

MATHEMATICS COMMON CORE CURRICULUM UNIT #1 Grade K*

North Smithfield School Department

TITLE OF UNIT: Number Names and Count Sequences **GRADE :** K

DATE PRESENTED: _____ **DATE DUE:** _____

LENGTH OF TIME: 7 Weeks (5 weeks of explicit of instruction and 2 weeks of assessment & re-teaching)

OVERVIEW OF UNIT:

Students will use the numbers 0 – 9 to complete a variety of counting and number activities such as oral counting, 1:1 counting, number writing, number representation and begin to understand the relationship between numbers and quantities. They will also begin to answer mathematical questions (How many?). Addition and subtraction will begin to be explored.

ESSENTIAL QUESTIONS

- *What number patterns do you hear? Twenty-one, twenty-two, twenty-three,...*
- *What number patterns do you see? 11, 12, 13, ...*
- *What does this numeral/number mean?*
- *What strategy did you use to count? How did you make sure that you counted all the objects?*
- *Why is it important to count each object only once?*
- *How many are there? (Rearrange and ask again.)*
- *How many are there? (Add another object) How many are there now? How do you know?*
- *What is addition?*
- *What is subtraction?*
- *How does (one child's strategy) relate to (another child's strategy)?*

STANDARDS: Common Core Math Standards – Grade level domains K-5

Counting and Cardinality CC	Operations and Algebraic Thinking OA	Number and Operations in Base Ten NBT	Number and Operations – Fractions NF	Measurement and Data MD	Geometry G
<input type="checkbox"/> K.CC.1 <input type="checkbox"/> K.CC.3 <input type="checkbox"/> K.CC.4 <input type="checkbox"/> K.CC.5	<input type="checkbox"/> K.OA.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					Modeling with Geometry G-MG

STANDARDS: Mathematical Practices grades K-12

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|----------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| 1. Make sense of problems and persevere in solving them | 3. Construct viable arguments and critique the reasoning of others | 5. Use appropriate tools strategically | 7. Look for and make use of structure | 8. Look for and express regularity in repeated reasoning |
| 2. Reason abstractly and quantitatively | 4. Model with mathematics ★ | 6. Attend to precision | | |

FOCUS MATHEMATICS STANDARDS:

- Know number names and the count sequence. **K.CC.1,3**
- Count to tell the number of objects. **K.CC.4, 5**
- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. **K.OA.1**

Applied Learning Standards:
 problem solving communication critical thinking research reflection/ evaluation

Expectations for Student Learning (High School only):

ENDURING UNDERSTANDING:

At the end of this unit, students will begin to understand and apply number knowledge using the numbers 0 - 9.

PRIOR KNOWLEDGE:

- Use numbers and counting as a means for solving problems, predicting and measuring quantity.
- Associate a number of objects with names and symbols for numbers.

STUDENT OBJECTIVES, SKILLS and/or NEW KNOWLEDGE:

- Saying the number names in a count sequence is a rote process. While it is foundational to counting, it does not indicate understanding of the relationship between quantity and number.

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- Oral and written patterns exist in the counting sequence (e.g., +1 pattern, +10 pattern, etc.)
- Number names can be written as numerals.
- Counting tells us 'how many'.
- Counting assigns a number name to an object or a set of objects. When counting, each object is paired with only one number name.
- The last number counted states the total in the group. This is known as cardinality.
- The quantity remains the same regardless of the arrangement of the objects or the order in which we count the objects. This is known as conservation of number.
- Addition is putting things together and adding to.
- Subtraction is taking apart and taking from.

SUGGESTED PROBLEMS:

ACTIVITIES, PRODUCTS, PERFORMANCE, and ASSESSMENTS: see curriculum introduction

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|----------------------------------------------|-----------------------------------|----------------------------------------------------------|---------------------------------------------------|
| 1. Application to real world problems | 6. Graphic organizers | 14. Problem/Performance based/common tasks | 18. Technology |
| 2. Creating charts/collecting data | 7. Graphing | 15. Real-life applications involving graphing | 19. Summarizing and note-taking |
| 3. Collaboration - interpersonal | 8. Interviews | 16. Represent numbers | 20. Tests and quizzes |
| 4. Conferencing | 9. Journals | 17. Rubrics/checklists (mathematical practice, modeling) | 21. Writing genres Arguments/ opinion Informative |
| 5. Exhibits | 10. KWL charts | | |
| | 11. Mathematical Practices | | |
| | 12. Modeling ★ | | |
| | 13. Oral presentations | | |

HIGHER ORDER THINKING SKILLS: Web's Depth of Knowledge 2 – 4 or Bloom's Taxonomy

Web's Depth of Knowledge

- skill/conceptual understanding
- strategic reasoning
- extended reasoning

Bloom's Taxonomy

- apply
- analyze
- synthesize/create
- evaluate

ADDITIONAL RESOURCES: see curriculum for specifics

VOCABULARY

Counting and Cardinality

- | | | | |
|---------------------|------------|------------|---------|
| • Count | • Number | • Ones | • Tens |
| • Counting sequence | • Numeral | • Organize | • Total |
| • Digit | • Object | • Quantity | • Zero |
| • Match | • One more | • Remove | |

Operations and Algebraic Thinking

- | | | | |
|------------------|--------------|-----------------------|---------------|
| • Add to | • Decompose | • Mental image | • Subtract |
| • Addend | • Equal to | • Minus | • Sum |
| • Break apart | • Equation | • Part | • Symbols |
| • Combinations | • How many? | • Plus | • Take away |
| • Combine | • Join | • Put together Remove | • Total |
| • Count back | • Make fives | • Separate | • Use doubles |
| • Count on | • Make tens | • Strategies | • Whole |
| • Counting up to | | | |

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LESSON PLAN for UNIT _____

LESSONS

- Lesson #1** Summary:

- Lesson #2** Summary:

- Lesson #3** Summary:

OBJECTIVES for LESSON # _____

- Materials/Resources:**

- Procedures:**
 - **Lead -in**

 - **Step by step**

 - **Closure**

- Instructional strategies:** see curriculum introduction

- Assessments:** see curriculum introduction
 - **Formative**

 - **Summative**