Unit 3d-Represent And Interpret Data On Line Plots

Content Area: **Math**
Course(s): **Math 4**
Time Period: **Marking Period 3**
Length: **MP3 Topic 11 11-1 to 11-4**
Status: **Published**

Essential Questions

- How can you solve problems using data on a line plot?
- How can you make a line plot?

Big Ideas

- **Line Plots:** Students read and interpret line plots. Students use this understanding to make line plots and solve problems involving data.
- **Measurement Data:** Students work with line plots that represent measurements given in halves, fourths, and eighths of a unit. Students will understand that line plots reveal certain characteristics of the data set.
- **Use Fractions in Data Problems:** Students will use their understanding of fraction equivalence, ordering, unit fractions, and fraction operations to order fractions and mixed numbers on a number line to make line plots. Students will solve problems using data on line plots while they add and subtract fractions and mixed numbers with like denominators.

CSDT Technology Connection

8.1.5.DA.3 Organize and present collected data visually to communicate insights gained from different views of the data.

Enduring Understandings

Number and Operations—Fractions

4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons

with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

4.NF.B.3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

4.NF.B.3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

Measurement and Data

4.MD.B.4 [M] Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots.

Mathematical Practices Focus

3. Construct viable arguments and critique the reasoning of others