

Statistics: PROGRESSION MAP FOR FLUENCY, REASONING AND PROBLEM SOLVING

Statistics: Statutory Requirements and Reasoning (from NCETM)

| INTERPRETING, CONSTRUCTING AND PRESENTING DATA | | | | | |
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| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| | interpret and construct simple pictograms, tally charts, block diagrams and simple tables | interpret and present data using bar charts, pictograms and tables | interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs | complete, read and interpret information in tables, including timetables | interpret and construct pie charts and line graphs and use these to solve problems |
| | ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity | | | | |
| | ask and answer questions about totalling and comparing categorical data | | | | |
| | <p>True or false? (Looking at a simple pictogram) "More people travel to work in a car than on a bicycle".</p> <p>Is this true or false? Convince me. Make up your own 'true/false' statement about the pictogram</p> <p>What's the same, what's</p> | <p>True or false? (Looking at a bar chart) "Twice as many people like strawberry than lime".</p> <p>Is this true or false? Convince me. Make up your own 'true/false' statement about the bar chart.</p> <p>What's the same, what's</p> | <p>True or false? (Looking at a graph showing how the class sunflower is growing over time) "Our sunflower grew the fastest in July".</p> <p>Is this true or false? Convince me. Make up your own 'true/false' statement about the graph.</p> <p>What's the same, what's</p> | <p>True or false? (Looking at a train time table) "If I want to get to Exeter by 4 o'clock this afternoon, I will need to get to Taunton station before midday".</p> <p>Is this true or false? Convince me. Make up your own 'true/false' statement about a journey using the timetable.</p> | <p>True or false? (Looking at a pie chart) "More than twice the number of people say their favourite type of T.V. programme is soaps than any other"</p> <p>Is this true or false? Convince me. Make up your own 'true/false' statement about the pie chart.</p> <p>What's the same, what's</p> |

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| | <p>different?</p> <p>Pupils identify similarities and differences between different representations and explain them to each other</p> | <p>different?</p> <p>Pupils identify similarities and differences between different representations and explain them to each other</p> | <p>different?</p> <p>Pupils identify similarities and differences between different representations and explain them to each other</p> | <p>What's the same, what's different?</p> <p>Pupils identify similarities and differences between different representations and explain them to each other</p> | <p>different?</p> <p>Pupils identify similarities and differences between different representations and explain them to each other</p> |
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| SOLVING PROBLEMS | | | | | |
|------------------|---|---|---|---|--|
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| | | <p>solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.</p> | <p>solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</p> | <p>solve comparison, sum and difference problems using information presented in a line graph</p> | <p>calculate and interpret the mean as an average</p> |
| | <p>Create a questions Pupils ask (and answer) questions about different statistical representations using key vocabulary relevant to the objectives.</p> | <p>Create a questions Pupils ask (and answer) questions about different statistical representations using key vocabulary relevant to the objectives. (see above)</p> | <p>Create a questions Pupils ask (and answer) questions about different statistical representations using key vocabulary relevant to the objectives. (see above)</p> | <p>Create a questions Pupils ask (and answer) questions about different statistical representations using key vocabulary relevant to the objectives. (see above)</p> | <p>Create a questions Make up a set of five numbers with a mean of 2.7 Missing information The mean score in six test papers in a spelling test of 20 questions is 15. Five of the scores were 13 12 17 18 16 What was the missing score?</p> |

Statistics: Key Performance Indicators

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--------|--|--|--|--|--|
| | Interpret and construct simple tables, tally charts and pictograms | Interpret and present data using bar charts, pictograms and tables | Interpret and present discrete and continuous data on appropriate graphs | Complete, read and interpret information in tables, including timetables | Construct and interpret pie charts Calculate the mean as an average |

Statistics: Cross-curricular links

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--------|---|--|---|--|---|
| | Science - drawing block graphs to measure growth of cress Tallys | Investigate how children travel to school Represent physical and man-made features in a diagram (Geography) Measuring personal performance and recording data (P.E.) | Science - Presentation and Interpretation of Data in Sound and Light topics Geography - bar charts following on from field work (local area study) | Science - Earth and Space - Interpreting information in tables involving negative numbers and numbers to 3 decimal places. | Science- to look at a variety of graphs- line graphs/pie charts. To interpret data given and draw conclusions |

Statistics: Vocabulary

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---------------|---|--|--|---|--|
| Vote table | Count Tally Sort Vote Graph Block-graph Pictogram Represent Group Set List Table Label Title | Chart Bar chart Frequency table Carroll diagram Venn diagram Axis axes diagram | Survey questionnaire date graph pictogram bar chart frequency table Carroll diagram Venn diagram label title axis | Survey Questionnaire Data Database Graph Block graph Pictogram List Table Chart Bar chart Frequency table Bar line chart Carroll diagram Venn diagram Line graph Label Title Axis Axes Maximum/minimum value outcome | Carroll diagram Venn diagram pie chart mean mode median range of estimates statistics distribution |