Unit 8: Chapter 10 Measurement

Content Area: **Mathematics**
Course(s): **Math 3**
Time Period: **April**
Length: **2 weeks**
Status: **Published**

Unit Summary

In this unit, students will learn about customary and metric units of length. They will measure to the nearest half and quarter inch. They will learn about customary units of time and tell time on analog and digital clocks. They will use strategies to solve problems with elapsed time. Students will learn about customary units of capacity and weight.

Standards

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.3.MD.A	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
MA.3.MD.A.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
MA.3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
MA.3.MD.B	Represent and interpret data.
MA.3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.
MA.3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Student Learning Objectives

Students will learn to use customary and metric units for length, capacity, weight, and time to measure objects on paper and in real life.

Essential Questions

How can you measure time using a number line?
How do you know which tool to use to measure volume, mass and length of an object?
Why do you collect data?
How does the type of data influence the choice of graph?
How do charts, tables and graphs help you interpret data?

Enduring Understandings

Students will understand that:

- intervals of time can be measured different ways.
- different tools are used to measure volume, mass and length of an object.
- data can be collected many ways.
- the type of graph selected to represent data is influenced by the data collected.
- charts, tables and graphs help people interpret data.

Application

Students will be able to independently use their learning to:

- determine how to tell time and find elapsed time.
- determine how to measure the length of an object to the nearest half or fourth inch.
- solve problems involving liquid volume and mass.

Skills

Students will be skilled out:

- measure customary units of length, capacity, time and weight.
- carry out simple unit conversions with a measurement system.
- point and count the half-inch intervals on a ruler.
- locate the nearest quarter inch and half-inch on a ruler when given a point on the ruler. and understand each whole inch can be considered the nearest quarter inch or half inch.
- recognize when a given quantity can be grouped into a known unit.
- identify and measure metric units of length, capacity, and weight.