



The Sutton Academy

# Knowledge Rich Curriculum Plan

Year 7 Support – Data and Statistics 2

Lesson/Learning Sequence	Intended Knowledge: <i>Students will know that...</i>	Tiered Vocabulary	Prior Knowledge: <i>In order to know this, students need to already know that...</i>	Assessment
<b>To learn how to draw pictograms.</b>	<ul style="list-style-type: none"> <li>• Students will know that a pictogram is a chart that uses pictures to represent data.</li> <li>• Students will know that we use pictograms to represent data in a more interesting and engaging way that makes it more memorable.</li> <li>• Students will know how to complete a pictogram given numerical values.</li> <li>• Students will know how to use the key to find frequency values from a pictogram.</li> </ul> <p><b>Opportunity for challenge:</b></p> <ul style="list-style-type: none"> <li>• Students will know how to interpret the data within a pictogram to answer simple questions.</li> </ul>	<p><b>Pictogram</b> – a chart that uses pictures to represent data.</p>	<ul style="list-style-type: none"> <li>• Students need to know how to interpret a tally chart</li> </ul>	Mini-Assessment 13
<b>To learn how to draw stem and leaf diagrams.</b>	<ul style="list-style-type: none"> <li>• Students will know that a stem and leaf is a diagram that quickly summarizes data while maintaining the individual data points.</li> <li>• Students will know that we use stem and leaf diagrams to group all the data in to categories whilst still showing each individual result.</li> <li>• Students will know to draw stem and leaf diagrams by splitting the tens and units column. The tens column becomes the 'stem' and the units become the 'leaf'.</li> <li>• Students will know that stem and leaf diagrams must be in order to read them properly.</li> <li>• Students will know that stem and leaf diagrams require a key so that the data can be interpreted correctly.</li> </ul>	<p><b>Stem and Leaf Diagram</b> – a diagram where each data value is split into a "leaf" (usually the last digit) and a "stem" (the other digits)</p>	<ul style="list-style-type: none"> <li>• Students need to know how to order numbers.</li> <li>• Students need to know how to identify the value of a digit within a number</li> </ul>	Mini-Assessment 13
<b>To learn how to interpret stem and leaf diagrams.</b>	<ul style="list-style-type: none"> <li>• Students will know that they must use the key to interpret the values on a stem and leaf diagram, eg. 3 7 = 37 and not just 7.</li> <li>• Students will know how to read values from a stem and leaf diagram.</li> <li>• Students will know how to find how many pieces of data are above or below a certain value.</li> </ul> <p><b>Opportunity for challenge:</b></p> <ul style="list-style-type: none"> <li>• Students will know how to use fractions to represent how many pieces of data are above or below certain values.</li> <li>• Students will know how to identify the median and mode from a stem and leaf diagram</li> </ul>		<ul style="list-style-type: none"> <li>• Students need to know how to draw a stem and leaf diagram.</li> </ul>	Mini-Assessment 13
<b>To learn how to complete two-way tables.</b>	<ul style="list-style-type: none"> <li>• Students will know that two-way tables are ways of sorting data so that the frequency of each category can be seen quickly and easily.</li> <li>• Students will know how to complete a two-way table with given information using a mixture of adding and subtracting.</li> <li>• Students will know how to fill in some values based on a worded problem and then complete two-way table using a mixture of adding and subtracting.</li> </ul> <p><b>Opportunity for challenge:</b></p> <ul style="list-style-type: none"> <li>• Read and interpret values from a two-way table.</li> </ul>		<ul style="list-style-type: none"> <li>• Students need to know how to add and subtract numbers using a column.</li> </ul>	Mini-Assessment 13

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<b>To learn how to interpret simple pie charts.</b>	<ul style="list-style-type: none"> <li>Students will know that a pie chart is a circular statistical graphic which is divided in to slices to illustrate numerical proportion.</li> <li>Students will know that we use a pie chart for expressing a part-to-whole relationship in a visual way which makes it easy to compare results.</li> <li>Students will know how to interpret simple pie charts using simple fractions and percentages such as a half or 25%.</li> </ul>	<p><b>Pie Chart</b> – a circular diagram which is divided into slices to illustrate numerical proportion</p> <p><b>Sector</b> – a pie-shaped part of a circle made of the arc along with its two radii</p>	<ul style="list-style-type: none"> <li>Students need to know how to calculate fractions of amounts</li> </ul>	Mini-Assessment 13
<b>To learn how to draw scatter graphs.</b>	<ul style="list-style-type: none"> <li>Students will know how to draw scatter graphs from given data values.</li> <li>Students will know how to finish a scatter graph that has been partially completed.</li> </ul> <p><b>Opportunity for challenge:</b></p> <ul style="list-style-type: none"> <li>Students will know how to draw a line of best fit.</li> </ul>	<p><b>Scatter Graph</b> – a type of mathematical diagram using coordinates to display values for two variables</p>	<ul style="list-style-type: none"> <li>Students need to know how to plot and read coordinates.</li> </ul>	Mini-Assessment 13
<b>To learn how to interpret scatter graphs.</b>	<ul style="list-style-type: none"> <li>Students will know if the data has positive correlation, negative correlation or no correlation.</li> <li>Students will know how to describe the relationship between the two variables on a scatter graph.</li> </ul> <p><b>Opportunity for challenge:</b></p> <ul style="list-style-type: none"> <li>Students will know how to identify outliers on a scatter graph.</li> </ul>	<p><b>Outlier</b> – a person or thing differing from all other members of a particular group or set</p> <p><b>Correlation</b> – a mutual relationship or connection between two or more things.</p>	<ul style="list-style-type: none"> <li>Students need to know how to plot a scatter graph.</li> </ul>	Mini-Assessment 13