

Data About us

Investigation 3 Using Graphs to Group Data Day 1 3.1 Traveling to School

Connection

Prior Work	Current Big Idea	Future Work
<ul style="list-style-type: none">Distinguish between categorical and numerical data.	<ul style="list-style-type: none">Use stem-and-leaf plots to group numerical data in intervals.Use ordered data in a stem-and-leaf plot to locate measures of center and measure of spread.	<ul style="list-style-type: none">Compare data sets by using back-to back stem-and-leaf plots.

Lesson Process

Steps	Student activity	Teacher Support	Comment/Evaluation
Launch 10-15 minutes	<ul style="list-style-type: none">Read "Traveling to School" and "Think about this!"	<ul style="list-style-type: none">Engage students to the context of the problem. What are the three questions that the students asked?"Review how the data are recorded for distance (that is, in decimal form in multiples of a quarter of a mile, or 0.25).Introduce the creation of stem-and-leaf plots to represent the data only when students are familiar with the data.	<ul style="list-style-type: none">Students should see that the times for traveling to school is quite spread out and would be difficult to create a line plot.

Steps	Student activity	Teacher Support	Comment/Evaluation
Explore 15-20 minutes	<ul style="list-style-type: none"> Follow teacher in making stem-and-leaf plot from given data. Complete Problem 3.1 and Problem 3.1 Follow-Up with partner or with teacher and class. 	<ul style="list-style-type: none"> Present the process of making a stem-and-leaf plot as a class exploration led by the teacher. 	<ul style="list-style-type: none"> Focus on development in understanding the stem-and-leaf plot. Students need to have an understanding of the idea that the data are now grouped in intervals and not simply as a set of the same measure.
Summarize 8-10 minutes	<ul style="list-style-type: none"> Read stem-and-leaf plot. Identify intervals in which the data is grouped. 	<ul style="list-style-type: none"> Ask student questions that focus on reading the stem plot and on identifying intervals. Emphasize not only reading the data but also reading between the data. Discuss the process of finding the measures of center and the range. 	<ul style="list-style-type: none"> What are some of the ways data can be organized to help people make sense of the numbers? “Would a line plot be a good way to display the given data? Why or why not?” “Would a stem plot be a good way to display the data? Why or why not?”
Homework	<ul style="list-style-type: none"> ACE questions 1-7. 		

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Investigation 3 Using Graphs to Group Data Day 2 3.2 Jumping Rope

Connection

Prior Work	Current Big Idea	Future Work
<ul style="list-style-type: none"> Create stem-and-leaf plots from given sets of data. 	<ul style="list-style-type: none"> Describe the shape of the data, including the location of clusters and gaps. Determine what is typical about given sets of data. Compare two data sets by using median and range. 	<ul style="list-style-type: none"> Make inferences and predictions about the group to which given sets of data pertain.

Lesson Process

Steps	Student activity	Teacher Support	Comment/Evaluation
Launch 10-15 minutes	Read and discuss the given stem-and-leaf-plot.	<ul style="list-style-type: none"> Make sure student can read the back-to-back stem plot before working on problem 3.2. Cover left side of the stem plot and ask students about the information shown just on the right side. Cover the right side of the stem plot and ask student about the information on the left side. Discuss how this type of arrangement 	<ul style="list-style-type: none"> Students may want to collect their own data for this exploration. Collecting student-generated data is time-consuming.

		lets a person make comparisons between data sets.	
Explore 15-20 minutes	<ul style="list-style-type: none"> Complete Problem 3.2 and Problem 3.2 Follow-Up with partner or with group. 	<ul style="list-style-type: none"> Guide students in completing Problem 3.2 and Problem 3.2 Follow-Up. 	<ul style="list-style-type: none"> The process of comparison may be difficult.
Summarize 8-10 minutes	<ul style="list-style-type: none"> Talk about ways to compare the two sets of data. 	<ul style="list-style-type: none"> Students may wonder how they can compare data sets that contain different numbers of data items. Encourage students to locate the medians and ranges of the two data sets. 	
Homework	<ul style="list-style-type: none"> ACE questions 8 and 9. 		