

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 1-10

Estimated Amount of Instructional Time: ~11 Days

Stage 1 – (Desired Results)

State Content and Skill Standards:

- CC.K-12.MP.1 through CC.K-12.MP.12
- 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.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.7. Add and subtract within 1000, using concrete models or drawings
- 2.NBT.9. Explain why addition and subtraction strategies work
- 2.MD.10. Draw a picture graph and a bar graph (with single-unit scale)
- 2.G.1. Recognize and draw shapes having specified attributes, angles or equal faces.¹ Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

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

Students will understand:

- Numbers can be written as number sentences
- A graph is an easy way to show data or information
- A repeating pattern can be created and named in different ways: such as colors shapes or letters.

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

- How do I know 34 is the same as 30 + 4?
- What does this graph tell me?
- What are the different ways I can name a pattern?

Big Idea(s)

**Represent and solve problems involving addition and subtraction.
Understand place value.**

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

- Digits are used to make numbers.
- Right and Left are direction words
- One More and One Less
- Elements of a Graph
- The digits on a clock represent 12 clock hours
- Addition Facts
- Pattern Blocks have attributes
- Ordinal Position words describe position
- Elements of a repeating Pattern
- How to identify "Some, Some More" story problems
- Two Numbers can have greater, lessor or equal value.
- Two objects can have greater, lessor or equal size.
- Vocabulary: Addends, Sums, and the Commutative Property of Addition
- When to use Logical Reasoning to Solve a Problem
- When to solve a Problem by Acting it Out

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

- Read, Identify, & Write Numbers to 100
- Identify Right and Left
- Identify One More and One Less Than a Number
- Graph Data on a Graph
- Tell and Show Time to the Hour
- Mentally compute doubles facts, +1, +0
- Identify the Attributes of Pattern Blocks; use pattern blocks to cover a design.
- Identify Ordinal Position in a set of six objects
- Create and Read a Repeating Pattern
- Act Out "Some, Some More" story problems to solve
- Comparing numbers to 50
- Compare and Order Objects by Size
- Identify Addends, Sums, and the Commutative Property of Addition
- Use Logical Reasoning to Solve a Problem
- Solve a Problem by Acting it Out

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| <p>Vocabulary: <i>addend, addition, commutative property of addition, data, digital time, doubles, equal, fewer, graph, greater, hexagon, hour, hour hand, largest, left, less, longer, minute hand, number, o' clock, ordinal number, parallelogram, plus, repeating pattern, right, shape, shorter, size, smallest, square, sum, trapezoid, triangle</i></p> | |
| <p>Stage 2 - Assessment Evidence (acceptable assessment evidence that students understand)</p> | |
| <p><i>Performance Tasks: (what authentic performance task (s) will students demonstrate understanding; by what criteria will it be judged?)</i> <i>Worksheet 10B:</i></p> <ul style="list-style-type: none"> • Carson put her books in a stack on her desk. The red book is not on top. The green book is in the middle. The yellow book is above the green book. Show which book is at the bottom of the stack. | <p><i>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</i></p> <p>Fact Assessment 1</p> <ul style="list-style-type: none"> • Doubles <p>Written Assessment 1</p> <ul style="list-style-type: none"> • Reads graph; identifies most • Continues shape pattern • Identifies one more, one less than a number • Writes time to the hour • Identifies missing numbers to 30 • Addition facts; doubles <p>Oral Assessment 1</p> <ul style="list-style-type: none"> • Identifying and writing numbers to 100 |
| <p>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> | |
| <p><i>Learning Activities:</i></p> <p>Math Meetings 1 through 10-2</p> <ul style="list-style-type: none"> • Calendar • Attendance graph • Temperature • Counting • Problem of the day • Clock <p>New Concepts 1 through 10-2</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>Journal Writing</p> <ul style="list-style-type: none"> • List 3 things to the left of you. List 2 things to the right of you. (After lesson 1) • Write something you learned about a friend or the class from the birthday graph. (After lesson 2) • Write about your last birthday. How old were you? (After lesson 2) • Pretend it is 4 o'clock. What would you be doing? (After lesson 3) • Choose 1 pattern block and trace it. Create a picture using your pattern block. Write about your picture. (After lesson 6) <p>*Math Center Activities 1-7 *Extend and Challenge Activities 1 & 2 *Differentiated Instruction Activities 1 through 10-2</p> <p style="text-align: right;">*if needed</p> | |

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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" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> Saxon Math Lessons 1 through 10-2 Math Folders Lesson Worksheets 1 through 10-2 Guided/Written Practice 1 through 10-2 Oral Assessment Recording Form 1 Journal Written Assessment 1 Fact Assessment 1 Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide </td> <td style="width: 40%; padding: 5px;"> Birthday Chart Pennies Student Clocks Pencils Teacher Fact Cards Pattern Blocks Color Tiles </td> </tr> </table> | Saxon Math Lessons 1 through 10-2 Math Folders Lesson Worksheets 1 through 10-2 Guided/Written Practice 1 through 10-2 Oral Assessment Recording Form 1 Journal Written Assessment 1 Fact Assessment 1 Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide | Birthday Chart Pennies Student Clocks Pencils Teacher Fact Cards Pattern Blocks Color Tiles |
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