

Main Topic: Analyzing Data

Learning Objectives/Outcomes:

- Analyze infectious disease and vaccination data using the mathematical calculations: mean, median, mode, and range.
- Analyze data to formulate conclusions and predict trends related to vaccinations and infectious diseases.

Topic 1: Analyzing Data	Topic 2: Considerations	Topic 3: Looking for Trends	Topic 4: Making Predictions	Topic 5: Statistics	Topic 6: Drawing Conclusions
<p>Ideas</p> <p>What does it mean to analyze data?</p> <ul style="list-style-type: none"> - to study or examine the information in a methodical way <p>How do you analyze data?</p> <ul style="list-style-type: none"> - By making observations about the information and answering questions or looking for patterns and/or relationships 	<p>Ideas</p> <p>What questions should you ask about the data?</p> <ul style="list-style-type: none"> - Are the data specific? - Are the data reliable? - Are the data accurate? - Does the data include anomalies? <p>What do the questions answer?</p> <ul style="list-style-type: none"> - What the data includes - What is the source of the information or how the information was obtained 	<p>Ideas</p> <p>What trends do you look for in a pie chart?</p> <ul style="list-style-type: none"> - The largest and smallest sections of the chart <p>What trends do you look for in a bar graph?</p> <ul style="list-style-type: none"> - Increases or decreases in the heights of bars <p>What trends do you look for in a line graph?</p> <ul style="list-style-type: none"> - Slope of the line on a line graph 	<p>Ideas</p> <p>What will help to make predictions about future sets of data?</p> <ul style="list-style-type: none"> - Recognizing trends in data 	<p>Ideas</p> <p>What are statistics?</p> <ul style="list-style-type: none"> - Using data in mathematical calculations <p>What is the mean?</p> <ul style="list-style-type: none"> - Average of a set of numbers <p>How do you find the mean?</p> <ul style="list-style-type: none"> - Adding all numbers together and dividing by how many numbers are present <p>What is the median?</p> <ul style="list-style-type: none"> - Middle value between the 	<p>Ideas</p> <p>What is a conclusion?</p> <ul style="list-style-type: none"> - A statement based on observations <p>What are conclusions used for?</p> <ul style="list-style-type: none"> - Can summarize the data or answer questions about the relationship between the variables

<p>What can help draw more accurate conclusions and make better predictions?</p> <ul style="list-style-type: none"> - Related data 	<ul style="list-style-type: none"> - Are there other data that is similar? - Are there anomalies? <p>What is an anomaly?</p> <ul style="list-style-type: none"> - Something that deviates from what is normal or expected - Can result from experimental or reporting errors, and might not be included in the conclusions 			<p>smallest and largest of a set of numbers.</p> <ul style="list-style-type: none"> - Number in the middle <p>How do you find the median?</p> <ul style="list-style-type: none"> - First sort the number from least to greatest, then find the number in the middle, or the average of the two middle numbers <p>What is the mode?</p> <ul style="list-style-type: none"> - Number that appears most often in a data set <p>How do you find the mode?</p>	
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				<ul style="list-style-type: none">- Find the number that occurs most often- Data sets can have no mode or multiple modes <p>What is the range?</p> <ul style="list-style-type: none">- Difference between the largest and smallest numbers in a set of numbers <p>How do you find the range?</p> <ul style="list-style-type: none">- Subtract the smallest number in the data set from the largest number in the data set	
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<p><u>Key Vocabulary</u></p>	<p><u>Key Vocabulary</u> Anomaly: something that deviates from what is normal or expected?</p>	<p><u>Key Vocabulary</u></p>	<p><u>Key Vocabulary</u></p>	<p><u>Key Vocabulary</u> mean: average of a set of numbers average: process of adding all the numbers together and dividing by how many numbers are present median: the middle value between the smallest and largest of a set of numbers mode: the number that occurs most often in a data set range: difference between the largest and smallest numbers in a set of numbers</p>	<p><u>Key Vocabulary</u> conclusion: a statement based on observations</p>
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<u>Pictures</u>	<u>Pictures</u>	<u>Pictures</u>	<u>Pictures</u>	<u>Pictures</u>	<u>Pictures</u>
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