

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 21-30

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.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.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:

- An addition and subtraction fact family has two addition and two subtraction facts that all use the same three numbers
- Numbers are used to describe the temperature
- Geometric shapes can be sorted by attribute
- A number sentence shows which operation will be used to solve a word problem.

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

- How can I check to see if an answer to a subtraction problem is correct?
- How do I know which ten the temperature is closest to on a thermometer?
- What are some different ways I can sort geometric shapes?
- How will a number sentence help solve a word problem?

Big Idea(s)

**Represent and solve problems involving addition and subtraction.
Add and subtract within 20.
Reason with shapes and their attributes.**

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

- geometric shapes have attributes
- "Some, Some More" and "Some, Some Went Away" Stories can be represented with pictures & number sentences.
- Shapes can be divided into two, equal parts, or halves.
- Fractional Parts of a Whole can be Closer to 0, 1/2, or 1
- A Square can be divided in Half Different Ways
- When adding two numbers next to each other on the number line, you can use doubles facts to solve the fact.
- 30 minutes is half of an hour.
- Estimating Temperature
- Thermometers are a tool to tell temperature.
- Counting Dimes and Pennies
- Fact Families relate three numbers.
- Addition Facts
- Drawing a Picture can be used to Solve an Problem

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

- Identify, Sort, Compare * Contrast Common Geometric Shapes by Attribute
- Draw Pictures and Write Number Sentences for "Some, Some More" and "Some, Some Went Away" Stories
- Divide and shade one half of a Shape
- Identify if a Fractional Part of a Whole is Closer to 0, 1/2, or 1
- Divide a Square in Half Two Different Ways
- Use the Doubles Plus 1 strategy to solve addition facts when appropriate
- Tell and Show Time to the Half Hour
- Estimating Temperature
- Read a Thermometer to the Nearest 10 Degrees
- Counting Dimes and Pennies
- Write Addition and Subtraction Fact Families
- Mentally compute addition facts with Sums of 8 and 9

<ul style="list-style-type: none"> •Patterns can be used to Solve a Problem <p>Vocabulary: <i>Celsius, degree, digit, Fahrenheit, half hour, half past, halves, sort, subtraction, temperature, thermometer</i></p>	<ul style="list-style-type: none"> •Draw a Picture to Solve an Problem when appropriate •Use Patterns to Solve a Problem when appropriate
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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 30B:</i></p> <ul style="list-style-type: none"> • The beads in Kamille's necklace are in a red, blue, blue, yellow repeating pattern. Show the color of the twelfth bead on her necklace. 	<p><i>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</i></p> <p>Fact Assessment 4</p> <ul style="list-style-type: none"> • Adding 9 <p>Written Assessment 1</p> <ul style="list-style-type: none"> • Reads graph • Identifies weekdays • Identified ordinal position to 12th • Identifies even numbers to 20 • Number clock face; write, shows elapsed time to the hour • Identifies shapes <p>Fact Assessment 5</p> <ul style="list-style-type: none"> • Doubles +1 <p>Written Assessment 1</p> <ul style="list-style-type: none"> • Draws SSM story; write number sentence; solves • Identifies temperature to 10 degrees • Shows one half of a whole • Compares three two-digit numbers • Identifies fractions: 1/2 , 1/3, 1/6 • Addition facts +2, +9 <p>Oral Assessment 3</p> <ul style="list-style-type: none"> • Identifying attributes of shapes
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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 21 through 30-2</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 <p>New Concepts 21 through 30-2</p> <ul style="list-style-type: none"> • State objective • Explicit Instruction • Guided Practice • Written Practice • Recap: "Who would like to share something they learned in math today?" • Homework <p>Test-Taking Strategies Practice 2 (for use after Lesson 25)</p> <ul style="list-style-type: none"> • Identifying a Number Sentence That Can Be Used to Solve a Problem • Identifying How Many More on a Graph
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- Identifying the Missing Shape in a Repeating Pattern
- Test-Taking Strategies Practice 3 (for use after Lesson 30)
- Identifying a Shape with a Given Number of Sides
 - Identifying a Number Sentence That Can Be Used to Solve a Problem
 - Read a Thermometer

Journal Writing

- Write a some, some more story problem for $4 + 3 = \underline{\quad}$. Draw a picture for your story problem. (After lesson 22)
- Write a some, some went away story problem for $7 - 1 = \underline{\quad}$. Draw a picture for your story problem. (After lesson 22)
- Write about your favorite TV show. At what time does it start? (After lesson 26)
- Make a list of 5 hot foods and 5 cold foods. Circle your favorite food and tell why it is your favorite. (After lesson 27)
- Pretend that you are going to the store and you have 9 dimes and 5 pennies. How much money do you have? Describe something you could buy with this money? (After lesson 28)
- Choose 2 different pattern blocks. Trace the pattern blocks. Describe two ways they are the same and two ways they are different. (After lesson 30-2).

*Math Center Activities 14-22

*Extend and Challenge Activity 4

*Differentiated Instruction Activities 21 through 30-2

*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	<table border="1"> <tr> <td> Saxon Math Lessons 21 through 30-2 Math Folders Lesson Worksheets 21 through 30-2 Guided/Written Practice 21 through 30-2 Journal Written Assessment 4 & 5 Fact Assessment 4 & 5 Oral Assessment 3 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide </td> <td> Attribute Shapes Teacher Fact Cards Student Facts Cards Pattern blocks Scissors Paper Squares Student Clocks Outdoor thermometer Dimes, pennies Color Tiles </td> </tr> </table>	Saxon Math Lessons 21 through 30-2 Math Folders Lesson Worksheets 21 through 30-2 Guided/Written Practice 21 through 30-2 Journal Written Assessment 4 & 5 Fact Assessment 4 & 5 Oral Assessment 3 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide	Attribute Shapes Teacher Fact Cards Student Facts Cards Pattern blocks Scissors Paper Squares Student Clocks Outdoor thermometer Dimes, pennies Color Tiles
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