National Curriculum Maths Unit 4

Level 1 Unit 4 - Maths (Handling data)

1. The learner will work with a variety of objects making simple classifications.

1.1 I can sort objects into a group [1]

1.2 I can identify the reason for putting an object into a particular group [2]

Level 2 Unit 4 - Maths (Handling data)

1. The learner will classify objects on two or more criteria, gather data and record information in lists, tables and block graphs.

1.1 I can sort objects into different groups based on particular reasons [4]

1.2 I can identify the information I need [5]

1.3 I can record my results in simple lists [6]

1.4 I can put my results into a table [7]

1.5 I can build a block graph from my results [8]

Level 3 Unit 4 - Maths (Handling data)

1. The learner will use inormation provided in tables and lists explaining its meaning and constructing a range of charts to present it graphically.

1.1 I can extract and interpret information presented in simple tables and lists [10]

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1.2 I can construct bar charts and pictograms, where the symbol represents a group of units [11]

1.3 I can communicate information I have gathered in a range of ways [12]

1.4 I can interpret information presented to me in lists, tables and charts [13]

Level 4 Unit 4 - Maths (Handling data)

1. The learner will collect data and construct frequency tables describing features of data sets using mathematical vocabulary. They will construct and interpret simple line graphs.

1.1 I can collect discrete data and record them using a frequency table [15]

1.2 I can describe sets of data using mode and range [16]

1.3 I can group data in equal class intervals [17]

1.4 I can represent collected data in frequency diagrams [18]

1.5 I can interpret frequency diagrams [19]

1.6 I can construct simple line graphs [20]

1.7 I can interpret simple line graphs [21]

Level 5 Unit 4 - Maths (Handling data)

1. The learner will understand and use mathematical terms associated with data, interpreting graphs and drawing conclusions. They will understand probability carrying out simple experiments

1.1 I can use the mean of discrete data [23]

1.2 I can compare two simple distributions using the range and one of the mode, median or mean [24]

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1.3 I can interpret graphs and diagrams, including pie charts, and draw conclusions [25]

1.4 I can explain and use the probability scale from 0 to 1 [26]

1.5 I can identify and justify probabilities and approximations to these [27]

1.6 I can select and use methods based on equally likely outcomes and experimental evidence [28]

1.7 I can explain how different outcomes may result from repeating an experiment [29]

Level 6 Unit 4 - Maths (Handling data)

1. The learner will construct and interpret frequency diagrams and pie charts using appropriate mathematical terms. They will draw conclusions from scatter diagrams and demonstrate a basic understanding of correlation. They will solve practical probability problems with an understanding of the total probability of all mutually exclusive events.

1.1 I can collect and record continuous data [31]

1.2 I can create frequency tables choosing appropriate equal class intervals over a sensible range [32]

1.3 I can construct and interpret frequency diagrams [33]

1.4 I can construct pie charts [34]

1.5 I can draw conclusions from scatter diagrams [35]

1.6 I can explain the meaning of correlation [36]

1.7 I can identify all the outcomes when dealing with a combination of two experiments [37]

1.8 I can recall that the total of all the mutually exclusive outcomes of an experiment is 1 [38]

Level 7 Unit 4 - Maths (Handling data)

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1. The learner will carry out experiments to test hypotheses using mathematical methods and terminology to report and evaluate their findings.

1.1 I can specify a hypothesis and test it [40]

1.2 I can design and use appropriate methods that take account of variability or bias [41]

1.3 I can determine the modal class appropriate for my enquiry [42]

1.4 I can estimate the mean, median and range of sets of grouped data [43]

1.5 I can select the statistic most appropriate to my line of enquiry [44]

1.6 I can use measures of average and range, with associated frequency polygons [45]

1.7 I can compare distributions and make inferences [46]

1.8 I can explain relative frequency as an estimate of probability and use this to compare outcomes of experiments [47]

Level 8 Unit 4 - Maths (Handling data)

1. The learner will compare distributions using a range of mathematical methods

1.1 I can construct and interpret cumulative frequency tables and diagrams [49]

1.2 I can estimate the median and interquartiles [50]

1.3 I can use median and interquartile range to compare distributions and make inferences [51]

1.4 I can explain how to calculate the probability of a compound event and use this in solving problems [52]

Level 9 Exceptional Performance Unit 4 - Maths (Handling data)

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1. The learner will increase the range of graphical presentations that they can construct and interpret, understanding the relationship between sample size and reliability, quantifying probabilities in practical situations.

1.1 I can interpret and construct histograms [54]

1.2 I can explain how different methods of sampling and different sample sizes may affect the reliability of conclusions drawn [55]

1.3 I can select and justify a sample and method to investigate a population [56]

1.4 I can explain how probabilities associated with independent, mutually exclusive events are used to solve practical problems in a range of cases [57]

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