Kindergarten

Unit Name	***Unit 4:*** *Numerical Reasoning: Understanding and Using Addition and Subtraction in My Life*	**Unit duration (Days)**	*7-8 weeks*

GA K-12 Standards

Students will explore the operations of addition and subtraction and use addition and subtraction to solve problems within 10 from real-life where the result or total is unknown. They will represent the situations in various ways using objects, fingers, drawings, expressions, or equations. Students will solve problems they create by generating questions and gathering information. Students will use a variety of strategies to solve addition and subtraction problems within 10. Students will identify and describe patterns with addition of numbers. Students will identify and extend patterns with numbers and shapes. As they have conversations about their days, they will describe patterns related to time from real-life (yesterday, today, tomorrow).

K.NR.5 Explain the concepts of addition, subtraction, and equality and use these concepts to solve real-life problems within 10.
- **K.NR.5.1** Compose (put together) and decompose (break apart) numbers up to 10 using objects and drawings
- **K.NR.5.2** Represent addition and subtraction within 10 from a given authentic situation using a variety of representations and strategies.
- **K.NR.5.3** Use a variety of strategies to solve addition and subtraction problems within 10.
- **K.NR.5.4** Fluently add and subtract within 5 using a variety of strategies to solve practical, mathematical problems

K.PAR.6 Explain, extend, and create repeating patterns with a repetition, not exceeding 4 and describe patterns involving the passage of time.
- **K.NR.6.1** Create, extend, and describe repeating patterns with numbers and shapes, and explain the rationale for the pattern.
- **K.NR.6.2** Describe patterns involving the passage of time using words and phrases related to actual events.

K.MDR.7: Observe, describe, and compare the physical and measurable attributes of objects and analyze graphical displays of data.
- **K.NR.7.1** Directly compare, describe, and order common objects, using measurable attributes (length, height, width, or weight) and describe the difference.
- **K.NR.7.2** Classify and sort up to ten objects into categories by an attribute; count the number of objects in each category and sort the categories by count.
- **K.NR.7.3** Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.

K.MP.1-8 Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals. *(It is important to note that MPs 1, 3 and 6 should support the learning in every lesson.)*
- **K.MP.1** Make sense of problems and persevere in solving them.
- **K.MP.2** Reason abstractly and quantitatively.

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- **K.MP.3** Construct viable arguments and critique the reasoning of others.
- **K.MP.4** Model with mathematics.
- **K.MP.5** Use appropriate tools strategically.
- **K.MP.6** Attend to precision.

The [Framework for Statistical Reasoning](#) and the [Mathematical Modeling Framework](#) should be taught throughout the units. The [K-12 Mathematical Practices](#) should be evidenced at some point throughout each unit depending on the tasks that are explored. It is important to note that MPs 1, 3 and 6 should support the learning in every lesson.

Essential Questions/ I CAN Statements

- (K.NR5) I can compose and decompose numbers to 10 using objects and drawings.
- (K.NR5) I can use a variety of representations and strategies to represent addition and subtraction within 10 from a given number.
- (K.NR.5) I can use a variety of representations and strategies to represent addition and subtraction within 5 from a given number.
- (K.PAR.6) I can create repeating patterns with numbers and shapes.
- (K.PAR.6)I can describe repeating patterns with numbers and shapes.
- (K.NR.5) I can fluently add and subtract within 10.

Tier II Vocabulary Words- High Frequency Multiple Meaning	**Tier III Vocabulary Words-** Subject/ Content Related Words
Acting out, number cube (die/dice), add/put together, number path, compare numerals, drawings, explain, add, subtract, take apart, one-to-one correspondence	Compose, decompose, quantity, equal, sum, difference

Assessments

Formative Assessment(s):
- MCS K-5 Activity & Assessment Collection
- K.NR.5 Mini Assessment - Addition and Subtraction
- MIP Module 7 Formative Assessment p. 266
- MIP Modeule 8 Formative Assessment p.188

It is the responsibility of each schools' grade level PLC to identify appropriate instructional lessons and resources, based on data and student needs, using the suggested pacing duration. The following learning tasks have been vetted to align to the standards included in this unit. The GA Dept. of Education strongly recommends that any additional tasks, resources, and/or assessments used for instruction should be vetted using the [Quality Assurance Rubric](#), to ensure alignment to the state standards.

Objective or Content	Learning Experiences Menu		Differentiation Considerations
K.NR.5 Explain the concepts of addition, subtraction, and equality and use these concepts to solve real-life problems within 10.	**GA DOE Learning Plans** **Introduction to Addition and Subtraction (within 5)** *In this learning plan, students will explore addition and subtraction within ten through various investigations and explorations. The foundational knowledge students gain through these explorations will be extended in subsequent learning plans within this unit. (timeframe 5-7 days)* ● **Teacher Guidance** ● **Student Reproducibles** ● **Blackline Masters** **Investigating Addition and Subtraction (within 5)** *In this learning plan, students will investigate addition and subtraction within 5 using hands-on activities and numberless word problems. (timeline 5-7 days)* ● **Teacher Guidance** ● **Student Reproducibles** ● **Blackline Masters** **Making Sense of Addition and Subtraction** *In this learning plan, students will engage in multiple tasks to make sense of addition and subtraction within 5 in authentic contexts to develop a deep understanding of addition and subtraction. (timeline 5-7 days)* ● **Teacher Guidance** ● **Student Reproducibles**	**MCS Curriculum Resources** **Savvas enVision Topic 6: Understanding Addition** Students develop an understanding of addition by representing operations in different ways. ● Lesson 6-1: Explore Addition ● Lesson 6-2: Represent Addition as Adding to ● Lesson 6-3: Represent Addition as Putting Together ● Lesson 6-4: Represent and Explain Addition within Equations ● Lesson 6-5: Solve Addition Word Problems: Put Together ● Lesson 6-6: Use Patterns to Develop Fluency in Addition **Savvas enVision Topic 7: Understanding Subtraction** Student develop an understanding of subtraction by representing the operation in different ways. ● Lesson 7-1: Explore Subtraction ● Lesson 7-2: Represent Subtraction as Taking Apart ● Lesson 7-3: Represent Subtraction as Taking From ● Lesson 7-4: Represent and Explain Subtraction with Equations ● Lesson 7-5: Solve Subtraction Word Problems: Taking From and Apart ● Lesson 7-8: Use Patterns to Develop Fluency in Subtraction	Joining Sets Using Counters: Solve addition problems to 20 by joining sets and counting all the objects (Adjust problems in these activities to make sure problems are within 10). Lady Bug Friends: Solve addition problems to 20 by joining sets and counting all the objects (Adjust problems in these activities to make sure problems are within 10). Both Hands: Solve addition problems to 20 by joining sets and counting all the objects (Adjust problems in these activities to make sure problems are within 10).

	Exploring Addition and Subtraction within 10 In this learning plan, students will investigate addition and subtraction within 10 using hands-on activities and interactive activities. (timeline 5-7 days) ● **Teacher Guidance** ● **Student Reproducibles** ● **Blackline Masters** **Experiencing Addition and Subtraction within 10** In this learning plan, students will engage in addition and subtraction within 10 using games and numberless word problems. (timeframe 5-7 days) ● **Teacher Guidance** ● **Student Reproducibles**	**Savvas enVision Topic 8: More Addition and Subtraction** Students extend their understanding of addition and subtraction by representing operations in different ways. ● Lesson 8-1: Decompose 5 to Solve Problems ● Lesson 8-2: Related Facts ● Lesson 8-3: Problem Solving: Reasoning ● Lesson 8-4: Fluently Add and Subtract to 5 ● Lesson 8-5: Decompose 6 and 7 to Solve Problems ● Lesson 8-6: Decompose 8 and 9 to Solve Problems ● Lesson 8-7: Ways to Make 10 ● Lesson 8-8: Decompose 10 to Solve Problems ● Lesson 8-9: Find the Missing Part of 10 ● Lesson 8-10: Continue to Find the Missing Part of 10	
K.PAR.6 Explain, extend, and create repeating patterns with a repetition, not exceeding 4 and describe patterns involving the passage of time.	**Diving Deeper Into Addition and Subtraction within 10** In this learning plan, students will investigate addition and subtraction within 10 using hands-on activities and numberless word problems. (timeframe 5-7 days) ● **Teacher Guidance** ● **Student Reproducibles**	
K.MDR.7 Observe, describe, and compare the physical and measurable attributes of objects and analyze graphical displays of data.	**Examining Patterns** In this learning plan, students will examine patterns to investigate addition and subtraction through games and play. (timeframe 2-3 days) ● **Teacher Guidance** ● **Student Reproducibles** ● **Blackline Masters**	

Content Resources

GA DOE Links:
- GA DOE Grade 1 Unit 4: Understanding and Using Addition and Subtraction in My Life
- GA DOE Grade K Comprehensive Grade Level Overview
- GA DOE Kindergarten Guide for Effective Mathematics Instruction
- K-5 Georgia Mathematics Strategies Toolkit
- Mathematics to Support English Language Learners
- Georgia Numeracy Project
- K-12 Mathematical Modeling Framework
- K-12 Statistical Reasoning Framework
- K-12 Mathematical Practices

Additional Resources:
- Number Corner or Calendar Time
- Number Talks
- Estimation Activities/Estimation 180
- Which One Doesn't Belong?
- Same or Different?
- Splat!