social skills to interact effectively with others
- \_\_\_\_\_Identify ways to resist inappropriate social pressure
- \_\_\_\_\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 3	Add Within 100 Using Strategies
Suggested Time Frame	October / 13 days

## **Overview/ Rationale of Unit**

Topic 3 focuses on addition within 100 using strategies that employ a hundred chart, an open number line, breaking numbers apart, and compensation.

#### **Desired Results**

## Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.

#### **Essential Questions:**

• What are strategies for adding numbers to 100?

## **Enduring Understandings:**

Students will understand that...

- Patterns on a hundred chart can be used to add numbers and to developmental math strategies and numbers sense.
- Two-digit numbers can be broken apart using tens and ones and added in different ways.
- You can represent how you break apart and add numbers with hops or jumps on an open number line.
- Two-digit numbers can be broken apart using 10s and ones and added in different ways.
- When adding two digit numbers, you can add an amount to one addend and subtract the same amount from another addend to make addition easier.
- There are different ways to add two digit numbers.
- Certain strategies may be better to use for a problem than others.

## Skills:

Students will be able to ...

- Add within 100 using place-value strategies and a hundred chart.
- Use an open number line to add tens and ones within 100.
- Break apart numbers into tens and ones to find their sum.
- Break apart addends and combine them in different ways to make numbers that are easy to add mentally.
- Choose and use any strategy to add two digit numbers.

Topic Vocabulary				
Key Vocabulary:	• Tens			
	• Ones			
	Open number line			
• Break apart				
	Compensation			

Assessment Evidence					
Formative Assessment(s) and Evidence of	Summative Assessment(s) and				
Learning:	Performance Task(s):				
Assessment Check-In	• End of Topic Assessment				
Informal Observations	Benchmark Assessments				
Convince Me! Practice Questions	• Pick a Project				
Guided Practice Problems	Student Work Products				
Independent Practice Problems					
<ul> <li>Problem Solving Problems</li> </ul>					
Quick Check Problems					
• Games					
Questioning					

## Learning Plan

## **Suggested Learning Activities**

## For Each Topic...

- Topic Opener Activity
- Pick a Project
- 3-Act Math

#### For each lesson...

- Daily Review
- Solve and Share
- Visual Learning Bridge
- Convince Me
- Guided Practice
- Independent Practice
- Problem Solving
- Quick Check
- Reteach to Build Understanding pages
- Build Mathematical Literacy pages
- Enrichment pages
- Additional Practice Pages
- Math Centers and Games from lists below

## Math Centers and Games

Materials: Hundred chart (Teaching Tool 17),						
<b>Intervention Activities</b>	<b>Technology Center</b>	Activity Center				
<ul> <li>Switching Strategies 3-1</li> <li>The Numbers Under the Line 3-2</li> <li>Break Apart an Addend 3-3</li> </ul>	<ul> <li>www.SavvasRealize.com</li> <li>Robo Launch 2-Digit Number Practice 3-1, 3-4, 3-5</li> <li>Flying Cow Incident</li> </ul>	<ul> <li>African Lions 3-3</li> <li>Rock Sums 3-4</li> <li>What a River 3-5</li> <li>Fierce Felines 3-6</li> </ul>				
<ul> <li>Using Compensation to Make a 10! 3-4</li> <li>Use that Strategy 3-5</li> <li>A Model Two-Step Problem! 3-6</li> </ul>	<ul> <li>2-Digit Numbers 3-2</li> <li>Launch that Sheep Add and Subtract 1, 2, 5, 10 game 3-3</li> </ul>	Projects should be worked on during lessons without other Activity Center option from list above.				
• Choose a Tool! 3-7	<ul> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>Make a Map to the Game</li> <li>Write a List of Air Travel Tasks</li> <li>Create an Olympics Poster</li> </ul>				

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	Credit and Debt Management		ETA	CRP4. Communicate clearly and		
	_			effectively and with reason.		
	Planning, Saving, and Investing			CRP5. Consider the environmental,		
				social and economic impacts of		
				decisions.		
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and		
				innovation.		
	Civic Financial Responsibility			CRP7. Employ valid and reliable		
				research strategies.		
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to		
				make sense of problems and persevere		
			in solving them.			
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical		
	and Preparation			leadership and effective management.		

Х	Career Awareness			CRP10. Plan education and career paths aligned to personal goals.	
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Career Preparation CRP12. Work productively in teams while using cultural global competence.					
Interdisciplinary Connections					

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NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

## **Technology Integration**

## <u>x</u>8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

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- Teacher Websites
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## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

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## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

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\_\_\_\_\_Recognize one's own feelings and thoughts

\_\_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior

Recognize one's personal traits, strengths and limitations

\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$  Understand and practice strategies for managing one's own emotions, thoughts and behaviors

<u>x</u>\_Recognize the skills needed to establish and achieve personal and educational goals

<u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- <u>x</u>\_Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- \_\_\_\_\_Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- \_\_\_\_\_Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- \_\_\_\_\_Identify ways to resist inappropriate social pressure
- \_\_\_\_\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 4	Fluently Add Within 100
Suggested Time Frame	October-November / 12 days

## **Overview/ Rationale of Unit**

Topic 4 focuses on developing computational fluency in addition within 100 by using models, understanding of place value, properties of operations, the partial-sums method, and mental math.

#### **Desired Results**

#### **Established Goals:**

#### New Jersey Student Learning Standards for Mathematics (NJSLS)

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

#### **Essential Questions:**

• What are strategies for adding numbers to 100?

#### **Enduring Understandings:**

Students will understand that...

- Strategies for adding two-digit numbers involved breaking numbers apart using place value and joining tens and ones in either order.
- Sometimes 10 ones can be composed to make 1 ten.
- One way to add two digit numbers is to break the numbers into tens and ones, add the tens and add the ones in either order, and then add these partial sums to find the total.
- One way to add two digit numbers is to break the numbers into tens and ones.
- One way to add two digit numbers is to break just one addend into tens and ones, add the tens to the other addend, and then add the ones.
- Strategies for adding two two digit numbers can be extended to adding more than two two digit numbers.
- Numbers can be added in any order.
- There are several addition strategies that can be used to add more than two numbers.
- Numbers can be added in any order.
- Some problems can be solved in one step. Other problems can be solved in two steps first, by solving a sub problem or by answering a hidden question, and then by using that answer to solve the original problem.

• Good math thinkers use math they know to show and solve problems.

#### Skills:

Students will be able to...

- Use models to add two digit numbers and then explain the work.
- Add two digit numbers using models.
- Add using place value and partial sums.
- Add using mental math, please value, and partial sums.
- Add using place value strategies and mental math.
- Add three or four two digit numbers.
- Practice using strategies to add more than two numbers.
- Use drawings, models, and equations to solve one and two-step problems.
- Make models to help solve math problems.

Topic Vocabulary				
Key Vocabulary:	<ul> <li>Regroup</li> <li>Partial sum</li> <li>Mental math</li> <li>Compatible numbers</li> </ul>			

Assessme	ent Evidence
Formative Assessment(s) and Evidence of	Summative Assessment(s) and
Learning:	Performance Task(s):
Assessment Check-In	End of Topic Assessment
Informal Observations	Benchmark Assessments
Convince Me! Practice Questions	• Pick a Project
Guided Practice Problems	Student Work Products
Independent Practice Problems	
Problem Solving Problems	
Quick Check Problems	
• Games	
Questioning	

Learning Plan						
	Suggested Learning Activities	8				
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>						
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandin</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below					
	Math Centers and Cames					
Materials: Place value blocks Pa	artial sums charts Place-Value Mat	A Bar diagrams				
Intervention Activities	Technology Center	Activity Center				
<ul> <li>Index Card Addition 4-1</li> <li>Sum of Sums 4-2</li> <li>Put it Together 4-3</li> <li>Bit by Bit 4-4</li> <li>Summing it Up 4-5</li> <li>Strategies 4-6</li> <li>Ticket Totals 4-7</li> <li>Let's Solve and Check! 4-8</li> <li>Parts Everywhere 4-9</li> </ul>	<ul> <li>www.SavvasRealize.com</li> <li>Robo Launch 2-Digit Number Practice 4-1, 4-5, 4-6</li> <li>Flying Cow Incident 2-Digit Numbers 4-1, 4-3, 4-4, 4-7</li> <li>Save the Word Grade 2 Topics 1-4 math game 4-9</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>Flowing Lava 4-3</li> <li>Flowing Lava 4-3</li> <li>The World's Sport 4-4</li> <li>How Many Goals? 4-6</li> <li>Glacier Math 4-9</li> <li>Projects should be worked on during lessons without other Activity Center option from list above.</li> <li>Make a Bike Trail Brochure</li> <li>Build a Coral Model,</li> <li>Display a Rock and Leaf Collection</li> <li>Make a Space Center Poster</li> </ul>				

	In this unit plan, the following 21st Century Life and Careers skills are addressed:					
	Check ALL that apply –			Indicate whether these skills are:		
			•	E – encouraged		
21 <sup>st</sup> Century Themes			•	T – taught		
			•	A – assessed		
				<b>Career Ready Practices</b>		
9.1	Personal Financial Literacy		E	CRP1. Act as a responsible and		
				contributing citizen and employee.		
	Income and Careers		TA	CRP2. Apply appropriate academic		
				and technical skills.		
Х	Money Management		Т	CRP3. Attend to personal health and		
				financial well-being.		
	Credit and Debt Management		ETA	CRP4. Communicate clearly and		
				effectively and with reason.		
	Planning, Saving, and Investing			CRP5. Consider the environmental,		
				social and economic impacts of		
				decisions.		
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and		
				innovation.		
	Civic Financial Responsibility			CRP7. Employ valid and reliable		
				research strategies.		
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to		
				make sense of problems and persevere		
				in solving them.		
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical		
	and Preparation			leadership and effective management.		
X	Career Awareness			CRP10. Plan education and career		
				paths aligned to personal goals.		
	Career Exploration		E	CRP11. Use technology to enhance		
				productivity.		
	Career Preparation			CRP12. Work productively in teams		
				while using cultural global competence.		
	Interdisciplinary Connections					

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

### **Technology Integration**

#### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

### 8.2 Technology Integration, Engineering, Design and Computational Thinking -Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

\_\_\_\_\_Recognize one's own feelings and thoughts

- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations

\_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

<u>x</u> Recognize the skills needed to establish and achieve personal and educational goals

<u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- <u>x</u> Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- \_\_\_\_\_Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- \_\_\_\_\_Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 5	Subtract Within 100 Using Strategies
Suggested Time Frame	November/ 13 days

## **Overview/ Rationale of Unit**

Topic five focuses on subtraction within 100 using strategies that employ a hundred chart, and open number line, breaking numbers apart, and compensation.

#### **Desired Results**

## Established Goals:

- New Jersey Student Learning Standards for Mathematics (NJSLS)
- 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.
- 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.

## **Essential Questions:**

What are strategies for subtracting numbers to 100?

## **Enduring Understandings:**

Students will understand that...

- Patterns on a hundred chart can be used to subtract numbers and to develop mental math strategies and number sense.
- Two digit numbers can be broken apart using tens and ones to subtract in different ways.
- You can represent how you break apart and subtract numbers with hops or jumps on an open number line.
- Two digit numbers can be broken apart using tens and ones to subtract in different ways.
- One digit numbers can be broken apart to make it easier to subtract them mentally.
- When subtracting two-digit numbers, you can add the same amount to both numbers in the problem.
- There are different ways to subtract two-digit numbers.
- Certain strategies may be better to use for a problem than others.
- You can use bar diagrams, equations, and the relationship between addition and subtraction to help you solve one and two-step word problems.

• Good math thinkers use math to explain why they are right. They can talk about the math that others do, too.

## Skills:

Students will be able to ...

- Use a hundred chart to subtract tens and ones.
- Use an open number line to subtract tens and ones.
- Add up to subtract using an open number line.
- Break apart one-digit numbers to make it easier to subtract mentally.
- Make numbers that are easier to subtract, and use mental math to find the difference.
- Choose and use any strategy to subtract two digit numbers.
- Solve one and two step problems using addition or subtraction.
- Critique the thinking of others by using what is known about addition and subtraction.

Topic Vocabulary		
Key Vocabulary:	Review words from previous topics	

Assessment Evidence				
Formative Assessment(s) and Evidence of	Summative Assessment(s) and			
Learning:	Performance Task(s):			
Assessment Check-In	• End of Topic Assessment			
Informal Observations	Benchmark Assessments			
Convince Me! Practice Questions	• Pick a Project			
Guided Practice Problems	Student Work Products			
Independent Practice Problems				
Problem Solving Problems				
Quick Check Problems				
• Games				
Questioning				
-				

Learning Plan				
	Suggested Learning Activities	<b>š</b>		
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>				
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understanding pages</li> <li>Build Mathematical Literacy pages</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from lists below</li> </ul>				
	Math Centers and Games			
<b>Materials:</b> Open number lines (te block (or teaching tool 19), Bar d tool 28)	eaching tool 14), Hundred chart (tea iagrams, Compensation strategies,	aching tool 17), Place-value Break-apart strategies (teaching		
<ul> <li>Intervention Activities</li> <li>What's the Difference 5-1</li> <li>Subtraction Drawings and Equations 5-2</li> <li>Add Up to Subtract 5-3</li> <li>Break Apart the Subtrahend 5-4</li> <li>Compensate to Subtract 5-5</li> <li>Pick a Strategy, Any Strategy! 5-6</li> <li>The Parts and the Whole! 5-7</li> <li>Agree or Disagree? 5-8</li> </ul>	<ul> <li>Technology Center</li> <li>www.SavvasRealize.com</li> <li>Robo Launch Add and Subtract 2-Digit Numbers 5-1, 5-5, 5-6</li> <li>Flying Cow Incident 2-Digit Numbers game 5-3</li> <li>Launch That Sheep- Add and Subtract 1, 2, 5, 10 math game 5-4</li> <li>Fluency- Add and Subtract within 20 math game 5-7</li> <li>Save the Word: Grade 2, Topics 1-4 math game 5-8</li> </ul>	<ul> <li>Activity Center <ul> <li>A Perfect Penny 5-2</li> <li>Wood Changes 5-3</li> <li>A Clutch of Eggs 5-4</li> <li>Watching and Waiting 5-5</li> </ul> </li> <li>Pick a Project <ul> <li>Projects should be worked on during lessons without other</li> <li>Activity Center option from list above.</li> <li>Write a Story About a Tortoise</li> <li>Create a Weather Report</li> <li>Research and Compare Moons</li> </ul> </li> </ul>		

- Whole! 5-7 Agree or Disagree? 5-8
  - - Moons Math Tools (use for • lessons without specific

Technology Center	
activity from list above)	

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply – Indicate whether these skills are:			te whether these skills are:	
			•	E – encouraged	
21 <sup>st</sup> Century Themes			•	T – taught	
			•	A – assessed	
				Career Ready Practices	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
	and Preparation			leadership and effective management.	
Х	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
Interdisciplinary Connections					

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science: 2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.

### **Technology Integration**

#### <u>x</u>8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

- \_\_\_\_\_Recognize one's own feelings and thoughts
- Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$  Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- $\underline{x}$  Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- <u>x</u> Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- Identify ways to resist inappropriate social pressure
- \_\_\_\_\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 6	Fluently Subtract Within 100					
Suggested Time Frame	December / 13 days					
	Overview/ Rationale of Unit					
Topic six focuses on developing computational fluency and subtraction within 100 by using understanding of place value, properties of operations, mental math, and the partial-differences strategy.						
	Desired Results					
<ul> <li>based on place value, properties of operations, and/or the relationship between addition and subtraction.</li> <li>2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.</li> <li>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.</li> </ul>						
Essential Questions: What are strategies	for subtracting numbers to 100?					
<ul> <li>Enduring Understandings: Students will understand that</li> <li>When you use place-value materials to subtract a one - digit whole number from a 2-digit whole number, sometimes you need to decompose 1 ten as 10 ones.</li> <li>When you use place value materials to subtract a two-digit number from a two-digit whole number, sometimes you need to decompose 1 ten as 10 ones.</li> <li>When subtracting, you can start with the tens or the ones.</li> <li>Subtraction problems involving 2-digit numbers can be solved using different subtraction strategies.</li> <li>2-step word problems can be solved by first identifying and solving a hidden question. The answer to the hidden question is then used to answer this question given in the problem.</li> <li>A bar diagram can be used to identify the relationship between quantities and a word problem and the operation(s) needed to solve it.</li> </ul>						

- Use place value and models to subtract 1-digit numbers.
- Use place value models to subtract 2-digit numbers.
- Subtract using place value and partial differences.
- Break apart 2-digit numbers to make it easier to subtract.
- Subtract 2-digit numbers using a variety of subtraction strategies.
- Use models and equations to solve word problems.
- Reason about word problems and use bar diagrams and equations to solve them.

Topic Vocabulary		
Key Vocabulary:	Partial differences	

Assessment Evidence				
Formative Assessment(s) and Evidence of	Summative Assessment(s) and			
Learning:	Performance Task(s):			
Assessment Check-In	End of Topic Assessment			
Informal Observations	Benchmark Assessments			
Convince Me! Practice Questions	• Pick a Project			
Guided Practice Problems	Student Work Products			
Independent Practice Problems				
Problem Solving Problems				
Quick Check Problems				
• Games				
Questioning				

	Learning Plan	
	Evanasted Learning Activities	~
For Each Topic • Topic Opener Activity	Suggested Learning Activities	<u>)</u>
<ul><li>Pick a Project</li><li>3-Act Math</li></ul>		
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandi</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below	
	Math Centers and Games	
<b>Materials:</b> Place value blocks (te (teaching tools 15, 16, and 23)	aching tool 19, place-value mat A	(teaching tool 26), Bar diagrams
<ul> <li>Intervention Activities</li> <li>Take It AWay 6-1</li> <li>Trading 1 Ten for 10 Ones 6-2</li> <li>Using Partial Differences 6-3</li> <li>Break Apart Tens and Ones to Subtract 6-4</li> <li>Subtract to Solve , and Add to Check 6-5</li> <li>Disappearing Bread Rolls 6-6</li> <li>Using Comparison Bar Diagrams 6-7</li> </ul>	<ul> <li>Technology Center</li> <li>Www.SavvasRealize.com</li> <li>Flying Cow Incident 2-Digit Numbers math game 6-1</li> <li>Robo Launch Add and Subtract 2-Digit Numbers math game 6-2, 6-3</li> <li>Launch that Sheep Add and Subtract 1, 2, 5, 10 math game 6-4</li> <li>Fluency Add and Subtract Within 100 math game 6-5</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	Activity Center• Castles 6-2• Lake Math 6-3• Melting Math 6-6• It's Up to You 6-7Pick a ProjectProjects should be worked on during lessons without other Activity Center option from list above.• Make a Model of a Snake and Its Nest• Compare and Contrast Classroom Sizes• Draw a Map of Some State Places• Perform a Skit About Constellations

I

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply –	Indicate whether these skills are:			
			•	E – encouraged	
21 <sup>st</sup> Century Themes			•	T – taught	
			•	A – assessed	
				<b>Career Ready Practices</b>	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
	and Preparation			leadership and effective management.	
X	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
Interdisciplinary Connections					

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science:

2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.
## **Technology Integration**

### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

### 8.2 Technology Integration, Engineering, Design and Computational Thinking -Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

Recognize one's own feelings and thoughts

- \_\_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations

\_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## **Self-Management**

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- <u>x</u> Recognize and identify the thoughts, feelings, and perspectives of others
  - \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

- \_\_\_\_\_Establish and maintain healthy relationships
- \_\_\_\_\_Utilize positive communication and social skills to interact effectively with others
- \_\_\_\_\_Identify ways to resist inappropriate social pressure
- \_\_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 7	More Solving Problems Involving Addition and Subtraction
Suggested Time Frame	December / 10 days

Topic 7 focuses on representing and solving one- and two-step word problems involving addition and subtraction situations. Students represent the numerical relationships in the word problems using drawings, bar diagrams, and equations with a symbol for the unknown number. Then they fluently add and subtract within 100 to find the solution. They also determine the unknown quantity in addition and subtraction equations.

#### **Desired Results**

## New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.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.

#### **Essential Questions:**

**Established Goals:** 

How can you solve word problems that use adding and subtraction?

#### **Enduring Understandings:**

Students will understand that...

- A bar diagram can be used to show the relationship between quantities and a real-world problem, and an equation can be written to represent that relationship
- Strategies for adding and subtracting whole numbers can be used to find unknowns.
- Strategies for adding and subtracting whole numbers can be used to find unknowns.
- Sometimes a problem has an unstated, or hidden, question that you need to answer before you can find the final answer.
- Sometimes the answer to one problem is needed to find the answer to another problem.
- An equation can have different numerical expressions on each side of the equal sign, but each has the same value.
- Reasoning can be used to identify relationships between quantities and real-world problems.

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Students will be able to ...

Model problems using equations with unknowns in any position. Use drawings and equations to make sense of the words in problems. Model and solve two-step problems using equations Use different ways to solve two-step problems Find unknown numbers in equations that relate four whole numbers. Find unknown numbers in equations that relate four or more whole numbers. Use reasoning to write and solve number stories.

Topic Vocabulary		
Key Vocabulary:	• Review words from previous topics	

Assessme	ent Evidence
Formative Assessment(s) and Evidence of	Summative Assessment(s) and
Learning:	Performance Task(s):
Assessment Check-In	End of Topic Assessment
Informal Observations	Benchmark Assessments
Convince Me! Practice Questions	Pick a Project
Guided Practice Problems	Student Work Products
Independent Practice Problems	
Problem Solving Problems	
Quick Check Problems	
• Games	
Questioning	
-	

	Learning Plan	
	Suggested Learning Activities	S
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>		
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understanding</li> <li>Build Mathematical Literacy point</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below	
	Math Centers and Games	
<b>Materials:</b> Red and blue colored Comparison bar diagrams (teaching)	pencils, REd and blue cubes, Conr ng tool 23) markers bar diagrams	ecting cubes (teaching tool 5), (teaching tool 15 and 16)
<ul> <li>Intervention Activities</li> <li>Parts and Whole 7-1</li> <li>The Language of Compare 7-2</li> <li>Dare to Compare 7-3</li> <li>Step by Step 7-4</li> <li>Come and Go 7-5</li> <li>Model with Bar Diagrams 7-6</li> <li>Add, Add, Add 7-7</li> <li>Story Time 7-8</li> </ul>	<ul> <li>Technology Center</li> <li>www.SavvasRealize.com</li> <li>Robo Launch Add and Subtract 2-Digit Numbers math game 7-4, 7-5</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	Activity Center         • Tree Protection 7-3         • Toy Vehicles for Sale         7-4         • Sandbag Math 7-5         • Bike Trail 7-8         Pick a Project         Projects should be worked on         during lessons without other         Activity Center option from list         above.         • Design a Player Card         • Build a Skyscraper         Model         • Create a Worksheet of         Cave Problems

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply – Indicate whether these skills are:				
	• E – encouraged			E – encouraged	
	21 <sup>st</sup> Century Themes		•	T – taught	
			•	A – assessed	
				<b>Career Ready Practices</b>	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
	and Preparation			leadership and effective management.	
X	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
	Interdiscir	olin	arv Cor	nnections	

Other standards covered:

NJ Learning Standards for Science:

2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.

K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

## **Technology Integration**

### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

# 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

\_\_\_\_\_Recognize one's own feelings and thoughts

- \_\_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations

\_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
  - \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

- \_\_\_\_\_Establish and maintain healthy relationships
- \_\_\_\_\_Utilize positive communication and social skills to interact effectively with others
- \_\_\_\_\_Identify ways to resist inappropriate social pressure
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 8	Work with Time and Money
Suggested Time Frame	January / 12 days

Topic 8 focuses on identifying and counting coins and bills, solving word problems about money, telling time to the nearest 5 minutes using a.m. and p.m., and telling time before and after the hour.

#### **Desired Results**

#### Established Goals: New Jersey Student Lear

- New Jersey Student Learning Standards for Mathematics (NJSLS)
  2.M.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and
- pennies, using and  $\phi$  symbols appropriately.
- 2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.

## **Essential Questions:**

• Solve problems with coins.

## **Enduring Understandings:**

Students will understand that...

- Each kind of coin has a specific value unrelated to its physical size.
- Money is measurable, and the value of coins can be quantified using cent amounts.
- Money is measurable and can be quantified using dollar and cent amounts.
- Each kind of bill has a specific value.
- You can count to find the total value of a group of dollar bills.
- Each kind of bill has a specific value, and the value of the bills can be used to solve problems about money.
- Word problems about money can often be solved by adding and subtracting.
- Good math thinkers know how to think about words and numbers to solve problems.
- time can be told and written to the nearest 5 minutes.
- Time can be expressed using different units that are related to each other.
- Time can be described before and after the hour in different ways.
- Certain time periods can be described using the abbreviations a.m. and p.m.

## Skills:

Students will be able to...

- Solve problems with coins.
- Solve problems with dollar bills and coins that model 100 cents.
- Reason about values of coins, and find different ways to make the same total value.
- Tell and write time to the nearest 5 minutes.

- Say the time in different ways.Tell time and use reasoning to state if the event is happening in the a.m. or p.m.

Topic Vocabulary		
Key Vocabulary:	• Dime	
	• Nickel	
	• Penny	
	• Quarter	
	• Half-dollar	
	• Cents ¢	
	• Dollar	
	• Dollar sign (\$)	
	• Dollar bill	
	• Tally marks	
	Quarter past	
	• Half past	
	• Quarter to	
	• a.m.	
	• p.m.	

Assessme	ent Evidence
Formative Assessment(s) and Evidence of	Summative Assessment(s) and
Learning:	Performance Task(s):
Assessment Check-In	End of Topic Assessment
Informal Observations	Benchmark Assessments
Convince Me! Practice Questions	• Pick a Project
Guided Practice Problems	Student Work Products
Independent Practice Problems	
Problem Solving Problems	
Quick Check Problems	
• Games	
Questioning	
-	

	Learning Plan	
	Suggested Learning Activities	S
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>		
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandiff</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below	
	Math Centers and Games	
Materials:	thun conters and Guiles	
Intervention Activities Sort and Count 8-1 Coin Talk 8-2 Showing the Same Amount 8-3 What's in the Piggy Bank? 8-4 Tally it Up 8-5 Making Good Time! 8-6 The Face of Time! 8-7 A.M. or P.M.? 8-8	<ul> <li>Technology Center</li> <li>www.SavvasRealize.com</li> <li>Save the Word math ame 8-8</li> <li>Fluency Add and Subtract Within 100 math game 8-5</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	Activity Center• Paper Coins 8-1• How Much Do You Have? 8-2• Money, Money, Money 8-3• Classify It! 8-8Pick a Project Projects should be worked on during lessons without other Activity Center option from list above.• Make a Train Schedule Poster• Create an Advertisement• Write a Daily Journal • Set Up a Store

	In this unit plan, the following 21st (	Cen	tury Li	fe and Careers skills are addressed:	
	Check ALL that apply –		Indica	te whether these skills are:	
	• E – encouraged				
	21 <sup>st</sup> Century Themes		•	T – taught	
			•	A – assessed	
	·			Career Ready Practices	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and contributing citizen and employee.	
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X	Money Management		Т	CRP3. Attend to personal health and financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental, social and economic impacts of decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.	
9.2	Career Awareness, Exploration, and Preparation			CRP9. Model integrity, ethical leadership and effective management.	
X	Career Awareness			CRP10. Plan education and career paths aligned to personal goals.	
	Career Exploration		Е	CRP11. Use technology to enhance productivity.	
	Career Preparation			CRP12. Work productively in teams while using cultural global competence.	
	Interdisci	plin	ary Co	nnections	
Othe	r standards covered:		•/ -		

NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

## **Technology Integration**

## x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

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- Teacher Websites
- SMART board

## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

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## **Self-Awareness**

- \_\_\_\_Recognize one's own feelings and thoughts
- \_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
  - Identify the consequences associated with one's action in order to make

constructive choices Evaluate personal, ethical, safety and civic impact of decisions

- \_\_\_\_\_Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- \_\_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
  - Identify who, when, where, or how to seek help for oneself or others when needed

Topic 9	Numbers to 1,000
Suggested Time Frame	January/February / 14 days

In topic 9, students' understanding of place value is extended to 1,000. This understanding serves as a foundation for adding and subtracting within 1,000.

#### **Desired Results**

## **Established Goals:**

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
- 2.NBT.A.1.a 100 can be thought of as a bundle of ten tens called a "hundred."
- 2.NBT.A.1.b The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- 2.NBT.A.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.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

## **Essential Questions:**

• How can you count, read, and show numbers to 1,000?

## **Enduring Understandings:**

Students will understand that...

- Numbers can be used to tell how many.
- The number system is based on groups of 10.
- Whenever there are 10 in one place value, you move to the next greater place value.
- Place value blocks and drawings can be used to model and write three digit numbers.
- The position of a digit in a number tells its value.
- It takes 10 of a number in one place value to make a number in the next greater place value.
- There are three common ways to write numbers standard form, word form, and expanded form. Each way involves using place value to tell the value of each digit.
- Numbers can be named in many ways.
- Recalling and using facts about equal amounts (such as 100 is equal to ten 10s and 10 is equal to ten ones) can help you name numbers in different ways.

•

- Place value patterns can help you mentally count by 1s and 10s from a given number.
- Place value patterns and number lines can be used to help you skip count by 5s, 10s, and 100s.
- Place value strategies can be used to compare numbers.
- The symbols >, =, < can be used to show how the numbers are related.
- Number lines go on forever and in both directions.
- For every number, there is another number that is greater than it, and another number that is less than it.
- A number line can be used to help you find numbers that are greater than or less than a given number.
- Good math thinkers look for patterns in math to help them solve problems.

## Skills:

Students will be able to ...

- Understand place value and count by hundreds to 1,000.
- Use place value blocks and drawings to model and write three digit numbers.
- Tell the value of a digit by where it is placed in a number.
- Read and write 3-digit numbers in expanded form, standard form, and word form.
- Make and name a number in different ways to show the same value.
- Use place value patterns to mentally count by ones and tens from a given number.
- Skip count by 5s, 10s, and 100s using a number line.
- Compare numbers using place value.
- Compare and write a 3-digit number that is greater than or less than another three digit number.
- Look for patterns to help when solving problems.

Topic Vocabulary		
Key Vocabulary:	<ul> <li>Hundred</li> <li>Thousand</li> <li>Digit place-value chart</li> <li>Standard form</li> <li>Expanded form</li> </ul>	
	<ul> <li>Word form</li> <li>Compare</li> <li>Greater than (&gt;)</li> <li>Less than (&lt;)</li> <li>Equal to (=)</li> <li>Decrease</li> </ul>	
	• Increase	

Assessment Evidence		
Formative Assessment(s) and Evidence of	Summative Assessment(s) and	
Learning:	Performance Task(s):	

Assessment Check-In	End of Topic Assessment
Informal Observations	Benchmark Assessments
Convince Me! Practice Questions	• Pick a Project
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Problem Solving Problems	
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Questioning	

Learning Plan				
Suggested Learning Activities				
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>				
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	Math Centers and Games			
<b>Materials:</b> Place-value blocks (te Hundreds, tens, and once charts (t number lines (teaching tool 14), It	aching tools 19 and 20), Place-value teaching tool 35), Blank hundred cl ndex cards,	ie mat B (teaching tool 34), hart (teaching tool 18), Open		
<ul> <li>Intervention Activities</li> <li>Build Hundreds 9-1</li> <li>Modeling Numbers 9-2</li> <li>Show and Tell the Value of Your Number 9-3</li> <li>What's My Number? 9-4</li> <li>Let's Trade 9-5</li> <li>Find the Patterns 9-6</li> <li>Counting by 5s, 10s, and 100s! 9-7</li> <li>Comparison Cards 9-8</li> <li>Sticky Numbers 9-9</li> <li>Pattern or No Pattern 9-10</li> </ul>	<ul> <li>Technology Center</li> <li>www.SavvasRealize.com</li> <li>Gobbling Globs Hundreds math game 9-1, 9-2, 9-3</li> <li>Space Jump Hundreds math game 9-7</li> <li>Save the Word: Grade 2 topics 1-8 math game 9-10</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>Activity Center         <ul> <li>Making Models 9-2</li> <li>What's Your Number?</li> <li>9-3</li> <li>Number Trackers 9-9</li> </ul> </li> <li>Pick a Project         <ul> <li>Projects should be worked on during lessons without other</li> <li>Activity Center option from list above.</li> <li>Make a Planets Poster</li> <li>Design a Waterfall Guide</li> <li>Create an Animal Riddle Booklet</li> </ul> </li> </ul>		

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	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
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				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
	Interdisciplinary Connections				

Other standards covered:

NJ Learning Standards for Science:

2-PS1-3.Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.

**Technology Integration** 

x\_\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

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- Teacher Websites
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- \_\_\_\_\_Ēstablish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
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- \_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- \_\_Identify who, when, where, or how to seek help for oneself or others when needed

Topic 10	Add Within 1,000 Using Models and Strategies
Suggested Time Frame	March/ 11 days

Topic 10 focuses on expanding students' understanding of addition to three digit numbers using models and strategies. Students explain why addition strategies work using place value and properties of operations.

#### **Desired Results**

## Established Goals:

## New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.M.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.
- 2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 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.
- •

## **Essential Questions:**

What are strategies for adding numbers to 1,000?

## **Enduring Understandings:**

Students will understand that...

- Place value patterns in basic facts can be used to help you mentally add 10 and 100 to any given three digit number.
- Three-digit numbers can be broken apart using hundreds, tens, and ones and added in different ways.
- When adding three-digit numbers, hundreds are added to hundreds, tens to tens, and ones to ones.
- When adding three-digit numbers, different strategies can be used to find the correct sum.
- Good math thinkers look for things that repeat in a problem. They use what they learned from one problem to help them solve other problems.

## Skills:

Students will be able to ...

- Add 10 and 100 mentally using place value.
- Use an open number line to add three-digit numbers.
- Add three-digit numbers using models.
- Use models and place value to add three-digit numbers.
- Add three-digit numbers using place value and partial sums.
- Use different addition strategies and explain why they work.
- Identify calculations or steps that repeat when solving problems.

Topic Vocabulary			
Key Vocabulary:	• None		

Assessment Evidence			
Formative Assessment(s) and Evidence of	Summative Assessment(s) and		
Learning:	Performance Task(s):		
Assessment Check-In	• End of Topic Assessment		
Informal Observations	Benchmark Assessments		
Convince Me! Practice Questions	• Pick a Project		
Guided Practice Problems	Student Work Products		
Independent Practice Problems			
Problem Solving Problems			
Quick Check Problems			
• Games			
Questioning			

Learning Dlan				
	Learning Plan			
	Suggested Learning Activities	š		
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul> For each lesson <ul> <li>Daily Review</li> <li>Solve and Share</li> </ul>				
<ul> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandi</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below			
	Math Centers and Games			
<b>Materials:</b> Place value blocks (o and 31), open number lines (or teasums chart (or teaching tool 37), 1	r teaching tools 19 and 20), play do aching tool 14), place value mat B hundreds, tens, and ones charts (or	ollar bills (or teaching tools 30 (or teaching tool 34), partial teaching tool 35)		
<ul> <li>Intervention Activities</li> <li>Add a Hundred 10-1</li> <li>Jumping on an Open Number Line! 10-2</li> <li>Adding Place Values 10-3</li> <li>Regroup to Add 10-4</li> <li>Adding Place Values 10-5</li> <li>Which Strategy 10-6</li> <li>Steps for Solving 10-7</li> </ul>	<ul> <li>Technology Center</li> <li>www.SavvasRealize.com</li> <li>Add It 2-Digit Numbers math game 10-1, 10-3, 10-4</li> <li>Gobbling Globs Hundreds math game 10-2, 10-5</li> <li>Fluency Add and Subtract Within 100 math game 10-7</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>Activity Center         <ul> <li>The Neck Bone's Connected to the Head Bone 10-2</li> <li>Inventions That Add 10-4</li> <li>Machine Makers 10-6</li> <li>Dinosaur Bones 10-7</li> </ul> </li> <li>Pick a Project Projects should be worked on during lessons without other Activity Center option from list above.         <ul> <li>Write Movie Reviews</li> <li>Make A Basketball Poster</li> <li>Draw a State Map</li> </ul> </li> </ul>		

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply – Indicate whether these skills are:				
				E – encouraged	
	21 <sup>st</sup> Century Themes			T – taught	
				A – assessed	
	Career Ready Practices			Career Ready Practices	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
		_		in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
37	and Preparation	_		leadership and effective management.	
X	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
		_		productivity.	
	Career Preparation			CKP12. Work productively in teams	
	· · · · · ·			while using cultural global competence.	
	Interdisci	plin	lary Col	nnections	
Othe	Other standards covered:				

NJ Learning Standards for 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.

## **Technology Integration**

## x\_\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

## INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

## **Self-Awareness**

- \_\_\_\_Recognize one's own feelings and thoughts
- \_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

## **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
  - Identify the consequences associated with one's action in order to make

constructive choices Evaluate personal, ethical, safety and civic impact of decisions

- \_\_\_\_\_Ēstablish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- \_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 11	Subtract Within 1,000 Using Models and Strategies
Suggested Time Frame	March / 11 days

Topic 11 focuses on expanding students' understanding of subtraction within 100 to subtraction within 1,000, using models and strategies. Students explain why subtraction strategies work using place value and properties of operations.

#### **Desired Results**

## Established Goals:

## New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.M.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately.
- 2.NBT.A.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 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.

## **Essential Questions:**

• What are strategies for subtracting numbers to 1,000?

## **Enduring Understandings:**

Students will understand that...

- Place value patterns and basic facts can be used to help you mentally subtract 10 or 100 from any given three-digit number.
- Three-digit numbers can be broken apart using hundreds, tens, and ones.
- When subtracting three-digit numbers, hundreds are subtracted from hundreds, tens from tens, and ones from ones.
- When subtracting three-digit numbers, different strategies can be used to find the correct difference.
- Good math thinkers know what the problem is about.

Students will be able to ...

- Subtract 10 or 100 mentally using place value strategies.
- Use an open number line to subtract 3-digit numbers.
- Use models to subtract three-digit numbers.
- Use models and place-value to subtract.
- Explain why subtraction strategies work using models, place value, and mental math.
- Solve problems that take more than one step.

Topic Vocabulary	
Key Vocabulary:	• None

Assessment Evidence			
Formative Assessment(s) and Evidence of	Summative Assessment(s) and		
Learning:	Performance Task(s):		
Assessment Check-In	• End of Topic Assessment		
Informal Observations	Benchmark Assessments		
Convince Me! Practice Questions	• Pick a Project		
Guided Practice Problems	Student Work Products		
Independent Practice Problems			
Problem Solving Problems			
Quick Check Problems			
• Games			
Questioning			

	Learning Plan		
	Suggested Learning Activities	5	
For Each Topic • Topic Opener Activity • Pick a Project • 3-Act Math			
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandi</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Centers and Games from</li> </ul>	ng pages pages n lists below		
	Math Centers and Games		
Materials: place value blocks (or teaching tools 19 and 20), play dollar bills (teaching tools 30 and 31), open number line (teaching tool 14), bundreds, tens, and ones charts (teaching tool 35).			
<ul> <li>Intervention Activities</li> <li>Subtract a Hundred 11-1</li> <li>ADd Up and Count Back to Subtract! 11-2</li> <li>Changing Hundreds to Tens 11-3</li> <li>Changing Tens to Ones 11-4</li> <li>Three-Digit Subtraction Stories 11-5</li> <li>A Model Two-Step Problem 11-6</li> </ul>	<ul> <li>Technology Center <ul> <li>www.SavvasRealize.com</li> <li>Save the Word: Grade 2 <ul> <li>Topics 1-8 math game</li> <li>11-2</li> </ul> </li> <li>Flying Cow Incident <ul> <li>2-digit numbers math</li> <li>game 11-5, 11-6</li> </ul> </li> <li>Math Tools (use for <ul> <li>lessons without specific</li> <li>Technology Center</li> <li>activity from list above)</li> </ul> </li> </ul></li></ul>	Activity Center         • Patterns in Hailstones and Numbers 11-1         • Perfect Pollinators 11-2         • It's Raining All Around 11-5         • Counting the Acorns 1106         Pick a Project Projects should be worked on during lessons without other Activity Center option from list above.         • Create a Redwood Trees Booklet         • Build a Snow Sculpture         • Make a Poster About Elorida Mountains	

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	Check ALL that apply – Indicate whether these skills are:			
			•	E – encouraged
21 <sup>st</sup> Century Themes			•	T – taught
			•	A – assessed
				Career Ready Practices
9.1	Personal Financial Literacy		E	CRP1. Act as a responsible and
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	Income and Careers		TA	CRP2. Apply appropriate academic
				and technical skills.
Χ	Money Management		Т	CRP3. Attend to personal health and
				financial well-being.
	Credit and Debt Management		ETA	CRP4. Communicate clearly and
	_			effectively and with reason.
	Planning, Saving, and Investing			CRP5. Consider the environmental,
				social and economic impacts of
				decisions.
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and
				innovation.
	Civic Financial Responsibility			CRP7. Employ valid and reliable
				research strategies.
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to
				make sense of problems and persevere
				in solving them.
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical
	and Preparation			leadership and effective management.
Х	Career Awareness			CRP10. Plan education and career
				paths aligned to personal goals.
	Career Exploration		Е	CRP11. Use technology to enhance
	-			productivity.
	Career Preparation			CRP12. Work productively in teams
	-			while using cultural global competence.
	Interdiscip	olin	ary Cor	nnections
Othe	er standards covered:			
1	J Learning Standards for Science: 2-L	S2-	-2.Devel	op a simple model that mimics the
f	unction of an animal in dispersing seed	s o	r pollina	ting plants.*

## **Technology Integration**

\_x\_\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
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## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

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The following social and emotional competencies are integrated in this curriculum document:

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- \_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

## Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

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- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
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- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
  - Identify the consequences associated with one's action in order to make

constructive choices Evaluate personal, ethical, safety and civic impact of decisions

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- \_\_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
  - Identify who, when, where, or how to seek help for oneself or others when needed

Topic 12	Measuring Length
Suggested Time Frame	April / 12 days

Topic 12 focuses on using appropriate tools to estimate, measure, and compare length using customary units (inches, feet, and yards) and metric units (centimeters and meters). This unit also addresses the inverse relationship between the size of a unit and the number of units needed to measure a given object.

#### **Desired Results**

#### **Established Goals:**

#### New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.

#### **Essential Questions:**

• What are ways to measure length?

### **Enduring Understandings:**

Students will understand that...

- The length of a known object can be used to estimate the length of another object to the nearest inch, foot, or yard.
- Length and height are measurable in inches.
- Length and height are measurable in inches, feet, and yards.
- When measuring length, the longer the chosen unit, the fewer units needed; the shorter the unit, the more units needed. Length and height are measurable in centimeters.
- Length and height are measurable in centimeters and meters.
- The length of two objects can be compared by subtracting to find the difference.
- Good math thinkers are careful about what they write and say, so their ideas about math are clear.

## Skills:

Students will be able to ...

- Estimate the length of an object by relating the length of an object to a known measurement.
- Estimate measures and use a ruler to measure the length and height to the nearest inch.
- Estimate measures and use tools to measure the length and height of objects to the nearest inch, foot, and yard.
- Estimate and measure the length and height of objects in inches, feet and yards.
- Estimate measures and use a ruler to measure length and height to the nearest centimeter. Estimate measures and use a ruler, meter stick, or tape measure to measure length and height to the nearest centimeter or meter.
- Measure the length and height of objects using different metric units.
- Tell how much longer one object is than another.
- Choose tools, units, and methods that help to be precise when measuring.

Topic Vocabulary		
Key Vocabulary:	• Estimate	
	• Inch (in.)	
	• Foot (ft)	
	• Yard (yd)	
	• Height	
	• Nearest inch	
	• Centimeter (cm)	
	Nearest centimeter	
	• Meter (m)	

Assessment Evidence			
Formative Assessment(s) and Evidence of	Summative Assessment(s) and		
Learning:	Performance Task(s):		
Assessment Check-In	• End of Topic Assessment		
Informal Observations	Benchmark Assessments		
Convince Me! Practice Questions	• Pick a Project		
Guided Practice Problems	Student Work Products		
Independent Practice Problems			
<ul> <li>Problem Solving Problems</li> </ul>			
Quick Check Problems			
• Games			
• Questioning			

Learning	Plan
Licar ming	1 1411

#### **Suggested Learning Activities**

## For Each Topic...

- Topic Opener Activity
- Pick a Project
- 3-Act Math

## For each lesson...

- Daily Review
- Solve and Share
- Visual Learning Bridge
- Convince Me
- Guided Practice
- Independent Practice
- Problem Solving
- Quick Check
- Reteach to Build Understanding pages
- Build Mathematical Literacy pages
- Enrichment pages
- Additional Practice Pages
- Math Centers and Games from lists below

## **Math Centers and Games**

**Materials:** inch rulers (teaching tool 38), 1 inch squares (teaching tool 39), measuring tapes, inch rulers and yardsticks (teaching tool 38), centimeter rulers (teaching tool 40), ones cubes (teaching tool 19), string, buttons or counters (teaching tool 6), yarn
	Make a Poster of Snake
	Lengths

	In this unit plan, the following 21st Century Life and Careers skills are addressed:					
	Check ALL that apply –		Indicate whether these skills are:			
			• E – encouraged			
21 <sup>st</sup> Century Themes			•	T – taught		
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				Career Ready Practices		
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and contributing citizen and employee.		
	Income and Careers		TA	CRP2. Apply appropriate academic and technical skills.		
Х	Money Management		Т	CRP3. Attend to personal health and financial well-being.		
	Credit and Debt Management		ETA	CRP4. Communicate clearly and effectively and with reason.		
	Planning, Saving, and Investing			CRP5. Consider the environmental, social and economic impacts of decisions.		
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and innovation.		
	Civic Financial Responsibility			CRP7. Employ valid and reliable research strategies.		
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.		
9.2	Career Awareness, Exploration, and Preparation			CRP9. Model integrity, ethical leadership and effective management.		
Х	Career Awareness			CRP10. Plan education and career paths aligned to personal goals.		
	Career Exploration		E	CRP11. Use technology to enhance productivity.		
	Career Preparation			CRP12. Work productively in teams while using cultural global competence.		
	Interdisciplinary Connections					
Othe	Other standards covered:					

NJ Learning Standards for Science:2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.

#### **Technology Integration**

#### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

# 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

#### INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

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Recognize one's own feelings and thoughts

- \_\_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations

\_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

#### **Self-Management**

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

### **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
  - \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

## **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's action in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

#### **Relationship Skills**

- \_\_\_\_\_Establish and maintain healthy relationships
- \_\_\_\_\_Utilize positive communication and social skills to interact effectively with others
- \_\_\_\_\_Identify ways to resist inappropriate social pressure
- Identify who, when, where, or how to seek help for oneself or others when needed

<b>Topic 13</b>	Shapes and Their Attributes
Suggested Time Frame	April-May /14 days

#### **Overview/ Rationale of Unit**

In topic 13, students investigate attributes of shapes and use them to identify and draw triangles, quadrilaterals, pentagons, hexagons, and cubes. They partition plane figures into equal shares and use fraction terminology to describe the shares.

#### **Desired Results**

## Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.
- 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.
- 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.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.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.

#### **Essential Questions:**

How can shapes be described, compared, and broken into parts?

#### **Enduring Understandings:**

Students will understand that...

- Two dimensional shapes can be classified and sorted based on their attributes.
- Polygons can be described by their number of sides and angles.
- Two dimensional shapes can be defined and differentiated based on attributes. These attributes can be used to draw a specific two-dimensional shape.
- You can describe a cube by talking about its faces, edges, and vertices. Knowing these attributes help to draw a cube.

- A rectangle can be partitioned into rows and columns of squares that are all the same size; you can count or add in different ways to find the total number of squares.
- A whole can have equal shares called halves, thirds, and fourths.
- You can show halves, thirds, and fourths of the same whole in different ways.
- You can partition a whole into equal shares in different ways.
- Equal shares of the same whole do not have the same shape.
- Good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.

#### Skills:

Students will be able to...

- Recognize shapes by how they look.
- Describe plane shapes by how they look.
- Draw polygon shapes.
- Draw cubes and describe how they look.
- Partition rectangles into equal size squares.
- Partition circles and rectangles into halves, thirds, and fourths.
- Make equal shares that do not have the same shape.
- Use repeated reasoning to show rectangles within rows and columns create designs with equal shares.

Topic Vocabulary				
Key Vocabulary:	<ul> <li>Vertices</li> <li>Quadrilateral</li> <li>Pentagon</li> <li>Hexagon</li> <li>Polygon</li> <li>Angle</li> <li>Right angle</li> <li>Cube</li> </ul>			
	<ul> <li>Face</li> <li>Edge</li> <li>Equal shares</li> <li>Halves</li> <li>Thirds</li> <li>Fourths</li> </ul>			

Assessment Evidence			
Formative Assessment(s) and Evidence of Summative Assessment(s) and			
Learning:	Performance Task(s):		
Assessment Check-In	• End of Topic Assessment		
Informal Observations	Benchmark Assessments		
Convince Me! Practice Questions	• Pick a Project		

<ul> <li>Guided Practice Problems</li> <li>Independent Practice Problems</li> <li>Problem Solving Problems</li> <li>Quick Check Problems</li> <li>Games</li> <li>Questioning</li> </ul>	Student Work Products
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Learning Plan

#### **Suggested Learning Activities**

#### For Each Topic...

- Topic Opener Activity
- Pick a Project
- 3-Act Math

#### For each lesson...

- Daily Review
- Solve and Share
- Visual Learning Bridge
- Convince Me
- Guided Practice
- Independent Practice
- Problem Solving
- Quick Check
- Reteach to Build Understanding pages
- Build Mathematical Literacy pages
- Enrichment pages
- Additional Practice Pages
- Math Centers and Games from lists below

#### **Math Centers and Games**

**Materials:** plane shapes (teaching Tool 46), centimeter grid paper (teaching tool 51), rulers (teaching tools 38 and 40), ones cubes or other solid cubes, 3/4-in squares teaching (tool 52), 3/4 in grid paper (teaching tool 49), halves, thirds, and fourths (teaching tool 52), graph paper or blank hundred chart (teaching tool 18), equal shares, different shapes (teaching tool 53), tracing paper, toothpicks, crayons, straws,

<b>Intervention Activities</b>	<b>Technology Center</b>	Activity Center
• In Shape 13-1	www.SavvasRealize.com	• Shapes of Buildings
• Shape Clues 13-2	• Power House-Equal	13-2
<ul> <li>Model Shapes 13-3</li> </ul>	Groups to 25 math game	Building with Shapes
• Shape Sort 13-4	13-5	13-3
<ul> <li>Making Equal Parts</li> </ul>	• Save the Word: Grade 2	• Cubes Around Us 13-4
13-5	Topics 1-12 math game	• Patio Design 13-8
• Sort the Shares 13-6	• Math Tools (use for	_
• Different Shapes 13-7	lessons without specific	Pick a Project
• Connect a Picture 13-8	Technology Center	Projects should be worked on
	activity from list above)	during lessons without other
		Activity Center option from list
		above.
		• Create a Tile Design
		Draw Your Dream
		Building
		Build a Landmark

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
	Check ALL that apply – Indicate whether these skills are:			te whether these skills are:	
			•	E – encouraged	
	21 <sup>st</sup> Century Themes		•	T – taught	
			•	A – assessed	
	1			Career Ready Practices	
9.1	Personal Financial Literacy		E	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
				financial well-being.	
	Credit and Debt Management		ETA	CRP4. Communicate clearly and	
				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
				make sense of problems and persevere	
				in solving them.	
9.2	Career Awareness, Exploration,			CRP9. Model integrity, ethical	
	and Preparation			leadership and effective management.	
Х	Career Awareness			CRP10. Plan education and career	
				paths aligned to personal goals.	
	Career Exploration		E	CRP11. Use technology to enhance	
				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
Interdisciplinary Connections					
Othe	er standards covered:				

NJ Learning Standards for 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.

## **Technology Integration**

#### x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

# 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

#### INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

#### **Self-Awareness**

- \_\_\_\_Recognize one's own feelings and thoughts
- \_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

#### Self-Management

 $\underline{x}$  Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
  - <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

#### **Social Awareness**

- <u>x</u> Recognize and identify the thoughts, feelings, and perspectives of others
  - \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

#### **Responsible Decision Making**

<u>x</u> Develop, implement and model effective problem solving and critical thinking skills

- Identify the consequences associated with one's action in order to make constructive choices
- \_\_\_\_\_Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- \_\_\_\_\_Ēstablish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Identify who, when, where, or how to seek help for oneself or others when needed

Topic 14	More Addition, Subtraction, and Length
Suggested Time Frame	May / 9 days

#### **Overview/ Rationale of Unit**

Topic 14 focuses on the application of understanding of addition and subtraction within 100 to solving word problems involving lengths. Students write and solve addition and subtraction equations using symbols for unknown values. Students also use number lines to represent whole number sums and differences within 100.

#### **Desired Results**

#### **Established Goals:**

#### New Jersey Student Learning Standards for Mathematics (NJSLS)

- 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.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.

#### **Essential Questions:**

How can you add and subtract lengths?

#### **Enduring Understandings:**

Students will understand that...

- Measurements in the same unit, such as inches, can be added or subtracted in the same way as adding and subtracting whole numbers.
- Pictures and equations can be used to solve word problems involving measurements.
- A sum can be represented as the total length of two line segments on a number line.
- Good math thinkers know how to pick the right tools to solve math problems.

#### Skills:

Students will be able to...

- Solve problems by adding or subtracting length measurements.
- Add or subtract to solve problems about measurements.
- Add and subtract to solve measurement problems by using drawings and equations.
- Add and subtract on a number line.
- Choose the best tool to use to solve problems.

## **Topic Vocabulary**

Key Vocabulary:

• None

Assessment Evidence				
Formative Assessment(s) and Evidence of	Summative Assessment(s) and			
Learning:	Performance Task(s):			
Assessment Check-In	• End of Topic Assessment			
Informal Observations	Benchmark Assessments			
Convince Me! Practice Questions	• Pick a Project			
Guided Practice Problems	Student Work Products			
Independent Practice Problems				
Problem Solving Problems				
Quick Check Problems				
• Games				
Questioning				
-				

Learning Plan					
Suggested Learning Activities					
<ul> <li>For Each Topic</li> <li>Topic Opener Activity</li> <li>Pick a Project</li> <li>3-Act Math</li> </ul>		~			
<ul> <li>For each lesson</li> <li>Daily Review</li> <li>Solve and Share</li> <li>Visual Learning Bridge</li> <li>Convince Me</li> <li>Guided Practice</li> <li>Independent Practice</li> <li>Problem Solving</li> <li>Quick Check</li> <li>Reteach to Build Understandiff</li> <li>Build Mathematical Literacy p</li> <li>Enrichment pages</li> <li>Additional Practice Pages</li> <li>Math Cantars and Games from</li> </ul>	ng pages pages				
	Moth Contons and Comes				
Matarials	Math Centers and Games				
<ul> <li>Intervention Activities</li> <li>Finding the Distance Around 14-1</li> <li>Secret Length 14-2</li> <li>Shorter Strings 14-3</li> <li>Yardstick Number Line 14-4</li> <li>Tool Belt 14-5</li> </ul>	<ul> <li>Technology Center www.SavvasRealize.com</li> <li>Robo Launch Add and Subtract 2-Digit Numbers math game 14-2, 14-3</li> <li>Save the Word: Grade 2 Topics 1-12 math game</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	Activity Center• Drum Diameter 14-2• It's a Butte 14-3• Go with the Flow 14-4• Drumsticks 14-5Pick a ProjectProjects should be worked on during lessons without other Activity Center option from list above.• Write a Ferris Wheel Story• Make Insect Drawings• Make a Measurement Poster• Draw a Garden Plan			

	In this unit plan, the following 21st Century Life and Careers skills are addressed:				
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				E – encouraged	
	21 <sup>st</sup> Century Themes		•	T – taught	
			•	A – assessed	
				Career Ready Practices	
9.1	Personal Financial Literacy		Е	CRP1. Act as a responsible and	
				contributing citizen and employee.	
	Income and Careers		TA	CRP2. Apply appropriate academic	
				and technical skills.	
Х	Money Management		Т	CRP3. Attend to personal health and	
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				effectively and with reason.	
	Planning, Saving, and Investing			CRP5. Consider the environmental,	
				social and economic impacts of	
				decisions.	
	Becoming a Critical Consumer			CRP6. Demonstrate creativity and	
				innovation.	
	Civic Financial Responsibility			CRP7. Employ valid and reliable	
				research strategies.	
	Insuring and Protecting		ETA	CRP8. Utilize critical thinking to	
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				paths aligned to personal goals.	
	Career Exploration		Е	CRP11. Use technology to enhance	
	-			productivity.	
	Career Preparation			CRP12. Work productively in teams	
	-			while using cultural global competence.	
	Interdisciplinary Connections				
Othe	er standards covered:				

NJ Learning Standards for Science: 2-ESS2-2.Develop a model to represent the shapes and kinds of land and bodies of water in an area.

## **Technology Integration**

## x\_8.1 Educational Technology:

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.

- Student Websites
- Teacher Websites
- SMART board

## 8.2 Technology Integration, Engineering, Design and Computational Thinking - Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

#### INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

#### **Self-Awareness**

- \_\_\_\_Recognize one's own feelings and thoughts
- \_\_\_\_Recognize the impact of one's feelings and thoughts on one's own behavior
- \_\_\_\_\_Recognize one's personal traits, strengths and limitations
- \_\_\_\_\_Recognize the importance of self-confidence in handling daily tasks and challenges

#### Self-Management

 $\underline{x}$ \_Understand and practice strategies for managing one's own emotions, thoughts and behaviors

- <u>x</u> Recognize the skills needed to establish and achieve personal and educational goals
- <u>x</u> Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

#### **Social Awareness**

- $\underline{x}$  Recognize and identify the thoughts, feelings, and perspectives of others
- \_\_\_\_\_Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- \_\_\_\_\_Demonstrate an understanding of the need for mutual respect when viewpoints differ
- \_\_\_\_\_Demonstrate an awareness of the expectations for social interactions in a variety of setting

#### **Responsible Decision Making**

- <u>x</u> Develop, implement and model effective problem solving and critical thinking skills
  - Identify the consequences associated with one's action in order to make

constructive choices Evaluate personal, ethical, safety and civic impact of decisions

## **Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- \_\_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
  - Identify who, when, where, or how to seek help for oneself or others when needed

Topic 15	Graphs and Data				
Suggested	June / 10 days				
Time Frame					
	Overview/ Rationale of Unit				
Topic 15 focuses on collecting, representing, and interpreting data. Students practice measurement skills to generate measurement data which they display in a line plot. Students also use categorical data to create and interpret bar graphs and picture graphs.					
	Desired Results				
Established Goals:					
<ul> <li>New Jersey Student Learning Standards for Mathematics (NJSLS)</li> <li>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.</li> <li>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.</li> <li>2.MD.D.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object.</li> <li>2.MD.D.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.</li> </ul>					
Essential Questions: How can line plots, questions?	<b>Essential Questions:</b> How can line plots, bar graphs, and picture graphs be used to show data and answer questions?				
<ul> <li>Enduring Understandings: <i>Students will understand that</i></li> <li>The length of objects can be organized in different ways.</li> <li>Different types of data can be displayed on a line plot.</li> <li>Line plots are useful for organizing large sets of data.</li> <li>Bar graphs can be used to organize and display data</li> <li>The height, or length, of bars in a bar graph makes it easy to compare data.</li> <li>Picture graphs use a single symbol to show data. This makes it easier to compare two or more categories.</li> <li>Picture graphs and bar graphs are useful tools for comparing data and drawing conclusions.</li> <li>Good math thinkers know how to think about words and numbers to solve problems.</li> </ul>					

Skills:

Students will be able to ...

- Measure the lengths of objects and make a line plot to organize the data
- Measure the lengths of objects, then make a line plot to organize the data.
- Draw bar graphs and use them to solve problems.
- Draw picture graphs and use them to solve problems.
- Draw conclusions from graphs.
- Reason about data and bar graphs and picture graphs to write and solve problems.

Topic Vocabulary				
Key Vocabulary:	<ul> <li>Data</li> <li>Line plot</li> <li>Bar graph</li> <li>Symbol</li> <li>Picture graph</li> </ul>			

Assessment Evidence					
Formative Assessment(s) and Evidence of	Summative Assessment(s) and				
Learning:	Performance Task(s):				
Assessment Check-In	• End of Topic Assessment				
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Convince Me! Practice Questions	• Pick a Project				
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	Math Centers and Games					
<b>Materials:</b> inch ruler (teaching tool 38), blank table and bar graph (teaching tool 43), blank bar graphs (teaching tool 44), connecting cubes (teaching tool 5), counters (teaching tool 6), ones cubes (teaching tool 10), classroom chicate, index cards, ruler;						
Intervention Activities	Technology Center	Activity Center				
<ul> <li>Measurement Line Plot 15-1</li> <li>Plotting More Date 15-2</li> <li>Getting to School 15-3</li> <li>Let's Vote 15-4</li> <li>Analyzing Graphs 15-5</li> </ul>	<ul> <li>www.SavvasRealize.com</li> <li>Math Tools (use for lessons without specific Technology Center activity from list above)</li> </ul>	<ul> <li>So Many Nails! 15-1</li> <li>Needles Long and Short 15-2</li> <li>Weather for All Seasons 15-5</li> <li>Pick a Project</li> </ul>				
		<ul> <li>Projects should be worked on during lessons without other Activity Center option from list above.</li> <li>Graph Data About Flowers</li> <li>Create a Bird-Watching Poster</li> <li>Make A Floria Travel Brochure</li> </ul>				

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			•	E – encouraged	
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				productivity.	
	Career Preparation			CRP12. Work productively in teams	
				while using cultural global competence.	
Interdisciplinary Connections					

Other standards covered:

NJ Learning Standards for English Language Arts: NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

NJ Learning Standards for Science: 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

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- \_\_\_\_x\_Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

## ACCOMMODATIONS AND MODIFICATIONS

Below please find a list of suggestions for accommodations and modifications to meet the diverse needs of our students. Teachers should consider this a resource and understand that they are not limited to the recommendations included below.

An **accommodation** *changes* HOW *a student learns*; the change needed does not alter the grade-level standard. A **modification** *changes* WHAT *a student learns*; the change alters the grade-level expectation.

#### **Special Education and 504 Plans**

All modifications and accommodations must be specific to each individual child's IEP (Individualized Educational Plan) or 504 Plan.

- Pre-teach or preview vocabulary
- Repeat or reword directions
- Have students repeat directions
- Use of small group instruction
- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments
- Repetition and time for additional practice
- Model skills/techniques to be mastered
- Extended time to complete task/assignment/work
- Provide a copy of class notes
- Strategic seating (with a purpose eg. less distraction)
- Flexible seating
- Repetition and additional practice
- Use of manipulatives
- Use of assistive technology (as appropriate)
- Assign a peer buddy
- Emphasize key words or critical information by highlighting
- Use of graphic organizers
- Scaffold with prompts for sentence starters
- Check for understanding with more frequency
- Provide oral reminders and check student work during independent practice
- Chunk the assignment broken up into smaller units, work submitted in phases
- Encourage student to proofread assignments and tests
- Provide regular home/school communication
- Teacher checks student planner
- Provide student with clear expectations in writing and grading criteria for assignments (rubrics)

#### Testing Accommodations:

Students should receive all testing accommodations for Benchmark assessments that they receive for State testing.

- Setting: Alternate setting for assessments, small groups, screens to block distractions
- Presentation: large print, test readers, use of audio, fewer questions on each page
- Response: answer verbally, use large block answer sheet, speech-to-text dictation, accept short answers
- Allow for retakes
- Provide study guides
- Use of reference aids such as glossary, multiplication tables, calculator
- Choice of test format (multiple-choice, essay, true-false)
- Alternate ways to evaluate (projects or oral presentations instead of written tests)
- Open-book or open-note tests

#### English Language Learners:

All modifications and accommodations should be specific to each individual child's LEP level as determined by the WIDA screening or ACCESS, utilizing the WIDA Can Do Descriptors.

- Pre-teach or preview vocabulary
- Repeat or reword directions
- Have students repeat directions
- Use of small group instruction
- Scaffold language based on their Can Do Descriptors
- Alter materials and requirements according to Can Do Descriptors
- Adjust number of paragraphs or length of writing according to their Can Do Descriptor
- TPR (Total Physical Response-Sheltered Instruction strategy) Demonstrate concepts through multi sensory forms such as with body language, intonation
- Pair visual prompts with verbal presentations
- Repetition and additional practice
- Model skills and techniques to be mastered
- Native Language translation (peer, assistive technology, bilingual dictionary)
- Emphasize key words or critical information by highlighting
- Use of graphic organizers
- Scaffold with prompts for sentence starters
- Check for understanding with more frequency
- Use of self-assessment rubrics
- Increase one-on-one conferencing; frequent check ins
- Use study guide to organize materials
- Make vocabulary words available in a student created vocabulary notebook, vocabulary bank, Word Wall, or vocabulary ring
- Extended time
- Select text complexity and tiered vocabulary according to Can Do Descriptors
- Projects completed individually or with partners
- Use online dictionary that includes images for words:

http://visual.merriamwebster.com/.

• Use online translator to assist students with pronunciation: <u>http://www.reverso.net/text\_translation.aspx?lang=EN</u>.

#### **Students at Risk of Failure:**

- Use of self-assessment rubrics for check-in
- Pair visual prompts with verbal presentations
- Ask students to restate information and/or directions
- Opportunity for repetition and additional practice
- Model skills/techniques to be mastered
- Extended time
- Provide copy of class notes
- Strategic seating with a purpose
- Provide students opportunity to make corrections and/or explain their answers
- Support organizational skills
- Check daily planner
- Encourage student to proofread work
- Assign a peer buddy
- Build on students' strengths based on Multiple Intelligences: Linguistic (verbal); Logical (reasoning); Musical/Rhythmic; Intrapersonal Intelligence (understanding of self); Visual Spatial Intelligence; Interpersonal Intelligence (the ability to interact with others effectively); Kinesthetic (bodily); Naturalist Intelligence; and Learning Styles: Visual; Auditory; Tactile; Kinesthetic; Verbal

#### High Achieving:

**Extension Activities** 

- Allow for student choice from a menu of differentiated outcomes; choices grouped by complexity of thinking skills; variety of options enable students to work in the mode that most interests them
- Allow students to pursue independent projects based on their individual interests
- Provide enrichment activities that include more complex material
- Allow opportunities for peer collaboration and team-teaching
- Set individual goals
- Conduct research and provide presentation of appropriate topics
- Provide students opportunity to design surveys to generate and analyze data to be used in discussion
- Allow students to move through the assignment at their own pace (as appropriate)

#### Strategies to Differentiate to Meet the Needs of a Diverse Learning Population

- Vocabulary Sorts-students engage with the vocabulary word by sorting into groups of similar/different rather than memorizing definitions
- Provide "Realia" (real life objects to relate to the five senses) and ask questions relating to the senses
- Role Play-students create or participate in role playing situations or Reader's Theater

- Moving Circle-an inside and outside circle partner and discuss, circles moves to new partner (Refer to Kagan Differentiated Strategies)
- Brainstorm Carousel-Large Post Its around the room, group moves in a carousel to music. Group discusses topic and responses on paper. Groups rotate twice to see comments of others. (Refer to Kagan Differentiated Strategies)
- Gallery Walk-Objects, books, or student work is displayed. Students examine artifacts and rotate.
- Chunking-chunk reading, tests, questions, homework, etc to focus on particular elements.
- Think Pair Share Write
- Think Talk Write
- Think Pair Share
- Note-taking -can be done through words, pictures, phrases, and sentences depending on level
- KWL (Know, Want to Know, Learned)/KWHL(Know, What to Know, How Will I Learn, learned)/KWLS (Know, Want to Know, Learned, Still Want to Know) /KWLQ (Know, What to Know, Learned, Questions I Still Have) Charts
- Corners Cooperative Learning Strategy:

http://cooperativelearningstrategies.pbworks.com/w/page/28234420/Corners.

- Circle Map strategy- place the main topic in a small circle and add student ideas in a bigger circle around the topic. Students may use their native language with peers to brainstorm.
- Flexible grouping -as a whole class, a small group, or with a partner, temporary groups are created:

http://www.teachhub.com/flexible-grouping-differentiated-instruction-strategy.

• Jigsaw Activities -cooperative learning in a group, each group member is responsible for becoming an "expert" on one section of the assigned material and then "teaching" it to the other members of the team: <u>http://www.adlit.org/strategies/22371/</u>.