Domain: Measurement and Data Grade: 5

# **Core Content**

# **Cluster Title: Represent and Interpret Data**

**Standard 2:** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations in fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

## **MASTERY Patterns of Reasoning:**

# Conceptual:

Students will understand how to measure to a half, fourth or eighth of a unit and display that information in a line plot. Students will understand the use of operations with fractions to solve problems.

#### Procedural:

Students will measure in fractions and graph the results on a line plot.

Students will be able to calculate accurately and formulate conclusions found on a line plot.

## Representational:

Students will draw conclusions and communicate results from data.

# Supports for Teachers

# **Critical Background Knowledge**

## Conceptual:

Students will understand line plots, fractions, and operations with fractions.

### **Procedural:**

Students will measure in fractional units and create a line plot.

Students will analyze data to perform operations with fractional units.

Code: 5.MD.2

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# Representational:

Students will measure in fractional units with appropriate tools.

Students will create line plots with collected data.

Students will perform operations on fractions.

## **Academic Vocabulary and Notation**

line plot, scale, intervals, benchmark fractions

| Instructional Strategies Used  | Resources Used |
|--|----------------|
| Measure various objects using fractional units with appropriate tools, and     |                |
| record results on a line plot.   |                |
|  |                |
| Use operations $(x, \div)$ of fractional parts with the data on the line plot. |                |

#### **Assessment Tasks Used**

#### Skill-Based Task:

With a given set of data, students will make a line plot and answer related questions involving computation of fractions.

For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

#### **Problem Task:**

Students will design computation questions using the data displayed in a line plot.

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