

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 71-80

Estimated Amount of Instructional Time: ~12 Days

Stage 1 – (Desired Results)

State Content and Skill Standards:

- CC.K-12.MP.1 through 7
- 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.3. Read and write numbers to 1000 base-ten, number names, and expanded form.
- 2.NBT.4. Compare two three-digit numbers on meanings of the hundreds, tens, and ones
- 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.8. Mentally add and subtract 10 and 100 to a given number
- 2.NBT.9. Explain why addition and subtraction strategies work
- 2.OA.2. Fluently add and subtract within 20 using mental strategies.
- 2.MD.1. Measure rulers, yardsticks, meter sticks, and measuring tapes.
- 2.MD.6. Represent whole numbers as lengths from 0 on a number line diagram
- 2.MD.7. Tell and write time from analog and digital clocks to the nearest five minutes
- 2.G.1. Recognize and draw shapes having specified attributes, angles or equal faces.¹ Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- 2.G.3. Partition circles and rectangles into two, three, or four equal shares

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

Students will understand:

- Numbers can be shown using a drawing or picture.
- When adding two-digit numbers, the sum may be greater than 100.
- There are five-minute intervals between each number on the clock.
- The median is the number in the middle of a set of numbers ordered from least to greatest.

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

- How can I draw a picture to show the amount for a three-digit number?
- How can I tell if the sum of 2-digit numbers will be greater than 100?
- How can counting by 5's help me tell the time?
- How do I find the median of a set of numbers?

Big Idea(s)

**Understand place value.
Use place value understanding and properties of operations to add and subtract.
Worth with time and money.**

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

- How subtracting 10 from a 2-digit number change the value of the number.
- Rulers are comprised of half-inch marks in between each inch.
- Two-Digit Numbers may be added together
- Base Ten Blocks are used to represent numbers
- Base Ten Blocks can represent numbers of greater, lessor or equal value to one another.
- Subtracting Facts

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

- Mentally Compute - 10 From a Two-Digit Number
- Measure and Draw Line Segments to the Nearest Half Inch
- Add Two-Digit Numbers With a Sum Greater Than 100
- Represent Numbers Using Base Ten Blocks
- Order Numbers Using Base Ten Blocks
- Mentally compute -3 facts
- Identify Gallon, Half-Gallon, Quart, and Liter Containers
- Estimate and Find the Capacity of Containers
- Identify the Place Value of a Digit in a Three-Digit Number

<ul style="list-style-type: none"> •Gallon, Half-Gallon, Quart, and Liter Containers measure capacity •Estimations may differ from the actual capacity of a container. •Digits in a 3-digit number represent the units of ones, tens and hundreds. •Models represent units of ones, tens, and hundreds. •Representing Three-Digit Numbers Pictorially •Models/pictures represent numbers. •Three digit numbers may be greater, lesser, or equal to one another. •Definition of a median number. •The numbers on a clock face represent units of 5 minutes. •Three Two-Digit Numbers may be added together •Subtracting Facts •Drawing a Picture may be used to Solve a Problem •A new shape may be created Using the pieces of Geometric Shape <p>Vocabulary: <i>capacity, cubes, cut, difference, flip, full, gallon, greater than, half-inch, liter, median, minute, quart</i></p>	<ul style="list-style-type: none"> •Write a Three-Digit Number for a Model •Represent Three-Digit Numbers Pictorially •Write a Three-Digit Number for a Model or Picture •Order Three-Digit Numbers •Identify the Median of a Set of Numbers •Tell and Show Time to Five-Minute Intervals •Add Three Two-Digit Numbers With a Sum Greater than 100 •Mentally compute -4 facts •Draw a Picture to Solve a Problem when appropriate •Cut a Geometric Shape Apart and Make a New Shape
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Stage 2 - Assessment Evidence (acceptable assessment evidence that students understand)

<p><i>Performance Tasks: (what authentic performance task (s) will students demonstrate understanding; by what criteria will it be judged?)</i></p> <p><i>Worksheet 80B:</i></p> <ul style="list-style-type: none"> • There are round cafeteria tables at George Clark Elementary School. Five children can sit at each table. Show how many tables Mrs. Tollett will need for the 22 children in her class. 	<p><i>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</i></p> <p>Fact Assessment 14-1 & 14-2</p> <ul style="list-style-type: none"> • Subtracting 2, 1 & 0 • 100 Addition Facts <p>Written Assessment 14</p> <ul style="list-style-type: none"> • SSM story (money); writes number sentence; solves; writes as money • Draws dozen; identifies half dozen • Writes, show time to the half hour; identifies a.m./p.m. • Draws, counts money (dimes, nickels, pennies) • Identifies congruent shapes • Adds with regrouping <p>Fact Assessment 15-1 & 15-2</p> <ul style="list-style-type: none"> • Subtracting 3 & 2 • 100 Addition Facts <p>Written Assessment 15</p> <ul style="list-style-type: none"> • SWA story (dozen); writes number sentence; solves; • Reads Venn diagram • Identifies temperature to 2 degrees • Writes fraction for shaded part of a whole: $\frac{1}{6}$, $\frac{3}{4}$ • Draws line segments using half inches • Adds with regrouping <p>Oral Assessment 8</p> <ul style="list-style-type: none"> • Making and reading a graph
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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:

<p><i>Learning Activities:</i></p> <p>Math Meetings 71 through 80-2</p> <ul style="list-style-type: none"> • Calendar
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- Attendance graph
- Temperature
- Counting
- Problem of the day
- Clock
- Pattern
- Number of the day
- Money
- Fact family
- Secret Number

New Concepts 71 through 80-2

- State objective
- Explicit Instruction
- Guided Practice
- Written Practice
- Recap: "Who would like to share something they learned in math today?"
- Homework

Test-Taking Strategies Practice 12 (for use after Lesson 75)

- Identifying Numbers in an Addition and Subtraction Fact Family
- Identifying a Missing Number on a Number Line
- Estimating Length Using Nonstandard Units

Test-Taking Strategies Practice 13 (for use after Lesson 80)

- Ordering Three-Digit Numbers
- Writing Three-Digit Number for a Picture
- Writing a Number Sentence for a Story Problem

Journal Writing

- Write a some, some more story problem in which you add 10. (After lesson 71)
- Write a some, some went away story problem in which you subtract 10. (After lesson 71).
- Name two drinks that come in gallon containers. Which is your favorite and when do you drink it? (After lesson 75-2)
- Write about three classroom activities that each take 5 minutes. (After lesson 78).

Literature Connections

- *Elevator Magic*, Stuart J. Murphy
- *Room for Ripley*, Stuart J. Murphy
- *100 Days of School*, Trudy Harris
- *One Hundred Hungry Ants*, Elinor J. Pinczes

*Math Center Activities 58-67

*Extend and Challenge Activity 7

*Differentiated Instruction Activities 71 through 80-2

*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

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	<p>Saxon Math Lessons 71 through 80-2 Math Folders Lesson Worksheets 71 through 80-2 Guided/Written Practice 71 through 80-2 Journal Written Assessment 14 & 15 Fact Assessment 14 & 15 Oral Assessment 8 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide</p>	<p>Dimes, pennies Rulers Student Fact Cards Teacher Fact Cards Base 10-Blocks Wrap-Ups Empty Containers Student Clocks Money Cards Color Tiles</p>

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