Mathematics Grade 4, Unit Plan

Unit 2: Using & Organizing Data	
Established Goals: Mathematics Grade Level Content Expectations **NC = Calculators cannot be used to test these GLCE's on MEAP**	
D.RE.03.02	Measure using common tools and select appropriate units of measure. III.1.E.1, III.2.E.2 ***Secure***
N.ME.04.01	Read and write numbers to 1,000,000; relate them to the quantities they represent; compare and order. IV.1.E.1, IV.2.E.3 ***Secure***
N.ME.04.02	Compose and decompose numbers using place value to 1,000,000's, e.g., 25,068 is 2 ten thousands, 5 thousands, 0 hundreds, 6 tens, and 8 ones. IV.E.1.1, IV.1.E.3, V.1.E.3 ***Secure***
N.FL.04.08 NC	Add and subtract whole numbers fluently. V.1.E.2 ***Secure***
D.RE.04.01	Construct tables and bar graphs from given data. III.1.E.1, III.1.E.2, III.2.E.5 ***Secure***
D.RE.04.02	Order a given set of data, find the median, and specify the range of values. III.1.E.1, III.2.E.2 ***Developing/Secure***
N.ME.04.03	Understand the magnitude of numbers up to 1,000,000; recognize the place values of numbers and the relationship of each place value to the place to its right, e.g., 1,000 is 10 hundreds. IV.1.E.1, IV.1.E.3, IV.2.E.1, IV.3.E.1 Developing
N.ME.04.04	Find all factors of any whole number through 50, list factor pairs, and determine if a one-digit number is a factor of a given whole number. IV.3.E.2, IV 3.E.3 Developing
D.RE.04.03	Solve problems using data presented in tables and bar graphs, e.g., compare data represented in two bar graphs and read bar graphs showing two data sets. III.1.E.2, III.1.E.3, III.2.E.1, III.2.E.3, III.2.E.4, III.3.E.3 Developing

Understandings • Statistical landmarks (maximum, minimum, median, mode and range) are used as reference points to make comparisons between groups of data. • The shape of graphs tells a story about the given data.	**Essential Questions** • How can one determine whether the data collected for one group is typical for other related groups? • For what purpose are various graphs used? • How can the shapes of the graphs be described and what information do these shapes provide?
Students will know… • Essential vocabulary terms • How to use the statistical landmarks median, mode and range. • Strategies for adding and subtraction multidigit numbers. • How to display data with a line plot, line graph or tally chart.	**Students will be able to…** • Organize and display data with a tally chart, line plot and bar graph. • Determine the range, mode and median of a set of data. • Add and subtract whole numbers.

Assessment Evidence

Performance Tasks

- Add and subtract multidigit numbers using an identifiable strategy.
- Interpret a tally chart to find the range, mode and median for a set of data.
- Construct a bar graph based on information derived from a frequency table.
- Solve problems based on information derived from a table.

Other Evidence:

- Oral and written responses to the Essential Question
- Exit slips
- Slate Assessments
- Alternative Assessment Options

Key Concepts

- Addition fluency
- Subtraction fluency
- Line plot
- Measure of median, mode, range

Instructional Resources

The University of Chicago School Mathematics Project. *Everyday Mathematics-Fourth Grade Teacher's Lesson Guide Volume 1 Unit 2: Using Numbers & Organizing Data.* Chicago, IL; SRA/McGraw Hill, 2002

Everyday Mathematics Games

- Lesson 2.2: *Name That Number* **SRB** pg 203
- Lesson 2.4: *High-Number Toss* **SRB** pg 201
- Lesson 2.4: *Number Top-It* **SRB** pg 204
- *Lesson 2.5: Addition Top-It* **SRB** pg. 207
- *Lesson 2.6: Subtraction Top-It* ***SRB*** *pg. 207*
- *Lesson 2.9: Subtraction Target Practice* **SRB** pg. 206

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Accommodations

Addition/Subtraction

- Continue to stress the trading strategy for both. Have students continue to trade using the unit, ten, and hundred blocks. Allow student to manipulate the trade.
- Continue to reinforce "partial-sums" method for addition. Do not suggest using the method for subtraction as it confuses students.
- Reducing the amount of problems allows student to concentrate on concept not the amount of work. This also allows students to use manipulatives without the fear of not completing the "whole" page. They can concentrate on the concept.
- Utilize "Name-Collection Boxes" (TE pg.83)-try to start inclusion of decimals and fractions.

Place Value:

- Using a prepared place value chart, student first writes the number on the chart putting the digit in the correct space before reading the number.
- "Reviewing Place Value for Whole Numbers"- (TE pg. 88,89,90)
- "Reading Large Numbers" (TE pg. 92)
- "Practicing Place-Value Skills with a Calculator" (TE pg. 94, 95) allow student to write the number(s) on a place value chart first (visual model of the original number to refer back to).
- Comparing number value- play: "Playing Number Top-It" (TE pg. 97)-excellent for building the visual connection.
- Books for student to take home: *Twelve Ways to Get Eleven* and *How Much is a Million?*