

STUDENT LEARNING MAP – MATH 5 – UNIT 3

Unit Topic: Measurement

Standards:

SOL 5.11 – **Solve** practical problems related to elapsed time in hours and minutes within a 24-hour period.

SOL 5.9 – **Identify** equivalent measurements within the metric system and **solve** practical problems involving length, mass, and liquid volume using metric units.

SOL 5.8 a and b – **Solve** practical problems that involve perimeter, area and volume and **identify** whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

Unit Essential Question: How can measurement be used to solve practical problems?

Unit Dates: Jan. 3 - Feb. 8

Assessment Date: Feb. 5

Duration: 20 days

Lesson 1 Focus

Elapsed Time

Standards (calculator)

SOL 5.11 – Elapsed Time

Students Will Know...

- elapsed time is the amount of time that has passed between two given times.
- elapsed time can be found by counting from the beginning time or counting back from the end time.

Key Content Vocabulary

elapsed time, digital clock, analog clock, A.M., P.M.

Key Academic Vocabulary

solve, determine, justify

Students Will Be Able To...

- **Solve** practical problems related to elapsed time in hours and minutes within a 24-hour period when given: the beginning and end time, the beginning time and elapsed time, or ending time and elapsed time.

Lesson Essential Question 1

How do I determine elapsed time in hours and minutes?

Lesson 2 Focus

Metric Measurement

Standards (calculator)

SOL 5.9 – Metric Measurement

Students Will Know...

- metric units of length include millimeters, centimeters, meters, and kilometers.
- metric units of mass include grams and kilograms.
- metric units of liquid volume include milliliters and liters.

Key Content Vocabulary

metric system, length, mass, liquid volume (capacity)

Key Academic Vocabulary

identify, estimate, measure, solve, convert, reasonable

Students Will Be Able To...

- **Identify** equivalent measurements within the metric system for length, mass, and liquid volume.
- **Estimate** and **measure** length, mass, and liquid volume (capacity) using the metric system to **solve** practical problems.

Lesson Essential Question 2

How do I measure and identify equivalent measurements of length, mass and liquid volume (capacity) using the metric system?

Lesson 3 Focus

Perimeter, Area and Volume

Standards (calculator)

SOL 5.8 a and b – Perimeter, Area, and Volume

Students Will Know...

- perimeter is the distance around any plane figure.
- area is measured by the number of square units needed to cover a surface or plane figure.
- volume is a measure of capacity and is measured in cubic units.
- the formula for perimeter, area, and volume.

Key Content Vocabulary

perimeter, area, volume, square units, cubic units, formula, rectangular prism, plane figure, polygon

Key Academic Vocabulary

determine, estimate, solve, investigate

Students Will Be Able To...

- **Solve** practical problems that involve perimeter, area, and volume in standard units of measure.
- **Determine** the perimeter of a polygon, with or without diagrams.
- **Estimate** and **determine** the area of a square and rectangle..
- **Estimate** and **determine** the area of a right triangle, with diagrams, when the base and height are given.
- **Estimate** and **determine** the volume of rectangular prisms with diagrams.

Lesson Essential Question 3

How do I determine if a problem situation requires finding the perimeter, area, or volume and use a formula to solve them?