



The Sutton Academy

Knowledge Rich Curriculum Plan

Year 7 Core – 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
To learn how to draw and interpret pictograms.	<ul style="list-style-type: none"> Students will know that a pictogram is a chart that uses pictures to represent data. Students will know that we use pictograms to represent data in a more interesting and engaging way that makes it more memorable. Students will know how to complete a pictogram given numerical values. Students will know how to use the key to find frequency values from a pictogram. Students will know how to interpret the data within a pictogram to answer simple questions. <p>Opportunity for challenge:</p> <ul style="list-style-type: none"> Students will know how to draw a key for a pictogram. 	<p>Pictogram – a chart that uses pictures to represent data</p>	<ul style="list-style-type: none"> Students need to know how to multiply and divide integers. 	Mini-Assessment 13
To learn how to draw stem and leaf diagrams.	<ul style="list-style-type: none"> Students will know that a stem and leaf is a diagram that quickly summarizes data while maintaining the individual data points. Students will know that we use stem and leaf diagrams to group all the data in to categories whilst still showing each individual result. 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'. Students will know that stem and leaf diagrams must be in order to read them properly. Students will know that stem and leaf diagrams require a key so that the data can be interpreted correctly. 	<p>Stem and Leaf Diagram – 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"> Students need to know how to order numbers. Students need to know how to identify the value of a digit within a number 	Mini-Assessment 13
To learn how to interpret stem and leaf diagrams.	<ul style="list-style-type: none"> 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. Students will know how to read values from a stem and leaf diagram. Students will know how to find how many pieces of data are above or below a certain value. Students will know how to use fractions to represent how many pieces of data are above or below certain values. <p>Opportunity for challenge:</p> <ul style="list-style-type: none"> Students will know how to find the averages from a stem and leaf diagram. 		<ul style="list-style-type: none"> Students need to know how to draw a stem and leaf diagram. 	Mini-Assessment 13
To learn how to complete two-way tables.	<ul style="list-style-type: none"> 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. Students will know how to complete a two-way table with given information using a mixture of adding and subtracting. 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. Students will know how to read and interpret values from a two-way table. <p>Opportunity for challenge:</p> <ul style="list-style-type: none"> Students will know how to construct a two-way table based on a worded problem. 		<ul style="list-style-type: none"> Students need to know how to add and subtract numbers using a column. 	Mini-Assessment 13

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To learn how to draw pie charts.	<ul style="list-style-type: none"> Students will know that a pie chart is a circular statistical graphic which is divided in to slices to illustrate numerical proportion. 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. Students will know how to construct pie charts for categorical data and discrete/continuous numerical data. 	<p>Pie Chart – a circular diagram which is divided into slices to illustrate numerical proportion</p> <p>Sector – a pie-shaped part of a circle made of the arc along with its two radii</p>	<ul style="list-style-type: none"> Students need to know how to draw angles using a protractor. 	Mini-Assessment 13
To learn how to interpret simple pie charts	<ul style="list-style-type: none"> Students will know how to interpret simple pie charts using simple fractions and percentages such as a half or 25%. Students will know how to find the mode from a pie chart. Students will know how to find the total frequency from a pie chart. Students will know how to find the frequency represented by each sector. Students will know that a sector is portion of a circle enclosed by two radii and an arc. <p>Opportunity for challenge:</p> <ul style="list-style-type: none"> Students will know how to compare angles with values in a real-life context and use this to calculate the values of other angles or find the angles of other values. 		<ul style="list-style-type: none"> Students need to know how to measure angles Students need to know how to calculate fractions of amounts 	Mini-Assessment 13
To learn how to draw scatter graphs.	<ul style="list-style-type: none"> Students will know how to draw scatter graphs from given data values. Students will know how to finish a scatter graph that has been partially completed. Students will know how to draw a line of best fit. 	<p>Scatter Graph – a type of mathematical diagram using coordinates to display values for two variables</p>	<ul style="list-style-type: none"> Students need to know how to plot and read coordinates. 	Mini-Assessment 13
To learn how to interpret scatter graphs.	<ul style="list-style-type: none"> Students will know if the data has positive correlation, negative correlation or no correlation. Students will know how to describe the relationship between the two variables on a scatter graph. Students will know that an outlier is a data point which falls outside the normal range of data. Students will know how to identify outliers on a scatter graph. <p>Opportunity for challenge:</p> <ul style="list-style-type: none"> Students will know how to use their line of best fit to estimate values from a scatter graph. 	<p>Outlier – a person or thing differing from all other members of a particular group or set</p> <p>Correlation – a mutual relationship or connection between two or more things.</p>	<ul style="list-style-type: none"> Students need to know how to plot a scatter graph. Students will know how to draw a line of best fit. 	Mini-Assessment 13