



Bridging for Math Strength Resources

Standards of Learning Curriculum Framework (SOL)

Bridging Standards of Learning (SOL) for Grade 7

Standard of Learning (SOL) 7.9b Make observations and inferences about data represented in a histogram



Student Strengths	Bridging Concepts	Standard of Learning
Students can interpret data represented in line plots, circle graphs, and stem-and-leaf plots.	Students can represent data in a histogram.	Students can make observations and inferences about data represented in a histogram.

Understanding the Learning Trajectory

Big Ideas:

- A histogram is used to deduce information and analyze data when presented in consecutive intervals.
- Comparisons, predictions and inferences are made by examining characteristics of a data set displayed in a variety of graphical representations to draw conclusions.
- Data analysis helps describe data, recognize patterns or trends, and make predictions.
- Inferential statistics uses data in a sample selected from a population to describe features of the population (Kader & Jacobbe, 2013. NCTM, Essential Understandings Statistics 6-8)
- The sampling distribution of a statistic describes the sample-to-sample variability and values of the statistic from the multiple samples of the same size selected from the same population.
- Selecting a simple random sample from a population is a fair way to select a sample.
- The predictable pattern for the sampling distribution of a statistic based on random sampling provides a way for making inferences about a population.

Formative Assessment:

- [Just in Time Mathematics Quick Check 7.9b Word](#)
- [Just in Time Mathematics Quick Check 7.9b PDF](#)
- [Just in Time Mathematics Quick Check 7.9b Desmos](#)

Important Assessment Look Fors:

- The student shows understanding of the verbiage of “no fewer than” means “equal to or more.”
- The student recognizes that there is more than one interval that serves a solution.
- The student computes the combination of the occurrences in each appropriate interval, and not the amount represented by the interval.
- The student is able to create a proper representation of the number of successful solutions to the scenario in comparison to the total number of cities represented.

Purposeful Questions:

- Do you know all of the exact data values? Why or why not?
- Which measures of center could be computed from a histogram? Explain your reasoning.
- Which intervals would be included in fewer than ____? At least ____? Greater than ____? How do you know?
- How will you convert the data from the histogram to a percentage?

Bridging Activity to Support the Standard	Instructional Tips
Routine Would You Rather Math?	Data from your final exam will relate to students’ lived experiences in schools.
Rich Tasks Illustrative Mathematics: Valentine Marbles	Use your knowledge of probability to estimate- A hotel holds a Valentine's Day contest where guests are invited to estimate the percentage of red marbles in a huge clear jar containing both red marbles and white marbles.
Games/Tech Quizziz: Histogram Practice Khan Academy: Reading Histograms Desmos 7.9ab Histograms! Desmos 7.9b Histogram Data Displays	Focus only on the sections (Parts A & B) of the task that require inferences to be made about the data. If students are not successful initially, point out that there are data points between the values on the scale as well. Students will be more comfortable with sorting and analyzing data through the use of histograms. Students will be more comfortable with sorting and analyzing data through the use of histograms, and determining what information a histogram can and cannot provide.
Other Resources: • VDOE Mathematics Instructional Plans (MIPS) ◦ 7.9abc - Numbers in a Name (Word) / PDF Version • VDOE Word Wall Cards: Grade 7 (Word) (PDF) ◦ Histogram • Desmos Activity ◦ Histograms Learning Trajectory Resources: Charles, R. (2005). Big ideas and understandings as the foundation for elementary and middle school mathematics. <i>Journal of Mathematics Education Leadership</i> , 7(3), NCSM. Common Core Standards Writing Team. (2019). Progressions for the Common Core State Standards for Mathematics. Tucson, AZ: Institute for Mathematics and Education, University of Arizona. Kader, G.D. & Jacobbe, T. (2013). <i>Developing Essential Understanding of Statistics for Teaching for Grade 6-8.</i> NCTM	

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Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2018). *Elementary and Middle School Mathematics: Teaching Developmentally*. (10th edition) New York: Pearson (2019:9780134802084)

VDOE Curriculum Framework for All Grades - [Standard of Learning Curriculum Framework \(SOL\)](#)