

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 31-40

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.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.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.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.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit
- 2.MD.10. Draw a picture graph and a bar graph (with single-unit scale)
- 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:

- Fractions can be compared and used to identify equal parts.
- When we have a complete set of equal pieces, we have a whole.
- Tally marks are used to record results on a simple table.
- Bar graphs are used to display data and information.

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

- How can I compare fractions?
- How many halves equal a whole? Fourths? Eighths?
- When would I use tally marks and a simple table?
- How can I show data on a bar graph? How can making a graph help me solve problems?

Big Idea(s)

**Understand place value.
Represent and interpret data.**

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

- Elements of a Bar Graph
- How to represent a number using tally marks
- How to skip Count by 5's
- The definition of Horizontal, Vertical, and Oblique lines
- A Whole can be divided into Halves, Fourths, and Eighths
- Halves, Fourths, and Eighths represent different sizes
- Fraction Notation is used to name a fraction part
- Addition Facts
- Objects can be weighed Using Nonstandard Units
- Two objects can weight more, less, or the same as one another.
- How Adding 10 to a Multiple of 10 changes the value of a number
- How numbers relate on the Hundred Number Chart

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

- Create and Read a Bar Graph
- Use Tally marks to show amounts
- Count by 5's to find a total
- Identify Horizontal, Vertical, and Oblique
- Divide a Whole into Halves, Fourths, and Eighths
- Identify & Compare Halves, Fourths, and Eighths
- Read & Write fractions using Fraction Notation
- Mentally compute addition facts with Sums of 10
- Weigh Objects Using Nonstandard Units
- Compare and Order Objects by Weight
- Mentally Add 10 to a Multiple of 10
- Find Missing Numbers on a Piece of the Hundred Number Chart
- Identify Pairs

<ul style="list-style-type: none"> • Pairs are units of 2. • A set of objects can be divided into units of 2. • Tens and Ones are place value units. • Elements of a Bar Graph • Addition Facts • Organized Lists can be used to Solve a Problem • Problems can be solved by acting them out • One-Inch Color Tiles are a unit of measure <p>Vocabulary: <i>bar graph, denominator, estimate, heaviest, horizontal, inch, lightest, oblique, one eighth, one fourth, pair, tally, vertical</i></p>	<ul style="list-style-type: none"> • Divide a Set of Objects Into Groups of Two • Identify Tens and Ones • Create and Read a Bar Graph • Mentally compute addition facts with Sums of 11 • Using an Organized List to Solve a Problem when appropriate • Solve a Problem by Acting It Out when appropriate • Measure with One-Inch Color Tiles
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Stage 2 - Assessment Evidence (acceptable assessment evidence that students understand)

<p>Performance Tasks: (what authentic performance task (s) will students demonstrate understanding; by what criteria will it be judged?)</p> <p>Worksheet 40B:</p> <ul style="list-style-type: none"> • William has two favorite shirts and two favorite hats. One of his favorite shirts is blue and the other is red. One of his favorite hats is green and the other is yellow. Show all the different ways he can wear his favorite shirts and hats. 	<p>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</p> <p>Fact Assessment 6</p> <ul style="list-style-type: none"> • Review facts; sums of 8 & 9 <p>Written Assessment 1</p> <ul style="list-style-type: none"> • Draws SSM story; writes number sentence; solves • Shows one half of a square in two ways • Counts money (dimes) • Identifies ordinal position to the 6th; days of the week; months • Identifies odd numbers to 19 • Addition facts: doubles, doubles +1, +0, +1, +2, +9 <p>Fact Assessment 7</p> <ul style="list-style-type: none"> • Review facts; sums of 10 <p>Written Assessment 1</p> <ul style="list-style-type: none"> • Draws SWA story; writes number sentence; solves • Numbers clock face; write, shows time to the half hour. • Draws tally marks • Counts money (dimes, pennies) • Reads graph • Writes addition/subtraction fact family <p>Oral Assessment 4</p> <ul style="list-style-type: none"> • Counting by 10's & 5's
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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>Learning Activities:</p> <p>Math Meetings 31 through 40-2</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 31 through 40-2</p> <ul style="list-style-type: none"> • State objective • Explicit Instruction • Guided Practice
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- Written Practice
 - Recap: "Who would like to share something they learned in math today?"
 - Homework
- Test-Taking Strategies Practice 4 (for use after Lesson 35)
- Identifying Time to the Half Hour
 - Representing Data from a Pictograph on a Bar Graph
 - Identifying Facts in an Addition and Subtraction Fact Family
- Test-Taking Strategies Practice 5 (for use after Lesson 40)
- Identifying a Number Between Two Numbers
 - Identifying the Missing Shape in a Repeating Pattern
 - Representing Data from a Tally Chart on a Bar Graph
- Journal Writing
- List three things you learned from the wake-up graph (After lesson 31)
 - Draw a picture using only horizontal, vertical, and oblique line segments. Describe your picture. (After lesson 33)
 - Choose a number on the hundred number chart. Write 3 clues to help us guess your number (After lesson 36)
 - Draw a picture of your favorite pair of something. Write clues to help us guess what you drew a picture of. (After lesson 37)
 - Write 2 questions you could ask the class about the apple graph (After lesson 39)
- Literature Connections
- *How Many Feet in the Bed*, Diana Johnston Hamm
- *Math Center Activities 23-33
 *Differentiated Instruction Activities 31 through 40-2

*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 31 through 40-2 Math Folders Lesson Worksheets 31 through 40-2 Guided/Written Practice 31 through 40-2 Journal Written Assessment 6 & 7 Fact Assessment 6 & 7 Oral Assessment 4 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide </td> <td> Teacher Fact Cards Wake-Up Time Chart Pennies Student Fact Cards Scissors Envelopes Playing Cards Balance (scale) Color Tiles Apples </td> </tr> </table>	Saxon Math Lessons 31 through 40-2 Math Folders Lesson Worksheets 31 through 40-2 Guided/Written Practice 31 through 40-2 Journal Written Assessment 6 & 7 Fact Assessment 6 & 7 Oral Assessment 4 Recording Form Math Palettes Math Center Activities Extend and Challenge Guide Differentiated Instruction Guide	Teacher Fact Cards Wake-Up Time Chart Pennies Student Fact Cards Scissors Envelopes Playing Cards Balance (scale) Color Tiles Apples
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