

Understanding by Design: MHSD 193

Designer Name(s): 2nd Grade Team

Date: 6.4.14

Subject Area: Mathematics

Grade Level(s): 2

Unit Title/Focus: Lessons 91-100

Estimated Amount of Instructional Time: ~12 Days

Stage 1 – (Desired Results)

State Content and Skill Standards:

- CC.K-12.MP.1 through CC.K-12.MP.8
- 2.NBT.1. three digits of three-digit number represent hundreds, tens, and ones
- 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
- 2.NBT.6. Add up to four two-digit numbers using strategies based on place value
- 2.NBT.7. Add and subtract within 1000, using concrete models or drawings
- 2.NBT.9. Explain why addition and subtraction strategies work
- 2.OA.1. Use addition and subtraction within 100 to solve one- and two-step problems
- 2.OA.2. Fluently add and subtract within 20 using mental strategies.
- 2.OA.3. Determine whether a group of objects (up to 20) has an odd or even #
- 2.MD.1. Measure rulers, yardsticks, meter sticks, and measuring tapes.
- 2.MD.2. Measure the length of an object twice, using length units of different lengths
- 2.MD.3. Estimate lengths using units of inches, feet, centimeters, and meters.
- 2.MD.6. Represent whole numbers as lengths from 0 on a number line diagram
- 2.MD.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit

Enduring Understandings: *(what are the big ideas, what are the specific understandings desired)*

Students will understand:

- When we estimate with numbers that are less than 100, we round each number to the nearest 10 and then we add mentally.
- Multiplication is repeated addition because we are adding the same number each time.
- When we divide to form equal groups, each group must have the same number.
- One way to measure length or height is using feet and inches.

Essential Questions: *(what questions will foster inquiry, understanding, and transfer of learning)*

- If a given number is halfway between two 10's, to which 10 is the given number rounded?
- How can I find how many items will be in 5 groups of 10?
- How can I find half of an even number of objects? Odd number of objects?
- How can I measure to find the length or height of something?

Big Idea(s)

**Work with equal groups of objects to gain foundation for multiplication.
Measure and estimate lengths in standard units.**

What Students will know: *(what knowledge will they acquire)*

- Two-Digit Numbers can be subtracted
- Equal Groups can be represented with number sentences.
- How to skip count by 25's to count quarters
- How to find the nearest 10's number for a given number
- Subtracting Facts
- Large Collections may be counted by estimation
- Sets can be divided in half
- Sums can be estimated
- Feet can be used to measure objects
- Subtracting Facts
- Making a Table can be used to Solve a Problem
- Patterns can be used to Solve a Problem

What Students will be able to do: *(what will they eventually be able to do as a result of their skills learned/knowledge)*

- Subtract Two-Digit Numbers
- Write Number Sentences to Show Equal Groups
- Multiply by 10
- Count Quarters
- Round to the Nearest Ten
- Mentally compute -7 facts
- Estimate and Count Large Collections
- Find One Half of a Set With an Even Number of Objects
- Find One Half of a Set With an Odd Number of Objects
- Estimating a Sum
- Measure Using Feet

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| <p>•Definition of area Vocabulary: <i>area, equal groups, equal parts, height, multiplication, quarter, remainder, round, rounding</i></p> | <p>•Mentally compute -8 facts •Make a Table to Solve a Problem when appropriate •Using Patterns to Solve a Problem when appropriate •Find the Area of Shapes Using Pattern Blocks</p> |
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Stage 2 - Assessment Evidence (acceptable assessment evidence that students understand)

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| <p><i>Performance Tasks: (what authentic performance task (s) will students demonstrate understanding; by what criteria will it be judged?)</i> <i>Worksheet 100B: (utilizing "Act it Out" & "Use Logical Reasoning")</i></p> <ul style="list-style-type: none"> The children in Mrs. Klassen's class are making greeting cards with moveable eyes. The children will use 2 moveable eyes for each card. Show how many moveable eyes Tyrise will need to make 6 greeting cards. | <p><i>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</i></p> <p>Fact Assessment 18-1 & 18-2</p> <ul style="list-style-type: none"> Subtracting 6 & 5 Subtracting 0-6 <p>Written Assessment 18</p> <ul style="list-style-type: none"> SWA story (-10); writes number sentence; solves Draws pictographs with scale of 2 Uses comparison symbols <, >, = Draws, counts money (dimes, nickels, pennies); writes amount two ways Draws picture for number; writes number in expanded form Adds two and three two-digit numbers <p>Fact Assessment 19-1 & 19-2</p> <ul style="list-style-type: none"> Subtracting 7 & 6 Subtracting 0-7 <p>Written Assessment 19</p> <ul style="list-style-type: none"> SSM story with regrouping (money); writes as money; writes number sentences; solves Logic problem Shows time to five minutes Writes a fraction to show part of a set Reads, draws pictograph with scale of 2 Subtracts two digit numbers with and without regrouping <p>Oral Assessment 10</p> <ul style="list-style-type: none"> Modeling and describing addition with regrouping |
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Stage 3 - Learning Plan (sequence of teaching and learning activities that will produce desired understandings, engagement and development) Use WHERETO elements to help you:

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| <p><i>Learning Activities:</i></p> <p>Math Meetings 91 through 100-2</p> <ul style="list-style-type: none"> Calendar Attendance graph Temperature Counting Problem of the day Clock Pattern Number of the day Money Fact family Secret Number <p>New Concepts 91 through 100-2</p> <ul style="list-style-type: none"> State objective Explicit Instruction Guided Practice |
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| <ul style="list-style-type: none"> • Written Practice • Recap: "Who would like to share something they learned in math today?" • Homework |
| Test-Taking Strategies Practice 16 (for use after Lesson 95) <ul style="list-style-type: none"> • Using Comparison Symbols to Compare Numbers • Identifying a Number Writing in Expanded Form • Using Logical Reasoning to Solve a Problem |
| Test-Taking Strategies Practice 17 (for use after Lesson 100) <ul style="list-style-type: none"> • Writing a Three-Digit Number from Words • Identifying the Length of an Object • Identifying a Number Written in Expanded Form |
| Journal Writing <ul style="list-style-type: none"> • Pretend you are going shopping. Make up a some, some went away story about how much money you had and how much money you spent. (After lesson 91) • Choose a coin. Write 3 clues to help us guess your coin. (After lesson 93) • Explain how to round numbers to the nearest 10 to a first grader (After lesson 94). • What would you use to fill the estimation jar? Explain why you chose this object. (After lesson 95-2) • If you could collect 100 things, describe what you could collect and why you chose these things. (After lesson 95-2). |
| Literature Connections <ul style="list-style-type: none"> • <i>A Quarter from the Toothfairy</i>, Caren Holtzman • <i>A Remainder of One</i>, Elinor J. Pinczes |
| *Math Center Activities 78-87 *Differentiated Instruction Activities 91 through 100-2 |

*if needed

W=help the students know WHERE the unit is going and WHAT is expected/Help teacher to know where the students are coming from (prior knowledge, interests)

H=HOOK all students and hold their interest

E=EQUIP students, help them EXPERIENCE the key ideas and EXPLORE the issue

R=Provide opportunities to RETHINK and REVISE their understanding/work

E (2)=Allow students to EVALUATE their work

T=Be TAILORED (personalized) to different needs, interests, and abilities of learners

O=Be ORGANIZED to maximize initial and sustained engagement as well as effective learning

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| Assessment Tasks that Provide Evidence for Claims including DOK | <input type="checkbox"/> Claim #1/DOK 1, 2, 3, 4 (circle one): | | |
| | <input type="checkbox"/> Claim #2/DOK 1, 2, 3, 4 (circle one): | | |
| | <input type="checkbox"/> Claim #3/DOK 1, 2, 3, 4 (circle one): | | |
| | <input type="checkbox"/> Claim #4/DOK 1, 2, 3, 4 (circle one): | | |
| Achievement Level Descriptors | ALD #1: ALD #2: ALD #3: ALD #4: (circle one): | | |
| Materials/Resources | <table border="1"> <tr> <td> Saxon Math Lessons 91 through 100-2 Math Folders Lesson Worksheets 91 through 100-2 Guided/Written Practice 91 through 100-2 Journal Written Assessment 18 & 19 Fact Assessment 18 & 19 Oral Assessment 10 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide </td> <td> Wrap Ups Teacher Fact Cards Student Fact Cards Cereal or Macaroni Dollar bill Quarters Number Cards Estimation Collections Pennies Price Tags Rulers Pattern Blocks </td> </tr> </table> | Saxon Math Lessons 91 through 100-2 Math Folders Lesson Worksheets 91 through 100-2 Guided/Written Practice 91 through 100-2 Journal Written Assessment 18 & 19 Fact Assessment 18 & 19 Oral Assessment 10 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide | Wrap Ups Teacher Fact Cards Student Fact Cards Cereal or Macaroni Dollar bill Quarters Number Cards Estimation Collections Pennies Price Tags Rulers Pattern Blocks |
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