

Ashwell Primary School
Computing Curriculum
Data Handling Progression - Knowledge & Skills Organiser



Year 1 – Data Handling

Core Knowledge / skills to be acquired: (Unit 1.2 – Grouping & Sorting)

- To sort items using a range of criteria.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.

Key Vocabulary:

- Sort** - Put things together by features they have in common.
Criteria - A way in which something is judged.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- In what ways can we sort objects?

Prior knowledge / skills this builds on: (EYFS Framework)

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

What comes next: (Unit 1.3 – Pictograms)

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.

Year 1 – Data Handling

Core Knowledge / skills to be acquired: (Unit 1.3 – Pictograms)

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.

Key Vocabulary:

- Pictogram** - A diagram that uses pictures to represent data.
Data - Facts and statistics collected together that can provide information.
Collate - Collect and combine (texts, information, or data).

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- In what ways can we sort objects?

Prior knowledge / skills this builds on: (Unit 1.2 – Grouping & Sorting)

- To sort items using a range of criteria.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.

What comes next: (Unit 2.4 – Questioning)

- To learn about data handling tools that can give more information than pictograms.
- To use yes/no questions to separate information.
- To construct a binary tree to identify items.
- To use 2Question (a binary tree database) to answer questions.
- To use a database to answer more complex search questions.
- To use the Search tool to find information.

Year 2 – Data Handling

Core Knowledge / skills to be acquired: (Unit 2.4 – Questioning)

- To learn about data handling tools that can give more information than pictograms.
- To use yes/no questions to separate information.
- To construct a binary tree to identify items.
- To use 2Question (a binary tree database) to answer questions.
- To use a database to answer more complex search questions.
- To use the Search tool to find information.

Key Vocabulary:

- Pictogram** - A diagram that uses pictures to represent data.
Data - Facts and statistics collected together that can provide information.
Collate - Collect and combine (texts, information, or data).
Question - A sentence written or spoken to find information.
Binary Tree - A simple way of sorting information into two categories.
Avatar - An icon or figure representing a person in a video game, Internet forum or other online format.
Database - A computerised system that makes it easy to search, select and store information.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- How does a Pictogram show information?
- How is information organised in a binary tree?
- How can a database help organise information?

Prior knowledge / skills this builds on: (Unit 1.3 – Pictograms)

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.

What comes next: (Unit 3.6 – Branching Databases)

- To sort objects using just 'yes' or 'no' questions.
- To complete a branching database using 2Question.
- To create a branching database of the children's choice.

Year 3 – Data Handling

Core Knowledge / skills to be acquired: (Unit 3.6 – Branching Databases)

- To sort objects using just ‘yes’ or ‘no’ questions.
- To complete a branching database using 2Question.
- To create a branching database of the children’s choice.

Key Vocabulary:

Branching database - Used to classify groups of objects. It is used to help identify the objects by answering questions with either ‘yes’ or ‘no’. Branching databases can also be called binary trees.

Database - A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.

Question - Something that is asked or written to try and gain information.

Data - Facts and statistics collected together for information.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- What is meant by data? What is a database? What is a branching database?

Prior knowledge / skills this builds on: (Unit 2.4 – Questioning)

- To learn about data handling tools that can give more information than pictograms.
- To use yes/no questions to separate information.
- To construct a binary tree to identify items.
- To use 2Question (a binary tree database) to answer questions.
- To use a database to answer more complex search questions.
- To use the Search tool to find information.

What comes next: (Unit 3.8 – Graphing)

- To enter data into a graph and answer questions.
- To solve an investigation and present the results in graphic form.

Year 3 – Data Handling (continued)

Core Knowledge / skills to be acquired: (Unit 3.8 – Graphing)

- To enter data into a graph and answer questions.
- To solve an investigation and present the results in graphic form.

Key Vocabulary:

Graph - A diagram showing the value of objects.

Field - A part of a record.

Data - Facts and statistics collected together for reference

Bar chart - A graph in which the numerical amounts are shown by the height or length of lines or rectangles of equal width.

Block graph - A graph where a block represents one item.

Line graph - A graph where a line is used to show an amount.

Pie chart - A type of graph in which a circle is divided into sections that each represent a part of the whole.

Row - A horizontal line of entries in a table or graph.

Column - A vertical line of entries in a table or graph.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- What is a graph? What are the frame lines on the graph called? What different kinds of graphs are there?

Prior knowledge / skills this builds on: (Unit 3.6 – Branching Databases)

- To sort objects using just ‘yes’ or ‘no’ questions.
- To complete a branching database using 2Question.
- To create a branching database of the children’s choice.

What comes next: (Unit 5.4 – Databases)

- To learn how to search for information in a database.
- To contribute to a class database.
- To create a database around a chosen topic.

Year 5 – Data Handling

Core Knowledge / skills to be acquired: (Unit 5.4 – Databases)

- To learn how to search for information in a database.
- To contribute to a class database.
- To create a database around a chosen topic.

Key Vocabulary:

Binary tree (branching database) - A way to sort information by dividing the information into groups based upon questions with yes or no answers.
Charts - Representing information in a pictorial form.
Collaborative - Produced by, or involving, two or more parties working together.
Data - Facts and statistics collected together for information.
Database - A set of data that can be held in a computer in a format that can be searched and sorted for information.
Find - Search for information in a database.
Record - A collection of data about one item entered into a database.
Sort, Group and Arrange - Different ways to sort information in a database to it is easy to read, understand and interpret.
Statistics and reports - To produce information about data in a database.
Table - Sorting information into rows and columns.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- What is a database?
- Why is the collaborative feature important?
- In what ways can I sort information in a database?

Prior knowledge / skills this builds on: (Unit 3.8 – Graphing)

- To enter data into a graph and answer questions.
- To solve an investigation and present the results in graphic form.

What comes next: (Unit 6.7 – Quizzing)

- To create a picture-based quiz for young children.
- To learn how to use the question types within 2Quiz.
- To explore the grammar quizzes.
- To make a quiz that requires the player to search a database. • To make a quiz to test your teachers or parents.

Year 6 – Data Handling

Core Knowledge / skills to be acquired: (Unit 6.7 – Quizzing)

- To create a picture-based quiz for young children.
- To learn how to use the question types within 2Quiz.
- To explore the grammar quizzes.
- To make a quiz that requires the player to search a database. • To make a quiz to test your teachers or parents.

Key Vocabulary:

Audience - the people giving attention to something.

Collaboration - the action of working with someone to produce something.

Concept map - a tool for organising and representing knowledge. They form a web of ideas which are all interconnected.

Database - a structured set of data held in a computer, especially one that is accessible in various ways.

Quiz - a test of knowledge, especially as a competition between individuals or teams as a form of entertainment.

Curriculum Enrichment / Cultural Capital Opportunities / key questions

- What factors do you need to consider when creating a quiz?
- Name three question types in 2Quiz.
- Apart from the questions, what else does a quiz need to contain?

Prior knowledge / skills this builds on: (Unit 5.4 – Databases)

- To learn how to search for information in a database.
- To contribute to a class database.
- To create a database around a chosen topic.