MATHEMATICS COMMON CORE CURRICULUM UNIT #3 Grade 1*
North Smithfield School Department

TITLE OF UNIT: Understand place value	**COURSE OR GRADE :1**

DATE PRESENTED: _____ **DATE DUE:** _____ **LENGTH OF TIME: s**everal weeks, quarter, semester

OVERVIEW OF UNIT:

Students will understand place value. Students will use place value understanding and properties of operations to add and subtract.

ESSENTIAL QUESTIONS

- *In the number 32 how many groups of 10 can you make, and how many leftovers will you have?*
- *Organize your objects into as many groups of ten as you can. How does this arrangement help you know how many objects you have?*
- *What patterns do you see when you add 10 to (or subtract 10 from) a number?*
- *What strategy did you use to compare 38 and 42? What strategy did you use to compare 42 and 48? What method would you recommend for comparing any two-digit number?*
- *What happens to a two-digit number when you add 10 to it or subtract 10 from it? Why does this happen?*
- *What happens to a two-digit number when you add 10 to it or subtract 10 from it? Why does this happen?*
- *What happens to a two-digit number when you add 10 to it or subtract 10 from it? Why does this happen?*
- *What strategy did you use to solve this problem? Justify your answer by using models, numbers, and words.*

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
☐	☐	☐ 1.NBT 2,3,4,5,6	☐	☐	☐
☐	☐	☐	☐	☐	☐
	☐	☐		☐ **Modeling with Geometry G-MG**	

STANDARDS: Mathematical Practices grades K-12

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:

- Understand place value   1.NBT.2,3
- Use place value understanding and properties of operations to add and subtract   1.NBT. 4,5,6

Applied Learning Standards:

problem solving	communication	critical thinking	research	reflection/ evaluation

Expectations for Student Learning (High School only):

ENDURING UNDERSTANDING:

Students will understand that the 2 digits of a 2 digit number represent amounts of tens and ones. Students will compare 2 digit numbers using <, >, =. Students will add within 100, including adding a 2 digit number and a one digit number, and adding a 2 digit number and a multiple of 10. Students will understand that in adding 2 digit numbers, you add tens and tens and ones and ones. Students will subtract multiples of 10 in the range of 10-90 from multiples of 10-90.

PRIOR KNOWLEDGE:

- Students can read, count, and recognize numbers through 10.
- Students will have demonstrated mastery in comparing single digit numbers.
- Students are able to show mastery in adding and subtracting one digit numbers.
- Students can count fluently to 100 and can compare 2 digit numbers accurately.

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STUDENT OBJECTIVES, SKILLS and/or NEW KNOWLEDGE:

- The position of digits in numbers determines the value they represent (which size group they count).

- Two-digit numbers can be decomposed into a unit of ten ones and some more ones.

- Groups of ten can be thought of as a unit that can be counted and used to describe quantities.

- When comparing multi-digit numbers, the value in the higher place can be used to determine whether the relationship is an equality (=) or an inequality (< or >).

- The patterns of the counting sequence are useful when adding or subtracting a multiple of ten to any multi-digit number.

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- First Grade students use concrete models, drawings and place value strategies to subtract multiples of 10 from decade numbers (e.g., 30, 40, 50). They often use similar strategies as discussed in 1.OA.4.

SUGGESTED PROBLEMS:
1.NBT.2 Basic
- http://www.illustrativemathematics.org/illustrations/1150
1.NBT.3 Basic
- http://www.illustrativemathematics.org/illustrations/1102
- http://www.illustrativemathematics.org/illustrations/6
1.NBT.4 Basic
- http://www.k-5mathteachingresources.com/support-files/tenmore1.pdf
- http://www.k-5mathteachingresources.com/support-files/addingsetsof101.nbt4.pdf
1.NBT.4 Advanced
- http://www.k-5mathteachingresources.com/support-files/sams-base-10-blocks.pdf
1.NBT.5 Basic
- http://www.teacherspayteachers.com/Product/10-more10-less-Common-Core-Wizard-of-Oz-Math
1.NBT.6 Basic
- http://www.readtennessee.org/math/teachers/k -3_common_core_math_standards/first_grade/number_operations_in_base_ten/1nbtc6/ 1nbtc6_activity.aspx

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

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

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:

- ☐ http://www.readtennessee.org/math/teachers/k-3_common_core_math_standards/first_grade.aspx

VOCABULARY

- Base ten blocks
- Combine
- Combine ones to make a ten
- Compare
- Compose
- Count
- Count backward
- Count forward
- Decompose
- Decompose to make friendly numbers
- Digits
- Equal to
- Equations
- Estimate
- Greater than
- Greatest
- Groups of/bundles of
- Horizontal form
- Hundreds
- Join
- Least
- Leftovers
- Less than
- More than
- Most
- Not equal to
- Number line Number relationship
- Ones
- Patterns
- Place value
- Quantity
- Remove Same as
- Separate
- Strategies
- Subtract
- Subtraction
- Tens
- Vertical form

*Referenced templates from *Common Core Curriculum Maps, English Language Arts* and *The Understanding By Design Guide to Creating High Quality Units*

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**

6/18/2013   North Smithfield School Department   4

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