NEPTUNE TOWNSHIP SCHOOL DISTRICT

Bilingual Everyday Mathematics

Curriculum

Grade 2

NEPTUNE TOWNSHIP SCHOOL DISTRICT
Office of the Superintendent
60 Neptune Blvd.
Neptune, NJ 07753-4836

December 18, 2019 Document C1#1

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NEPTUNE TOWNSHIP SCHOOL DISTRICT

BILINGUAL EVERYDAY MATHEMATICS
GRADE 2
CURRICULUM

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Curriculum

NEPTUNE TOWNSHIP SCHOOL DISTRICT

Bilingual Everyday Mathematics
Grade 2

Acknowledgements

The Bilingual Mathematics Grade 2 curriculum was developed by Deborah Peniston, Literacy Coach, in cooperation with the Curriculum Steering Committee members including, Lakeda Demery-Alston, Supervisor of Humanities and ESL/Bilingual, and Sally A. Millaway, Ed.D., Director for Curriculum, Instruction and Assessment.

This bilingual curriculum represents the shift in instruction to the New Jersey Student Learning Standards for Mathematics and the increased rigor that those standards bring to the teaching and learning of mathematics. Foundational content is taught in English and Spanish. It is our hope that this curriculum will serve as a valuable resource for the staff members who teach this course and that they will continue to make recommendations for improvement to the document.

NEPTUNE TOWNSHIP SCHOOL DISTRICT

DISTRICT MISSION STATEMENT

The primary mission of the Neptune Township School District is to prepare students for a life-long learning process in a complex and diverse world. It is with high expectations that our schools foster:

• A strong foundation in academic and modern technologies.

• A positive and varied approach to teaching and learning.

• An emphasis on critical thinking skills and problem-solving techniques.

• A respect for and an appreciation of our world, its resources, and its people.

• A sense of responsibility, good citizenship, and accountability.

• An involvement by the parents and the community in the learning process.

Neptune Township School District

Educational Outcome Goals

The students in the Neptune Township schools will become life-long learners and will:

- Become fluent readers, writers, speakers, listeners, and viewers with comprehension and critical thinking skills.
- Acquire the mathematical skills, understandings, and attitudes that are needed to be successful in their careers and everyday life.
- Understand fundamental scientific principles, develop critical thinking skills, and demonstrate safe practices, skepticism, and open-mindedness when collecting, analyzing, and interpreting information.
- Become technologically literate.
- Demonstrate proficiency in all New Jersey Student Learning Standards (NJSLS).
- Develop the ability to understand their world and to have an appreciation for the heritage of America with a high degree of literacy in civics, history, economics and geography.
- Develop a respect for different cultures and demonstrate trustworthiness, responsibility, fairness, caring, and citizenship.
- Become culturally literate by being aware of the historical, societal, and multicultural aspects and implications of the arts.
- Demonstrate skills in decision-making, goal setting, and effective communication, with a focus on character development.
- Understand and practice the skills of family living, health, wellness and safety for their physical, mental, emotional, and social development.
- Develop consumer, family, and life skills necessary to be a functioning member of society.
- Develop the ability to be creative, inventive decision-makers with skills in communicating ideas, thoughts and feelings.
- Develop career awareness and essential technical and workplace readiness skills, which are significant to many aspects of life and work.

Everyday Math - Grade 2 - Daily Pacing Guide

Day	Unit & Lesson	Topic / Activity	NJSLS-M	Day	Unit & Lesson	Topic / Activity	NJSLS-M
1		Routines Overview		16		Math Pre- Assessment Benchmark	
2		Routines Overview		17		Math Pre- Assessment Benchmark	
3	1.1	Numbers All Around	2.NBT.3, 2.NBT.4,	18	1.9	Even and Odd Number Patterns	2.OA.3
4	1.2	Number Lines and Partnership Priniples	2.NBT.3, 2.NBT.4,	19	1.1	Skip Counting Patterns	2.NBT.2
5	1.3	Math Tools	2.NBT.3, 2.MD.8	20	1.11	Comparing Numbers and Home Links	2.NBT.4, 2.MD.8
6	1.4	Class Number Scroll	2.NBT.3, 2.NBT.8	21	1.12	Explorations Base-10 Blocks, Area, and Dominoes	2.NBT.2, 2.NBT.3,
7		Flex Day- EDM Games and Centers		22	1.13	Unit 1 Progress Check day 1	
8	1.5	Open Responses Number-Grid Puzzles Day 1	2.NBT.8, 2.NBT.9	23	1.13	Unit Progress Check Day 2	
9	1.5	Open Responses Number-Grid Puzzles Day 2	2.NBT.8, 2.NBT.9	24	2.1	Grouping by 10s	2.NBT.3, 2.NBT.7,
10	1.6	Equivalent Names for Numbers	2.NBT.2, 2.NBT.5,	25	2.2	Addition Number Stories	2.OA.1, 2.OA.2
11	1.7	Playing Fishing for Ten	2.NBT.3, 2.NBT.4,	26	2.3	Doubles ans Combinations of 10	2.OA.2
12		Flex Day- EDM Games and Centers		27		Flex Day- EDM Games and Centers	
13	1.8	My Reference Book, Quarters, and Math Boxes	2.NBT.2, 2.MD.8	28	2.4	The amking -10 Strategy	2.OA.2, 2.NBT.9
14		Math Pre-Assessment Benchmark		29	2.5	The Near-Doubles Strategy	2.OA.2, 2.NBT.9
15		Math Pre-Assessment Benchmark		30	2.6	The Turn-Around Rule for Addition	2.OA.2, 2.NBT.9

Day	Unit & Lesson	Topic / Activity	NJSLS-M	Day	Unit & Lesson	Topic / Activity	NJSLS-M
31	2.7	Open Response day 1	2.OA.1, 2.OA.2, 2.NBT.9	46		Flex Day- EDM Games and Centers	
32	2.7	Open Response Day 2	2.OA.1, 2.OA.2, 2.NBT.9	47	3.4	Playing Salute!	2.NBT.3, 2.NBT.5
33		Flex Day- EDM Games and Centers		48	3.5	Subtraction Strategies: Counting Up and Counting Back	2.OA.2
34	2.8	Explorations Exploring Addition Tools, Odd and Even Patterns, and Shapes	2.OA.2, 2.OA.3, 2.NBT.2,	49	3.6	0 and 1 Fact Strategies and Subtraction Top It	2.OA.2, 2.NBT.5,
35	2.9	Even Numbers and Equal Addends	2.OA.2, 2.OA.3	50	3.7	What's My Rule?	2.NBT.7, 2.NBT.9
36	2.1	Name-Collection Boxes	2.NBT.3, 2.NBT.5	51		Flex Day- EDM Games and Centers	
37	2.11	Playing Name that Number	2.NBT.3, 2.NBT.5	52	3.8	Usng Doubles to Subtract	2.OA.1, 2.OA.2
38		Flex Day- EDM Games and Centers		53	3.9	Going Back Through 10 Strategy for Subtraction	2.OA.1, 2.OA.2, 2.MD.6
39	2.12	Frames and Arrows	2.NBT.2, 2.NBT.5	54	3.1	Going Up Through 10 Strategy	2.OA.2, 2.MD.6
40	2.13	Unit 2 Progress Check Day 1		55	3.11	Explorations Exploring Rectangeles, Fact Wheels, ans Coins	2.OA.2, 2.MD.8, 2.G.2
41	2.13	Unit 2 Progress Check Day 2		56		Flex Day- EDM Games and Centers	
42	3.1	Open Response Using Addition Strategies Day 1	2.OA.2	57	3.12	Unit 3 Progress Check Day 1	
43	3.1	Open Response Using Addition Strategies Day 2	2.OA.2	58	3.12	Unit 3 Progress Check Day 2	
44	3.2	Subtraction from Addition: Think Addition	2.NBT.5, 2.NBT.9	59	4.1	Clocks and Telling Time	2.MD.7
45	3.3	Fact Families	2.OA.2, 2.NBT.5	60	4.2	Telling Time to the Nearest 5 Minutes	2.NBT.2, 2.MD.7

Day	Unit & Lesson	Topic / Activity	NJSLS-M	Day	Unit & Lesson	Topic / Activity	NJSLS-M
61	4.3	A.M. and P.M.	2.MD.7	76	5.1	Playing Beat the Calculator	2.OA.2
62	4.4	Numeration and Place Value	2.NBT.1, 2.NBT.3	77	5.2	Using Coins to Buy Things	2.NBT.2, 2.MD.8
63		Flex Day- EDM Games and Centers		78	5.3	Counting Up with Money	2.NBT.5, 2.NBT.7,
64	4.5	Using Place Value to Compare Numbers	2.NBT.3, 2.NBT.4	79	5.4	Coin Calculations	2.NBT.7, 2.MD.8
65	4.6	Open Resonse Using Base 10 Blocks to Show A Number Day 1	2.NBT.1, 2.NBT.3	80		Flex Day- EDM Games and Centers	
66	4.6	Open Response Using Base 10 Blocks to Show a Number Day 2	2.NBT.1, 2.NBT.3	81	5.5	Explorations: Exploring Arrays, Time, and Shapes	2.OA.4, 2.MD.7, 2.G.1
67	4.7	Playing Target	2.NBT.3, 2.NBT.7	82	5.6	Mentally Adding and Subtracting 10 and 100	2.NBT.5, 2.NBT.7,
68		Flex Day- EDM Games and Centers		83	5.7	Open Number Lines	2.NBT.5, 2.NBT.7,
69	4.8	How Big is a Foot?	2.MD.1, 2.MD.2, 2.MD.3, 2.MD.9	84		Math Mid-Year Assessment	
70	4.9	The Inch	2.MD.1, 2.MD.9	85		Math Mid-Year Assessment	
71	4.10	The Centimeter	2.MD.1, 2.MD.2	86		Math Mid-Year Assessment	
72	4.11	Explorations Matching Facts with Strategies, Measuring a Path, Exploring Arrays	2.NBT.5, 2.MD.1, 2.MD.2	87		Math Mid-Year Assessment	
73		Flex Day- EDM Games and Centers		88		Flex Day- EDM Games and Centers	
74	4.12	Unit 4 Progress Check Day 1		89	5.8	Change-to-More Number Stories	2.NBT.5, 2.NBT.7
75	4.12	Unit 4 Progress Check Day 2		90	5.9	Parts-and-Total Number Stories	2.NBT.5, 2.NBT.7

Day	Unit & Lesson	Topic / Activity	NJSLS-M	Day	Unit & Lesson	Topic / Activity	NJSLS-M
91	5.1	Change Number Stories	2.NBT.2, 2.NBT.5,	106	6.8	Partial-Sums Addition, Part 2	2.NBT.3, 2.NBT.5,
92	5.11	Open Response: Adding Multidigit Numbers Day 1	2.NBT.9, 2.MD.8	107	6.9	Open Response: Subtracting with Base-10 Blocks Day 1	2.NBT.5, 2.NBT.7
93	5.11	Open Response: Adding Multidigit Numbers Day 2	2.NBT.9, 2.MD.8	108	6.9	Open Response: Subtracting with Base-10 Blocks Day 2	2.NBT.5, 2.NBT.7
94		Flex Day- EDM Games and Centers		109		Flex Day- EDM Games and Centers	
95	5.12	Assessment: Unit 5 Progress Check Day 1		110	6.10	Explorations: Exploring Arrays, Length, and Shapes	2.NBT.2, 2.MD.1, 2.MD.4,
96	5.12	Assessment: Unit 5 Progress Check Day 2		111	6.11	Assessment: Unit 6 Progress Check Day 1	
97	6.1	Representing Data:Pockets	2.MD.6, 2.MD.10	112	6.11	Assessment: Unit 6 Progress Check Day 2	
98	6.2	Comparison Number Stories	2.NBT.5, 2.NBT.7,	113		Flex Day- EDM Games and Centers	
99		Flex Day- EDM Games and Centers		114	7.1	Playing Hit the Target	2.NBT.1, 2.NBT.1a,
100	6.3	Interpreting Number Stories	2.NBT.5, 2.NBT.7,	115	7.2	Open Response: Four or More Addends Day 1	2.OA.1, 2.OA.2, 2.NBT.6
101	6.4	Animal Number Stories	2.NBT.3, 2.NBT.4,	116	7.2	Open Response: Four or More Addends Day 2	2.OA.1, 2.OA.2, 2.NBT.6
102	6.5	Two-Step Number Stories	2.NBT.5, 2.NBT.7	117	7.3	Playing Basketball Addition	2.NBT.6, 2.NBT.9
103	6.6	Recording Addition Strategies	2.NBT.7, 2.NBT.9	118		Flex Day- EDM Games and Centers	
104		Flex Day- EDM Games and Centers		119	7.4	Measuring with Yards	2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4
105	6.7	Partial-Sums Addition, Part 1	2.NBT.5, 2.NBT.7,	120	7.5	Measuring with Meters	2.MD.1, 2.MD.3, 2.MD.4

Day	Unit & Lesson	Topic / Activity	NJSLS-M
121	7.6	Generating Data: Standing Jumps and Arm Spans	2.MD.1, 2.MD.2, 2.MD.3, 2.MD.9
122	7.7	Representing Data: Standing Jumps	2.NBT.5, 2.MD.6, 2.MD.9
123		Flex Day- EDM Games and Centers	
124	7.8	Representing Data: Arm Spans	2.NBT.5, 2.MD.2, 2.MD.6,
125	7.9	Explorations: Exploring Shape Attributes, Graphs, and Measurements	2.MD.3, 2.MD.9, 2.MD.10, 2.G.1
126	7.1	Assessment: Unit 7 Progress Check Day 1	
127	7.1	Assessment: Unit 7 Progress Check Day 2	
128		Flex Day- EDM Games and Centers	
129		Flex Day- EDM Games and Centers	
130	8.1	Attributes of 2-Dimensional Shapes	2.G.1
131	8.2	Playing Shape Capture	2.G.1
132	8.3	Comparing Triangles, Pentagons, and Hexagons	2.G.1
133		Flex Day- EDM Games and Centers	
134	8.4	Open Resonse: Drawing and Reasoning about Quadrilaterals Day 1	2.G.1
135	8.4	Open Resonse: Drawing and Reasoning about Quadrilaterals Day 2	2.G.1
136	8.5	Attributes of3-Dimesional Shapes	2.G.1
137	8.6	Partitioning Rectangles, Part 1	2.G.2
138		Flex Day- EDM Games and Centers	
139	8.7	Partitioning Rectangles, Part 2	2.G.2
140	8.8	Equal-Groups and Array Number Stories	2.OA.1, 2.OA.4, 2.NBT.2
141	8.9	More Equal Groups and Arrays	2.OA.1, 2.OA.4, 2.NBT.2
142	8.1	Playing Array Concentration	2.OA.4, 2.NBT.2
143		Flex Day- EDM Games and Centers	
144	8.11	Explorations: Exploring Mystery Shapes, Polygons, and Equal Parts	2.G.1, 2.G.3
145	8.12	Assessment: Unit 8 Progress Check Day 1	
146	8.12	Assessment: Unit 8 Progress Check Day 2	
147		Flex Day- EDM Games and Centers	
148	9.1	Creating and Naming Equal Parts	2.G.3
149	9.2	Explorations: Exploring Equal Shares, Patter-Block Fractions, and Number Lines	2.MD.6, 2.G.3
150	9.3	Open Response: Sharing Muffins Day 1	2.G.3

Day	Unit & Lesson	Topic / Activity	
151	9.3	Open Response: Sharing Muffins Day 2	2.G.3
152		Flex Day- EDM Games and Centers	
153	9.4	Fractional Units of Length	2.MD.1, 2.MD.4, 2.MD.6
154	9.5	Reviewing Place Value	2.NBT.1a, 2.NBT.3,
155	9.6	Expand-and-Trade Subtraction, Part 1	2.NBT.1a, 2.NBT.1b,
156	9.7	Expand-and-Trade Subtraction, Part 2	2.NBT.1a, 2.NBT.3,
157		Flex Day- EDM Games and Centers	
158	9.8	Equivalent Money Amounts	2.NBT.7, 2.MD.8
159	9.9	Open Response: Estimating Costs Day 1	2.NBT.5, 2.NBT.6,
160	9.9	Open Response: Estimating Costs Day 2	2.NBT.5, 2.NBT.6,
161	9.1	Connecting Doubles Facts, Even Numbers, and Equal Groups	2.OA.1, 2.OA.2, 2.OA.3, 2.OA.4
162		Flex Day- EDM Games and Centers	
163	9.11	Multiples of 10 and 5	2.NBT.2, 2.NBT.5
164	9.12	Assessment: Unit 9 Progress Check Day 1	
165	9.12	Assessment: Unit 9 Progress Check Day 2	
166		EDM Skills Review	
167		EDM Skills Review	
168		Flex Day- EDM Games and Centers	
169		EDM Skills Review	
170		EDM Skills Review	
171		EDM Skills Review	
172		EDM Skills Review	
173		EDM Skills Review	
174		Math Post-Assessment	
175		Math Post-Assessment	
176		Math Post-Assessment	
177		Math Post-Assessment	
178		EDM Skills Review	
179		EDM Skills Review	
180		Last Day of School	

Unit Plan Title	Unit 1: Establishing Routines
Suggested Time Frame	18 days including "Flex Days"

Overview/ Rationale of Unit
In this unit, children work in an active, collaborative environment to learn both mathematics content and mathematical practices. Children's learning will focus on three clusters of the NJ Student Learning Standards for Math (NJSLS-M): Operations and Algebraic Thinking, Numbers and Operations in Base Ten, and Measurement and Data. They will also work deeply with the Mathematical Practices of making sense of problems and persevering in solving them, reasoning abstractly and quantitatively, and looking for and making use of structure.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.2 Fluently add and subtract within 20 using mental strategies. BY end of grade 2, know from memory all sums of two one-digit numbers.
- 2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
- 2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
- 2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- 2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- 2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Essential Questions: • Why do we need routines? • How are numbers used in the world around us?	**Enduring Understandings:** *Students will understand that…* • Numbers have a variety of uses.
Knowledge: *Students will know…* • Whole numbers as lengths from 0 on a number line. • Solve addition and subtraction number stories. • Values of coin combinations. • How to count tallies. • Place value strategies. • Addition and subtraction to write equivalent number names for numbers. • Combinations of 10. • Even and Odd Numbers. • Place value patterns. • Greater than, less than and equal symbols.	**Skills:** *Students will be able to…* • Fluently add and subtract within 20 using mental strategies. • Determine whether a group of objects (up to 20) has an odd or even number of members. • Count within 1000; skip-count by 5s, 10s, and 100s. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. • Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. • 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. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skills and developing strategic thinking.* • **1-2 and 1-12 -**Number-Line squeeze • **1-4 and 1-11-**The Number Grid Game • **1-6 -**Two-fisted Penny Addition • **1-7 and 1-8-** Fishing for 10 • **1-7-**Penny Plate • **1-7-**Fishing for 100, • **1-7-**Turning over 10 • **1-8** The Exchange Game with Pennies, Nickels, and Dimes • **1-8-**Quarter-Dime-Nickel- Penny Grab • **1-11** Number Top-it *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 1-12 include: • Base 10 "Buildings" • Covering Rectangles with Shapes • Sorting Dominos
Key Vocabulary:	• Combinations of ten • Cube • Equivalent names • Even number • Explorations • Flat • Long • Math Boxes • Math Message • Multiple of ten • Nickel • Number Grid • Number Line • Number Scroll • Odd Number • Pattern • Quarter

Teacher Resources
Texts: Literature Connection • Lesson 1-3 *Lots of Ladybugs! Counting by Fives* by Michael Dahl • Lesson 1-9 *Even Steven and Odd Todd* by Kathryn Cristaldi **Websites:** • www.abcya.com • www.sheppardsoftware.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning:	**Summative Assessment(s) and Performance Task(s):**
• Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	• End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 1.1 Exploring Number Lines **ELL Support:** Pre-teach the vocabulary needed for exploring number lines. Say one term at a time and use Total Physical Response (TPR) protocols. Children repeat term correctly. Use sentence frames to help children use the term interval. Lesson 1.2 Working with a partner to add and subtract on a number line **ELL Support:** Use role play, gestures, and think-alouds to help children learn terms necessary for working in partnerships. Provide sentence frames to assist children in their discussions with partners. Lesson 1.3 Exploring the Pattern block template **ELL Support:** As you give directions, use gestures to show the features of the different shapes. For example, for the number of sides of a triangle, hold up 3 fingers as you give directions to find the shape with 3 sides. Lesson 1.4 Making a class Number Scroll from 1 to 1,000 **ELL Support:** Introduce the word pattern by showing examples of simple patterns and examples that are not patterns, using pattern blocks, classroom objects, and strings of numbers. Have children concentrate on writing numbers in the ones and tens place to help reinforce the pattern of starting at 0 and counting up to 99. Number Grid Game **ELL Support:** Provide children with a set of directions, accompanied by pictures of the manipulatives, and a sample round of the game. Role-play the game instructions as your read them aloud. Lesson 1.5 Solving the open response problem **ELL Support:** In open response problems, it is critical to be able to distinguish whether children's difficulties with a concept stem from mathematical or language issues. Using models, pictures/visuals, and gestures in the questions may help discern the source of difficulty. Encourage children to use pictures, number models, and symbols to explain their thinking.

	Lesson 1.6 Solving broken calculator Problems **ELL Support:** To introduce the word broken, contrast examples of unbroken and broken objects. Explain unbroken means it works, so it is good; broken means it does not work, so it is not good. Extend the idea to a calculator key that is not working or is broken. Lesson 1.7 Exploring the Every Day Math Deck **ELL Support:** Provide sentence frames to help children express what they are noticing about the cards. For example: "These are (alike, different) because… I noticed that …" Lesson 1.8 Discussing My Reference Book and introduce Math Boxes **ELL Support:** Using a "think, pair, share" format, facilitate a whole-class discussion about the word reference by asking children to provide an alternate title for My Reference Book in which the word reference does not appear, but the title tells what kind of book it is. Introduce Math Boxes by explaining to children that every language has short statements (called sayings or expressions) used to explain something people think is important the saying. The saying "practice makes perfect" is used for Math Boxes because it is where children will practice different kinds of math problems daily with each lesson. Provide children with a checklist of the tools they can use to solve problems. Lesson 1.9 Identifying even and odd numbers **ELL Support:** Explain that in Spanish, the words for even and odd (when referring to numbers) are translated as par and impar, respectively. Par is like the pair, so impar would mean not a pair or odd. Extend by saying there are pairs in even numbers, and one left over in odds. Lesson 1.10 Finding Patterns on number grid **ELL Support:** Use I do, We do, You do sequences, think-alouds, and highlighting of key terms to make the activity directions comprehensible. Have children work on their own journal pages as they imitate your actions, then have them work independently. Highlight the following terms as you work through the examples: count by, counts, shaded numbers, in order, digits, ones place, and pattern as part of your modeling and think-alouds.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
The following social and emotional competencies are integrated in this curriculum document:

Self-Awareness

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

Self-Management

__x__ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x__ Recognize the skills needed to establish and achieve personal and educational goals
__x__Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__x__ Recognize and identify the thoughts, feelings, and perspectives of others
__x__ Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
_ x__ Demonstrate an understanding of the need for mutual respect when viewpoints differ
_x_ Demonstrate an awareness of the expectations for social interactions in a variety of settings

Responsible Decision Making

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

Relationship Skills

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

Unit Plan Title	Unit 2: Fact Strategies
Suggested Time Frame	18 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, students review and extend fact strategies and program routines from the First Grade Everyday Mathematics curriculum. Through frequent experiences with these strategies and routines throughout second grade, students develop fluency in adding all addends 0-10. Children's learning will focus on two clusters of the NJ Student Learning Standards for Math (NJSLS-M), Operations and Algebraic Thinking and Numbers and Operations in Base Ten. They will also work deeply with the Mathematical Practices of attending to precision and looking for and making use of structure.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- 2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- 2.OA.3- Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
- 2.NBT.1- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
- 2.NBT.3- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.5- Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Essential Questions: • What strategy do you use when you add? Why? • Why is it good to know more than one strategy for addition and subtraction?	**Enduring Understandings:** *Students will understand that…* • Strategies can be applied to solve addition problems. • The ability to choose the appropriate operations for a given situation and the ability to perform those operations well are skills that are essential for modern day life.
Knowledge: *Students will know…* • Place value concepts. • How to write and solve addition number stories. • Doubles and combinations of ten. • Add within 20. • The "turn around" rule for addition. • Odd and even numbers. • Equivalent names for numbers. • How to solve frames-and-arrows problems.	**Skills:** *Students will be able to…* • 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. • Fluently add and subtract within 20 using mental strategies.2 • Know from memory all sums of two one-digit numbers. • Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. • 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. • Count within 1000; skip-count by 5s, 10s, and 100s. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.				

<table>
<tr><th colspan="3">Student Resources</th></tr>
<tr><td>Math Centers and Games:</td><td colspan="2">Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking.

• 2-1, 2-5 and 2- 8- The Exchange Game
• 2-1 Spinning for Money
• 2-3- Fishing for Ten
• 2-4 The Number- Grid Game
• 2-4 and 2-10 Two Fisted Penny Addition
• 2-5- Roll and Record Doubles
• 2-9 and 2-10 Evens and Odds
• 2-11 and 2-12 Name that Number

Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.

Explorations Lesson 2-8 include:
• Using Tools to Add
• Sorting Dominos
• Making Geoboard Shapes</td></tr>
<tr><td>Key Vocabulary:</td><td>• Addend
• Addition number story
• Arrows; arrow rule
• Combinations of Ten
• Divide
• Doubles; doubles fact
• Equal addends
• Equivalent
• Fourths
• Frame
• Frames-and-Arrows diagram
• Half; halves
• Helper fact</td><td>• Label
• Making ten
• Name collection box
• Near doubles strategy
• Number model
• Number sentence
• Number story
• Sum; total
• Trade
• Turn around rule
• Unit box</td></tr>
</table>

Teacher Resources
Texts: Literature Connection • Lesson 2-3 *Two of Everything: A Chinese Folktale* by Lily Toy Hong • Lesson 2-9 *One Odd Day* by Doris Fisher • Lesson 2-9 *My Even Day* by Doris Fisher **Websites:** • www.abcya.com • www.sheppardsoftware.com • www.illuminations.NCTM.org • www.coolmath.com • http://NLVM.usa.edu/ • www.khanacademy.com • www.nRICH.maths.org • www.kidzone.ws/ • www.APlusMath.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning: • Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips / Slates Assessments • Self-Assessments • Games • Questioning	**Summative Assessment(s) and Performance Task(s):** • End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 2.1 Counting Money **ELL Support:** Role play the directions for exchanging bills. Demonstrate the meaning of the term how many by counting $1 bills aloud, and demonstrate the meaning of the term exchange by using the words giving and getting as you role-play. Lesson 2.2 Creating and solving Addition Number Stories **ELL Support:** As you display the story or draw the picture, label the units to continue to build a word bank of everyday words for Beginning ELLs to use. Maintain a display of words with pictures for children to use in their number stories. Lesson 2.3 Naming Doubles and combinations of 10 **ELL Support:** Distinguish between homonyms some and sum. Give examples of the two words in a sentence. To further children's understanding of the term in common, have them work in pairs to complete a 4-Square Graphic Organizer showing pictures, examples, non-examples, and their own definitions for the term. Lesson 2.4 Making-10 Strategy **ELL Support:** Post a number sentence and label, first addend, second addend, and sum. To review helper facts, have children look at the words help and helper. Ask how the two words are alike. Explain when we add –er to something we do, you are usually talking about someone. Lesson 2.5 Near Doubles Strategies **ELL Support:** To illustrate the meaning of the word near, have two children stand next to each other. Have children point to or name other pairs of nearby numbers—such as those on the number line. Encourage pre-production children to show their thinking by moving counters of two different colors on double ten frames to demonstrate what they saw.

	Lesson 2.6 Identifying odd and even numbers **ELL Support:** Use TPR prompts to teach the meaning of the word grab, both as a noun and as a verb. First show, and then direct children to grab some pennies. Use sentence frames to help children talk through the activity to identify how many pennies they grabbed. Lesson 2.8 Writing number stories and number models **ELL Support:** Help children connect the words in a number story to the symbols in a number model. Use teacher think-alouds and demonstrations with objects to role-play a number story. Recount the same number story, representing it with a number model. Lesson 2.10 Practicing with Name Collection Boxes **ELL Support:** Explain the meaning of the term collection as being made up of items that are not exactly the same, but share something in common, by showing children examples of collections. Explain the meaning of names that do not belong by showing sets of objects with one or two that do not belong. Lesson 2.12 Solving Frames and Arrows Problems **ELL Support:** Before children solve the Frames-and-Arrows problems, help them make the connection between what they did for the Math Message and what they will do to solve these. Use the same number sequences used in the Math Message, and show how to use them in the Frames-and-Arrows format.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
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Unit Plan Title	Unit 3: More Fact Strategies
Suggested Time Frame	17 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, students develop more fact strategies, with a focus on strategies for solving subtraction facts. Additional routines and games for practicing facts are introduced, as frequent use of them will support the development of fluency with addition and subtraction within 20 by the end of second grade. Children's learning will focus on four clusters of the NJ Student Learning Standards for Math (NJSLS-M): Operations and Algebraic Thinking, Number and Operations in Base Ten, Measurement and Data, and Geometry.
They will also work deeply with the Mathematical Practices of looking for and making use of structure, reasoning abstractly and quantitatively, and modeling with mathematics.

Stage 1 – Desired Results

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

- 2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- 2.OA.2 Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.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.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.
- 2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- 2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
- 2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

Essential Questions:	**Enduring Understandings:** *Students will understand that…*
• What strategies do you use to find sums and differences? • How do I recommend what strategy to use for a specific problem? • How can "knowing" addition and subtraction facts help me?	• They can use various strategies to solve addition and subtraction problems. • Working with a variety of strategies helps with fluency in subtraction. • There is inverse relationship between addition and subtraction.
Knowledge: *Students will know…* • How to write subtraction number stories. • How to generate fact families. • How to find missing addends. • Counting up and counting back strategies for subtraction. • How to use doubles to solve subtraction facts. • Going back through "ten strategy" for subtraction. • Going up through "ten strategy" for subtraction.	**Skills:** *Students will be able to…* • 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. • Fluently add and subtract within 20 using mental strategies. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • 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. Explain why addition and subtraction strategies work, using place value and the properties of operations. • 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. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. • Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	CRP3. Attend to personal health and financial well-being.
	Credit and Debt Management		ETA	CRP4. Communicate clearly and effectively and with reason.
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	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		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.				

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<tr><td>Math Centers and Games:</td><td colspan="2">Games in Everyday Mathematics are an essential tool for practicing skills and developing strategic thinking.

• 3-4- and 3-5- Salute
• 3-4- Penny Plate
• 3-5- The Difference Game
• 3-6 and 3-9- Subtraction Top-it!
• 3-6- Name that Number
• 3-8- Roll and Record Doubles
• 3-10- The Exchange Game
• 3-11- Evens and Odds
• 3-11- Spinning for Money

Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.

Exploration 3-11 Exploring Rectangles, Fact Wheels, and Coins
• Covering a Rectangle with Different-Size Squares
• Practicing Addition on a Fact Wheel Making Coin Stamp Booklets</td></tr>
<tr><td>Key Vocabulary:</td><td>• -0 facts; -1 facts
• Addition facts
• Column
• Counting back; counting up
• Diagonal
• Difference
• Double ten frame
• Equivalent names
• Fact family; related facts
• Fact Triangle
• Fact Wheels
• Fact Table
• Friendly Number
• Function Machine</td><td>• Going Back Through Ten
• Going back through Ten
• Input; Output
• Making Ten
• Missing addend
• Near doubles
• Rectangle
• Row
• Square
• Subtraction facts
• Subtraction number stories
• Think addition strategy
• What’s My Rule</td></tr>
</table>

Teacher Resources
Websites: • www.abcya.com • www.sheppardsoftware.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning: • Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	**Summative Assessment(s) and Performance Task(s):** • End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 3.1 Making 10 on a Double Ten Frame **ELL Support:** For children who attempt to count the dots on the double frame one by one, review the number of dots that appear in one column, one row, and in one full ten frame. Lesson 3.2 Generating Related Addition and Subtraction Facts **ELL Support:** Extend children's understanding of the term related by showing an example of a family picture. Use think-alouds that include other words from the same word family and restatements that include the term connected. Extend children's understanding of related facts, by asking how numbers in fact families are related. Lesson 3.3 Fact Triangles Routines **ELL Support:** To give children a visual reference for where to put their fingers when using the Fact Triangles, highlight the sum in one color and the addends in another color. To help children see the pattern, give them a guide that uses the same color highlighting of the sum and addends in the fact family. Lesson 3.5 Exploring Counting Strategies for Subtraction **ELL Support:** Provide a laminated number line, which children can write on to help solve problems with counting up and counting back strategies. Encourage them to follow along on their own number lines as classmates share their strategies. Practicing Subtraction Using Fact Triangles **ELL Support:** Use a sample Fact Triangle, and write the terms top, bottom, and addend in the appropriate places, so children will understand where they are to cover the number. Use Total Physical Response prompts to have children practice identifying the terms. Lesson 3.6 The -0 and -1 Strategies **ELL Support:** Provide sentence frames to help children with strategies. For example: "When I subtract 0, I see that _____." (Sample answer: Nothing changes.) "When I subtract 1, I see that _____." (Sample answer: The answer is one less.)

	Lesson 3.7 Function Machines, Solving "What's My Rule" **ELL Support:** Role-play class rules and school rules children may know to explain the meaning of the term rules as guidelines you follow at all times. Allow children to use their fingers to show the rules for different function machines. Have children who are ready practice saying the word rule. Lesson 3.9 Going Back Through 10 Strategy **ELL Support:** The concept going back through 10 may be difficult for children to understand. Tell a story, using a sketch of a highway to illustrate going from one town to another and making a stop in the friendly place called Ten Town. For example, for 15-7, say, "I will start at Mile 15 and stop at friendly Ten Town for a meal and gas. From Mile 15 to Ten Town will be 5 miles. Now I will go from Ten Town (10) to Mile 7. From 10 to 7 will be 3 miles. So I first traveled 5 miles, and then went another 3 miles, or 8 miles all together. Lesson 3.10 Going Up Through 10 Strategy **ELL Support:** Contrast going up through and back through using gestures to the right and left and drawing arrows in the appropriate directions on the number line. Use think-alouds to reduce the linguistic load of number story contexts. Post the words up and back with arrows to the right and left for reference.

Technology Integration
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Self-Management

__x_ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
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__x_ Develop, implement and model effective problem solving and critical thinking skills
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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

Unit Plan Title	Unit 4: Place Value and Measurement
Suggested Time Frame	17 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children extend their understanding of place value, which provides a foundation for the development of strategies for fluently adding and subtracting multi-digit numbers. They also explore standard tools and units for measuring length and time. Children's learning will focus on two clusters of the NJ Student Learning Standards for Math (NJSLS-M): Numbers and Operations in Base Ten and Measurement and Data.

They will also work deeply with the Mathematical Practices of reasoning abstractly and quantitatively, modeling with mathematics, using appropriate tools strategically, attending to precision, looking for and making use of structure, and looking for and expressing regularity in repeated reasoning.

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Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
- 2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
- 2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
- 2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- 2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- 2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.
- 2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- 2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

Essential Questions: • How does understanding place value help you to solve multi-digit addition and subtraction problems? • How would you describe what time it is? • How does understanding the units of measure help you to know what unit to use?	**Enduring Understandings:** *Students will understand that…* • The digits in two and three digit numbers have a specific meaning. • The hands on the clock represent hour and minutes. • There are various units of measure.
Knowledge: *Students will know…* • How to tell time to the nearest hour and half hour. • How to tell time to the nearest five minutes. • How to tell time using AM and PM. • How to use base ten blocks to represent three digit numbers. • How to use place value and expanded form to compare three digit numbers. • How to model addition and subtraction of multi-digit numbers using base ten blocks. • Standard units of length such as inch and centimeter.	**Skills:** *Students will be able to…* • Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. • 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. • Measure the length of an object by selecting and using appropriate tools. • Measure the length of an object twice, using length units of different lengths for the two measurements. • Estimate lengths using units of inches, feet, centimeters, and meters. • Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. • Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.				

<table>
<tr><th colspan="3">Student Resources</th></tr>
<tr><td>Math Centers and Games:</td><td colspan="2">Games in Everyday Mathematics are an essential tool for practicing skills and developing strategic thinking.

• 4-2- and 4-4- Evens and Odds
• 4-3- Addition Top-It
• 4-5- Number Top-It
• 4-5- The Digit Game
• 4-7- Target to 50
• 4-7 Target to 200
• 4-10- The Exchange Game

Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.

Explorations 4-11 Matching Facts with Strategies, Measuring a Path, Exploring Arrays
• Matching Facts with Strategies
• Measuring a Long Path
• Exploring Arrays</td></tr>
<tr><td>Key Vocabulary:</td><td>• 24-hour time line
• AM: PM
• Analog Clock
• Base Ten Blocks
• Centimeter (cm)
• Cube: Flat: Long
• Digital Clock
• Digit
• Estimate
• Expanded Form
• Foot (ft.)
• Hour</td><td>• Hour Hand
• Inch (in)
• Is Greater Than (>)
• Is Less Than (<)
• Metric System
• Minute
• Minute Hand
• Represent
• Ruler
• Standard Units
• U.S. Customary Units</td></tr>
</table>

Teacher Resources
Texts: Literature Connection • Lesson 4-3 *Tuesday* by David Wiesner • Lesson 4-8 *How Big Is a Foot?* by Rolf Myller **Websites:** • www.abcya.com • www.sheppardsoftware.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning:	**Summative Assessment(s) and Performance Task(s):**
• Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	• End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 4.1 Estimating Time with the Hour and Minute Hands **ELL Support:** Show children a container. Put objects in the container, such as cubes, and say, "This container holds cubes." Then point to the clock and to the interval between the 12 and 1, say "This is a special container that holds minutes, 5 minutes." Continue around the clock showing each container, ending with the whole clock containing 60 minutes. Use role play of children standing in a line to teach the terms just before, just after, and between. Use the terms almost and about interchangeably and in opposition exactly. Lesson 4.2 Telling and Writing Time **ELL Support:** Model length with hand gestures while using the words long and short as a way to introduce the long minute hand and the short hour hand. Display a visual of a short hand and a long hand with a colon in between. Provide children with many oral language practice opportunities for telling time. Provide sentence frames to help children discuss their strategies for finding the hour and the minutes. Give children a time, and ask them to tell how you should write it, using numbers and the term colon. Lesson 4.3 Exploring a 24-Hour Timeline **ELL Support:** Introduce children to the word timeline by showing a clock and a line. Plot a few times on the line and show them on the clock. Lesson 4.4 Matching Numbers to Base-10 Block Representatives **ELL Support:** Use the idea of stretching out to help children understand the meaning of the term expand. Use visual aids, such as a rubber band or balloon, to demonstrate the action of expanding. Link the action to numbers written in expanded form. Scaffold to help children actively construct an understanding of representing a number by giving different children in the group different kinds of objects, including base-10 blocks. Lesson 4.5 Sharing Strategies **ELL Support:** When talking about which number is greater or less than the other, model the symbols with gestures with your hands. Provide a display to remind children of the meanings.

	Lesson 4.6 Drawing Base-10 Blocks for Numbers **ELL Support:** Prior to this lesson and as needed, review the vocabulary using base-10 blocks and shorthand. Use Total Physical Response commands. Lesson 4.7 Making Exchanges (longs and cubes) **ELL Support:** Provide sentence frames using terms: 10 cubes, 1 long, equal, and the same. Lesson 4.8 Measuring with a Foot Long Foot **ELL Support:** Contrast the terms exact and approximate by showing examples of measures that line up exactly with a given number of feet and others that come close to the same number. Use think-alouds, and everyday terms, such as close to, nearly, more or less, and about to help children construct meaning for approximate. Lesson 4.9 Measuring with Different Tools **ELL Support:** Model how to measure an object with the 1-inch square pattern blocks and the 12-inch ruler, and highlight the words pattern blocks, measure, and 12-inch ruler. Lesson 4.10 Measuring with the 12-Inch and 10-Centimeter Rulers **ELL Support:** Use visual aids and actions to explain the meanings of the terms object, measure, centimeters, inches, about, and record. Have children fill in a 4-Square Graphic Organizer with the headers: Picture, Abbreviation, Example, and Non-Example for the term centimeter. Have children compare and contrast inches with centimeters.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

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

__x_ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x_ Recognize the skills needed to establish and achieve personal and educational goals
__x_ Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__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

__x_ 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

Unit Plan Title	Unit 5: Addition and Subtraction
Suggested Time Frame	18 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children review addition and subtraction problems in the context of money and number stories. They learn strategies for mentally adding and subtracting 10 and 100. Children's learning will focus on three clusters of the NJ Student Learning Standards for Math (NJSLS-M), Operations and Algebraic Thinking, Number and Operations in Base Ten, and Measurement and Data.

They will also work deeply with the Mathematical Practices of making sense of problems and persevering in solving them, reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, modeling with mathematics, using appropriate tools strategically, attending to precision, looking for and making use of structure, and looking for and expressing regularity in repeated reasoning.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem.
- 2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- 2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.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.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2..., and represent whole-number sums and differences within 100 on a number line diagram.
- 2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Essential Questions:	**Enduring Understandings:** *Students will understand that…*
• How do you know when to use addition and subtraction? • Is there more than one way to make the same amount of money? • How can diagrams be used to help solve number stories?	• Addition should be used in problems that involve joining and subtraction should be used in problems involving separating. • There are many coin combinations to make the same amount of money. • Diagrams can be used to simplify a problem by inputting known numbers and solving for the missing numbers.
Knowledge: *Students will know…* • Mental strategies to add two 1-digit numbers. • Coin equivalencies and be able to make different combinations of coins for the same amount of money. • How to make change by counting up. • How to construct shapes on geoboards. • How to mentally add and subtract 10 and 100. • How to use open number lines as a tool for solving open number stories. • How to solve change-to-more number stories. • How to solve parts-and-total number stories. • How to solve change number stories involving temperature.	**Skills:** *Students will be able to…* • 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. • Fluently add and subtract within 20 using mental strategies.[2] By end of Grade 2, know from memory all sums of two one-digit numbers. • Count within 1000; skip-count by 5s, 10s, and 100s. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900. • 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. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking* • 5-1 and 5-7 Beat the Calculator and Beat the Calculator with Extended Facts • 5-2 Spinning for Money and Dime-Nickel-Penny Grab • 5-3 Salute! • 5-4 Target • 5-5 Addition Top-it and Clock Concentration • 5-6 Addition/Subtraction Spin • 5-10 Number Top-it *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 5.5 • Making Arrays • Playing Clock Concentration • Making Shapes
Key Vocabulary:	• Addition fact • Array • Change diagram • Change-to-less number story • Change-to-more number story • Degree Fahrenheit • Equivalencies • Fact power • Mental addition • Mental subtraction • Open number line • Parts-and-total diagram • Parts-and-total number story • Thermometer • Total

Teacher Resources
Websites • www.abcya.com • www.sheppardsoftware.com • http://illuminations.NCTM.org • http://NLVM.usa.edu • www.kidzone.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning: • Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	**Summative Assessment(s) and Performance Task(s):** • End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 5.1 Discussing Fact Power **ESL Support:** Show examples of addition facts, and point to a calculator and to your heads as you tell children they will use a calculator and their brain to practice addition facts. Lesson 5.2 Finding the Total **ELL Support:** Encourage pre-production children to share their strategies using coins and gestures. Provide sentence frames for children who are ready. For example: "I counted the _____. I got _____." Reviewing Money Equivalencies **ELL Support:** As you call out the coin names and display them, have children touch the coins on My Reference Book, pages 110-111. Lesson 5.3 Making Change **ELL Support:** Use the terms buy and purchase in adjacent sentences to help children understand the meanings and uses of the term purchase. For example: What did you buy? What did you purchase? Lesson 5.4 Buying Items With and Without Exact Change **ELL Support:** Show a pencil and attach a price tag labeled 20 cents. Then display 2 dimes. Say, "The pencil costs 20 cents. I will use exact change. I will use 2 dimes to buy it." Show other real-world items with price tags, and direct children to buy them with exact change. Lesson 5.5 Making Arrays **ELL Support:** Use the Number-Grid Poster to introduce the terms row and column. Have children gesture from side to side on the grid for row, and gesture up and down for column. Have children use connecting cubes (or centimeter cubes) to build their array. Provide children with two dice of different colors, one color for the rows and the other for the columns. Have them record their arrays on centimeter grid paper (MM p. TA25) and outline the array. To draw their array, children can remove the cubes and mark the squares within their outline.

	Lesson 5.6 Adding and Subtracting 10 and 100 **ELL Support:** Use an I do, We do, You do sequence to model and have children practice as you guide them through the steps. Lesson 5.7 Using Open Number Lines **ELL Support:** Create an open number line on the floor, and have children role-play. Use visual aids to illustrate the story contexts. Lesson 5.8 Solving Change-to-More Number Stories **ELL Support:** Help children make the connection between the term weigh, the unit pounds, and its abbreviation lb. Point to one of the fish on the Fish Poster (Math Journal 2, p. 120), and use the sentence frame, Fish _____ weighs _____ pounds. Lesson 5.9 Solving Parts-and-Total Number Stories **ELL Support:** Role-play the problems using real-world items or pictures. Use think-alouds, so children can hear the term cost being used as an action and a noun. Lesson 5.10 Using Change Diagrams **ELL Support:** Provide reading and oral language practice with the term temperature by pointing to it, modeling pronunciation, and directing children to say it several times.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
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__x___Recognize the impact of one's feelings and thoughts on one's own behavior
__x___Recognize one's personal traits, strengths and limitations
__x___Recognize the importance of self-confidence in handling daily tasks and challenges

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__x___Establish and maintain healthy relationships
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__x___Identify ways to resist inappropriate social pressure
_x____Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
__x___Identify who, when, where, or how to seek help for oneself or others when needed

Unit Plan Title	Unit 6: Whole Number Operations and Number Stories
Suggested Time Frame	15 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children collect and display data on two different types of graphs. They are introduced to comparison number stories and two-step number stories. Later in the unit, they share and record their own invented strategies for addition and learn a formal addition strategy. Children's learning will focus on three clusters of the NJ Student Learning Standards for Math (NJSLS-M), Operations and Algebraic Thinking, Number and Operations in Base Ten, and Measurement and Data.

They will also work deeply with the Mathematical Practices of making sense of problems and persevering in solving them, reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, using appropriate tools strategically, and attending to precision.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g. By using drawings and equations with a symbol for the unknown number to represent the problem.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.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.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- 2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
- 2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems[1] using information presented in a bar graph.

Essential Questions:	**Enduring Understandings:** *Students will understand that…*
• How can data be organized? • How can number stories be solved? • How can you estimate sums and differences of two and three digit numbers?	• Data can be organized into bar graphs and picture graphs to make data easier to read. • Number stories can be solved using a variety of methods and manipulative tools. • Ballpark estimates are a good tool to help solve addition and subtraction problems.
Knowledge: *Students will know…* • How to draw picture graphs and bar graphs to represent a data set. • How to solve comparison number stories. • How to choose diagrams for solving number stories. • Solve two-step number stories. • How to make ballpark estimates and invent and record their own strategies for solving addition problems. • How to use base-10 blocks to find partial sums. • How to build arrays on geoboards. • How to measure and compare lengths.	**Skills:** *Students will be able to…* • 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. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • 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. • 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. • 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. • 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[1] using information presented in a bar graph.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
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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, and Preparation**			CRP9. Model integrity, ethical leadership and effective management.
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	Career Exploration		E	CRP11. Use technology to enhance productivity.
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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.

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking.* • 6-6 The Exchange Game • 6-8 Salute! • 6-10 Beat the Calculator *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 6-10 include: • Making Geoboard Arrays • Comparing Lengths • Making Shapes
Key Vocabulary:	• Ballpark estimate • Bar graph • Comparison diagram • Comparison number story • Data • Difference • Geoboard • Graph key • Partial sums • Partial-sums addition • Picture graph • Quantity • Rectangular array • Tally chart • Two-step number story

Teacher Resources
Texts: Literature Connection • Lesson 6-4 *Actual Size* by Steve Jenkins • Lesson 6-5 *Where the Sidewalk Ends by* Shel Silverstein **Websites:** • www.abcya.com • www.sheppardsoftware.com • www.coolmath.com • www.khanacademy.com • http://NLVM.usa.edu • www.nRICH.maths.org • www.APlusMath.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning: • Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	**Summative Assessment(s) and Performance Task(s):** • End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Suggested Learning Activities	Lesson 6.1 Creating Picture Graphs and Bar Graphs **ELL Support:** Create and display an anchor chart titled Representing Data. Include picture graph, horizontal axis, graph key, and label. Include illustrations and short sentences. Then add bar graph to the anchor chart. Make copies of the chart for individual use. Lesson 6.2 Solving Comparison Number Stories **ELL Support:** Demonstrate the meaning of difference with the two lined-up fish by shading the unmatched and labeling it difference. Restate sentences with the terms how much/how many and amount to help children build understanding of the term quantity. Make connections between the word more and the comparative –er suffix by explaining that when comparing two objects or quantities, the object or quantity that has more is often described with a word with –er. Lesson 6.3 Selecting Appropriate Diagrams **ELL Support:** Scaffold to help children think about the meanings of the terms change, compare/comparison, parts, situation, and total. Ask questions using these terms. Lesson 6.4 Solving and Writing Animal Stories **ELL Support:** As you present the animal number stories, point to the pictures of each animal and repeat the name. Allow children to name or point to the pictures of the animals as they share and to use hand gestures to show whether one animal is longer/shorter than the other. Provide sentence frames for children to use to share their solution strategies. Then provide pictures for children to writer their animal stories. They may place the pictures in a parts-and-total diagram to scaffold their thinking. Lesson 6.5 Solving Two-step Number Stories **ELL Support:** Help children frame their thoughts about how to solve the problems by providing a checklist that includes the following questions: “What is the answer needed? What do we know? What did we have at first? What changes occurred? What happened? What is the first step? What is the second step? How many were there at the end?” Encourage children to verbalize their thinking as they work through the list of questions.

	Lesson 6.6 Sharing and Recording Strategies **ELL Support:** Encourage children to share their strategies by modeling with a number grid, a number line, or an open number line. As you record the different strategies, use gestures to illustrate the actions taken. For example: counting up, show going to the right of the number line; combining, put your hands together. Making Ballpark Estimates **ELL Support:** Follow questions about whether a solution makes sense with a restatement of the question, using the words seems right or seems reasonable to help children build understanding of the idiomatic phrase in this context. Lesson 6.7 Finding Partial-sums With Base-10 blocks **ELL Support:** Have children work with the base-10 blocks on a place-value chart to reinforce that longs go in the tens place and cubes in the ones place. Lesson 6.8 Using Expanded Form to Find Partial Sums **ELL Support:** Encourage children to demonstrate their thinking nonverbally by allowing them to show their work and point to each step of their exchanges and the corresponding expanded forms. Lesson 10 Making Geoboard Arrays **ELL Support:** Promote academic language use, including use of terms array, rectangular array, row, and enclose. Provide children with sentence frames to use to discuss their rectangular arrays.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
The following social and emotional competencies are integrated in this curriculum document:

Self-Awareness

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

Self-Management

__x__ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x__ Recognize the skills needed to establish and achieve personal and educational goals
__x__ Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__x__ Recognize and identify the thoughts, feelings, and perspectives of others
__x__ Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
__x__ Demonstrate an understanding of the need for mutual respect when viewpoints differ
__x__ Demonstrate an awareness of the expectations for social interactions in a variety of settings

Responsible Decision Making

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

Relationship Skills

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

Unit Plan Title	Unit 7: Whole Number Operations and Measurement and Data
Suggested Time Frame	15 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children further explore addition and subtraction strategies and use them to add three or more numbers. They use units of yards and meters to measure distances. At the end of the unit, they collect data and display it in a frequency table and a line plot. Children's learning will focus on three clusters of the NJ Student Learning Standards for Math (NJSLS-M), Number and Operations in Base Ten, Measurement and Data, and Geometry.
They will also work deeply with the Mathematical Practices of modeling with mathematics, using appropriate tools strategically, and attending to precision.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.
- 2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- 2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- 2.MD.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[1] using information presented in a bar graph.
- 2.G.1Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Essential Questions:	**Enduring Understandings:**
• How can measurements be compared? • Which classroom objects can be used to approximate standard units of inches, feet, yards, centimeters, and meters?	*Students will understand that…* • Measurements need the same unit of measure in order to be compared. • The length of objects is measureable in different units.
Knowledge: *Students will know…* • How to find differences between two-digit numbers and multiples of 10. • How to solve addition problems with three or more addends. • How to explore U.S customary units and measure to the nearest yard. • How to choose appropriate units and tools to estimate and measure lengths. • How to measure lengths to the nearest centimeter and nearest inch. • How to create a frequency table and a line plot to display data.	**Skills:** *Students will be able to…* • Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. Use place value understanding and properties of operations to add and subtract. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Add up to four two-digit numbers using strategies based on place value and properties of operations. • Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. • 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. • 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[1] using information presented in a bar graph. • Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.				

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking.* • 7-1 Hit the Target and Hit the Target with Other Numbers • 7-3 and 7-4 Basketball Addition • 7-8 Beat the Calculator • 7-9 Addition/Subtraction Spin *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 7-9 include: • Sorting Shapes • Drawing a Picture Graph • Measuring Body Parts
Key Vocabulary:	• Addend • Arm span • Frequency table • Line plot • Meter (m); yard (yd.) • Multiple of 10 • Partial-sums addition • Personal reference • Standard unit

Teacher Resources	
Websites: • www.abcya.com • www.sheppardsoftware.com	
Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning:	**Summative Assessment(s) and Performance Task(s):**
• Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals	• End of Unit Assessments • Benchmark Assessments • Tests • Quizzes

• Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games	• Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 7.1 Making Multiples of 10 **ELL Support:** Provide oral language practice with the multiple-of-10 terms by having children repeat counts by 10s to 100 in chorus. Distribute number cards with the multiples of then from 30 through 90 to practice identifying the multiples by name. Call out number words, and have children show the appropriate numeral. Solving Calculator Change Puzzles **ELL Support:** To help children figure out how to move from 45 to 50 on their calculators, let them look at a number grid to visualize that they need to add 5 to get from 45 to 50. An open number line may also help them visualize their strategies more concretely before they try to compute with their calculators. Lesson 7.3 Sharing Strategies **ELL Support:** Provide base-10 blocks so children can show their thinking nonverbally. Provide sentence frames to help them share their strategies using sequential language. Playing Basketball Addition **ELL Support:** Display the terms first and second alongside their abbreviations 1^{st} and 2^{nd}. Have children work in partnerships to prepare an explanation of one of the two abbreviations to share with another partnership. Provide a chart showing combinations of 10. Lesson 7.4 Estimating and Measuring Distances **ELL Support:** Use stick-on notes to model the terms overlap, gap, space, and end-to-end. Assess children's understanding by asking them to show examples of terms.

	Lesson 7.5 Estimating and Measuring Lengths **ELL Support:** Have children use a crayon to nonverbally share how they would use their personal reference to estimate its length. Use questions and directions, such as: How long do you think the crayon is? Show your partner. Use the crayon. Use sentence frames to help children discuss personal references and measurement. Lesson 7.6 Collecting and Recording Arm Span and Standing Jump Data **ELL Support:** Model touching your arm as you say arm. Then ask children to touch their arms. With a broad gesture, show your arms outstretched and say, "This is my arm span." Have a children do the same. Model using the term jump as a noun and as a verb with the Total Physical Response technique. Use sentence frames. Lesson 7.7 Making a Class Line Plot **ELL Support:** Build children's understanding of a line plot and their capacity to explain it by having them work in partnerships to prepare a 4-Square Graphic Organizer. Headers should be, Picture of a Line Plot, A Collection Example, An Organized Collection, and My Definition. Lesson 7.8 Making Frequency Table of Arm Span Data **ELL Support:** Use gestures as you fill in the table. To demonstrate the shortest arm span, bring your arms close together; and for the longest, hold your arms far apart. Follow questions about the frequency of different arm span measures by asking children to count the tally marks, so they associate the terms frequent, frequently, and frequency with counts. Lesson 7.9 Sorting Shapes **ELL Support:** Use the terms groups and sorts interchangeably to provide children with listening experiences that will allow them to construct that sort and sorts can be used as nouns. Drawing a Picture Graph **ELL Support:** Use the terms choose and select interchangeably with the term pick to avoid confusion with phrase picking fruits, as in picking or pulling them from a tree.

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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INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
The following social and emotional competencies are integrated in this curriculum document:

Self-Awareness

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

Self-Management

__x__Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x__Recognize the skills needed to establish and achieve personal and educational goals
__x__Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__x__Recognize and identify the thoughts, feelings, and perspectives of others
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__x___Demonstrate an understanding of the need for mutual respect when viewpoints differ
__x___Demonstrate an awareness of the expectations for social interactions in a variety of settings

Responsible Decision Making

__x__Develop, implement and model effective problem solving and critical thinking skills
__x___Identify the consequences associated with one's action in order to make constructive choices
__x___Evaluate personal, ethical, safety and civic impact of decisions

Relationship Skills

___x__Establish and maintain healthy relationships
__x___Utilize positive communication and social skills to interact effectively with others
___x__Identify ways to resist inappropriate social pressure
___x__Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
__x___Identify who, when, where, or how to seek help for oneself or others when needed

Unit Plan Title	Unit 8: Geometry and Arrays
Suggested Time Frame	17 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children explore 2- and 3-dimensional shapes and their attributes. They partition rectangles into rows and columns of same-size squares. At the end of the unit, they explore strategies for determining the total number of objects in equal groups and rectangular arrays. Children's learning will focus on three clusters of the NJ Student Learning Standards for Math (NJSLS-M), Operations and Algebraic Thinking, Number and Operations in Base Ten, and Geometry.

They will also work deeply with the Mathematical Practices of reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, modeling with mathematics, using appropriate tools strategically, attending to precision, and looking for and expressing regularity in repeated reasoning.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem.
- 2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
- 2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.
- 2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- 2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- 2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Essential Questions:	**Enduring Understandings:** *Students will understand that…*
• How can 2- and 3-dimensional shapes be described? • How can arrays help in the understanding of multiplication?	• Two and three dimensional shapes can be described, classified, and analyzed by their attributes. • Arrays show the equal groups that represent a multiplication problem.
Knowledge: *Students will know…* • How to describe the attributes of 2-dimensional shapes. • How to identify shapes with certain attributes. • How to build and compare various polygons. • How to sort and compare 3-dimensional shapes according to their attributes. • How to use manipulatives to partition rectangles into same-size squares. • How to solve number stories about equal groups and arrays. • How to build equal groups and arrays and write number models for them. • How to describe attributes of a shape, build polygons with trapezoids, and show fractions on a geoboard.	**Skills:** *Students will be able to…* • 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. • 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. • Count within 1000; skip-count by 5s, 10s, and 100s. • Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. • Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. • 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.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.				

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking.* • 8-1 Subtraction Top-It • 8-2 Shape Capture • 8-3 Target • 8-6 The Number-Grid Difference Game • 8-8 Beat the Calculator • 8-9 Basketball Addition • 8-10 Array Bingo • 8-10 and 8-11 Array Concentration *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 8-11 include: • Identifying Mystery Shapes • Making Pattern-Block Worktables Partitioning Shapes into Equal Parts
Key Vocabulary:	• Angle • Apex • Array • Attribute • Column and row • Cube • Equal groups • Face • Parallel and parallel sides • Partition • Polygon • Quadrilateral • Right angle • Side • Vertex

Teacher Resources
Texts: Literature Connection • Lesson 8-1 *The Greedy Triangle* by Marilyn Burns • Lesson 8-3 *Shape Up* by David A. Adler • Lesson 8-8 *Each Orange Had 8 Slices: A Counting Book* by Paul Giganti,Jr. • Lesson 8-10 *One Hundred Hungry Ants* by Elinor J. Pinczes **Websites:** • www.abcya.com • www.sheppardsoftware.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning: • Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	**Summative Assessment(s) and Performance Task(s):** • End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Suggested Learning Activities	Lesson 8.1 Describing Shapes **ELL Support:** To help children name the attributes side, angle, and vertex, and use the terms in their oral descriptions, have them write the terms on the shapes. Have children repeat the names of the attributes as they write them. Have children compare triangles and quadrilaterals using compare and contrast language structures. Discussing Attributes **ELL Support:** Provide children with illustrated vocabulary cards for the different attributes. Encourage them to use the terms, either by pointing to them or by saying the terms aloud, as they are describing the shapes. Children can create 4-Square Graphic Organizers. Identifying Attributes **ELL Support:** To prepare children to discuss the attributes of shapes, preteach the terms slide, straight, parallel, angle, and vertex by using Total Physical Response directions and think-aloud statements. Construct shapes out of straws and twist ties, pointing out attributes. Invite children to make their own shapes and imitate your actions, repeating the names of the attributes. Lesson 8.3 Comparing Triangles **ELL Support:** As you describe the attributes of the polygons, demonstrate the terms straight, do not cross, and closed with the twist ties. Co-create an anchor chart with the title Describing Polygons and the terms straight, closed, cross, side, point, and line segment to create a word bank. Use words, pictures, and child definitions for the terms. Use gestures or parts of their body to illustrate the terms for further understanding. Comparing Pentagons and Hexagons **ELL Support:** If children are ready, use sentence frames with more complex structures for comparing and contrasting.

	Lesson 8.5 Comparing 3-Dimensional Shapes **ELL Support:** To prompt children's use of the sentence frames, use statements, such as: Tell me what attributes these shapes have in common. Tell me how these shapes differ. Lesson 8.6 Partitioning Rectangles **ELL Support:** Provide a straightedge or ruler to help children partition the rectangle after they have counted and recorded the number of squares they needed. Encourage children to make sense of their partners' ideas by providing them sentence frames that involve clarification and paraphrasing. Lesson 8.7 Partitioning Strategies **ELL Support:** Post the visual illustrations of the terms row and column. Allow children to point to the word row on the reference chart and then use their fingers to count how many rows they have in their drawings. They can do the same for columns. Lesson 8.8 Solving Equal-Groups and Array Number Stories **ELL Support:** Use images, models, and real objects to make the number stories more comprehensible. Have children read a number model, such as 3x5, as 3 times 5. Display a corresponding drawing, such as 3 rows of 5 circles each, to connect the meaning of the language to a concrete or pictorial representation, as well as the language that uses groups. Lesson 8.9 Building Equal Groups and Arrays **ELL Support:** Review the terms array, row, and column using one-word response questions, such as: What is this called? As you give directions, model the actions and name the materials used in each step. Lesson 8.11 Identifying Mystery Shapes **ELL Support:** Have children use the illustrated attribute cards (Teacher's Lesson Guide 2, p. 755) if they need the visual clues with the words. Encourage them to say the attribute by name.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
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__x__ Recognize the importance of self-confidence in handling daily tasks and challenges

Self-Management

__x_ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x_ Recognize the skills needed to establish and achieve personal and educational goals
__x_ Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__x_ Recognize and identify the thoughts, feelings, and perspectives of others
__x_ Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
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__x_ Demonstrate an awareness of the expectations for social interactions in a variety of settings

Responsible Decision Making

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

Relationship Skills

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

Unit Plan Title	Unit 9: Equal Shares and Whole Number Operations
Suggested Time Frame	18 days including "Flex Days"

Overview/ Rationale of Unit

In this unit, children partition shapes into equal shares and apply this concept to length measurement. They and continue working with equal groups. They also learn a new subtraction strategy based on place value. Children's learning will focus on four clusters of the NJ Student Learning Standards for Math (NJSLS-M), Operations and Algebraic Thinking, Number and Operations in Base Ten, Measurement and Data, and Geometry. They will also work deeply with the Mathematical Practices of making sense of problems and persevering in solving them, reasoning abstractly and quantitatively, constructing viable arguments and critiquing the reasoning of others, looking for and making use of structure, and looking for and expressing regularity in repeated reasoning.

Stage 1 – Desired Results

Established Goals:

New Jersey Student Learning Standards for Mathematics (NJSLS)

- 2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
- 2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.
- 2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- 2.NBT.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.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.
- 2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
- 2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Essential Questions:	**Enduring Understandings:**
• How can you divide something into equal parts? • How can place value be used to help solve addition and subtraction problems?	*Students will understand that…* • A fraction describes the division of a whole into equal parts. • Each number can be represented with base-10 blocks and can be combined or traded to solve addition and subtraction problems.
Knowledge: *Students will know…* • How to divide shapes and use fraction vocabulary to name the shares. • How to use pattern blocks to divide shapes. • How to measure lengths to the nearest half inch. • How to write multi-digit numbers in expanded form and compare them. • How to use base-10 blocks to solve subtraction problems. • How to use expand-and-trade subtraction to subtract multi-digit numbers. • How to find coin and bill combinations with equivalent values. • How to solve number stories about 2 equal groups. • How to skip count and add to solve problems involving multiples of 10 and 5.	**Skills:** *Students will be able to…* • 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. • Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Explain why addition and subtraction strategies work, using place value and the properties of operations. • 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. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have? • 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.

In this unit plan, the following 21st Century Life and Careers skills are addressed:				
Check ALL that apply – **21st Century Themes**			**Indicate whether these skills are:** ● **E – encouraged** ● **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		T	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		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.				

Student Resources	
Math Centers and Games:	*Games in Everyday Mathematics are an essential tool for practicing skill and developing strategic thinking.* • 9-1 Array Concentration • 9-5 Shapes Concentration and Number Top-It • 9-7 Beat the Calculator • 9-8 Hit the Target *Math Centers, through Explorations, in Everyday Mathematics will focus on independent or small group activities that will focus on concept development, manipulatives, data collection, problem solving, games and skill reviews.* Explorations 9-2 include: • Sharing Crackers • Making Equal Parts • Making a Number Line
Key Vocabulary:	• Addition facts • Array • Change diagram • Change-to-less number story • Change-to-more number story • Degree Fahrenheit • Equivalencies • Fact power • Mental addition • Mental subtraction • Open number line • Parts-and-total diagram • Parts-and-total number story • Thermometer • Total

Teacher Resources
Texts: Literature Connection • Lesson 9-1 *Ed Emberley's Picture Pie: A Cut and Paste Drawing Book* by Ed Emberley **Websites:** • www.abcya.com • www.sheppardsoftware.com

Stage 2-Assessment Evidence	
Formative Assessment(s) and Evidence of Learning:	**Summative Assessment(s) and Performance Task(s):**
• Assessment Check-In • Informal Observations • Mental Math and Reflexes • Math Journals • Home Links • Exit Slips/Slates Assessments • Self-Assessments • Games • Questioning	• End of Unit Assessments • Benchmark Assessments • Tests • Quizzes • Student Work Products

Stage 3 – Learning Plan	
	Descriptions
Learning Activities	Lesson 9.1 Partitioning Shapes **ELL Support:** Have children cut the shapes in half. Give children several examples and non-examples of halves, fourths, and thirds. Have children use their own personal Word Banks for the names of shapes to help them. Lesson 9.2 Making Equal Parts **ELL Support:** Provide oral language practice using different names for the equal parts by challenging children to restate sentences using another equal part name. For example, if I have 2 of 4 equal parts, I have two-fourths or two-quarters. Making a Number Line **ELL Support:** Encourage children to refer to the Class Equal Shares Poster created in Lesson 9.1 to find and copy equal-part names onto their number lines. Lesson 9.4 Measuring to the Nearest Half-Inch **ELL Support:** Encourage children to talk to their partners as they measure. Provide sentence frames to help them share and build on each other's ideas. Lesson 9.5 Comparing Multi-digit Numbers **ELL Support:** Scaffold children's use of comparative language structures using sentence frames. Lesson 9.6 Representing Subtraction with and without Trades with Base-10 Blocks **ELL Support:** Scaffold children's understanding of the steps by having one child give an oral account of what is done at each step as another child carries out the corresponding actions with base-10 blocks. Repeat the oral accounts as you record the steps with base-10 shorthand. Lesson 9.7 Practicing Expand-and-Trade Subtraction **ELL Support:** Use gestures to make the meaning of the term expand-and-trade more comprehensible. Then role-play trading one item for another as you say

	trade. Provide a Word Bank that includes the terms ballpark, estimate, expand, and trade. Lesson 9.8 Making Equivalent Amounts with Coins and Bills **ELL Support:** Review values of coins and bills by pointing to the coins and bills on the Money anchor chart, as you ask children to find the number of coins in the different coin and bill amounts. Scaffold to help children independently read dollars-and-cents notation by adding an illustration to the Money anchor chart. Review the meaning of exact change by role-playing counting out the exact cost of an item on the Good Buys Poster. Lesson 9.9 Comparing Estimation Strategies **ELL Support:** Prior to this lesson, preview how to make a ballpark estimate with a simple problem, such as 21+47, and then explain why you chose the easier number for making the estimate. Model this process a few times. Be sure to use and describe vocabulary such as ballpark estimate, making estimates in your head, doing a problem mentally, and explaining thinking clearly and precisely. Lesson 9.10 Connecting Doubles and Even Numbers with Equal Groups **ELL Support:** Have children use two ten frames put together side-by-side to create a 2-by-10 grid to build their 3 arrays. Then have children record their arrays on centimeter grid paper before asking them to write the number model. This will help children move from the concrete to the pictorial representation. Use visuals to accompany the number stories or use the same number story context for each problem to reduce the vocabulary load. Lesson 9.11 Relating 10s and 5s **ELL Support:** Help children see the relationship between dimes and nickels more concretely by adding two columns to the Dimes and Nickels chart for Teacher's Lesson Guide 2, p. 850 and displaying the sums with base-10 shorthand. Once the Dimes and Nickels chart is completed, have children say all of the examples chorally to give them oral language practice saying the numbers and signs.

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.
- Website (Student Activities)- http://everydaymath.uchicago.edu/teachers/ - Student Websites - Smart board

INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES
The following social and emotional competencies are integrated in this curriculum document:

Self-Awareness

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

Self-Management

__x_ Understand and practice strategies for managing one's own emotions, thoughts and behaviors
__x_ Recognize the skills needed to establish and achieve personal and educational goals
__x_ Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

Social Awareness

__x_ Recognize and identify the thoughts, feelings, and perspectives of others
__x_ Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
__x__ Demonstrate an understanding of the need for mutual respect when viewpoints differ
__x_ Demonstrate an awareness of the expectations for social interactions in a variety of settings

Responsible Decision Making

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

Relationship Skills

__x__ Establish and maintain healthy relationships
__x_ Utilize positive communication and social skills to interact effectively with others
__x__ Identify ways to resist inappropriate social pressure
__x_ Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
__x__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: http://www.reverso.net/text_translation.aspx?lang=EN.

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 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: http://www.adlit.org/strategies/22371/.

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An Affirmative Action Equal Opportunity Employer

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