



Purple Mash Computing Scheme

Questioning

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Overview

In this unit, children will explore how to ask questions to collect useful information. They will learn to organise data using tally charts, pictograms, and simple branching databases to help sort and identify objects.

Key Learning

- To understand how data can be used to help answer a question.
- To ask an appropriate question, gather data using a tally chart and present it using digital tools.
- To begin to explore how yes or no questions can be used to sort data.
- To understand how branching databases work and practise navigating them to find answers.

Knowledge Organiser and Learning Mat

These resources can be used to support learning across the unit.

- [Knowledge Organiser](#)
- [Learning Mat](#)

Concept Map and Quiz

Use these resources to gauge children's understanding before or after the unit has been taught.

- [Concept Map](#)
- [Quiz](#)

Lesson 1: Collecting and Representing Data

Aim

- To understand how data can be used to help answer a question.

Success Criteria

- I understand what data is and the way it can be stored and presented.
- I can explain how questions are asked to gather data.
- I can contribute towards a set of data to help answer a question.

Preparation

- (Optional Extension) Set **Types of Home Pictogram** as a 2Do.

Please find all lesson resources and additional teaching notes below.

Resources

- [Slideshow - Lesson 1](#)
- [Types of Homes Pictogram](#)

Teaching Notes

This lesson does not require children to use devices. Please bear this in mind before delivering this lesson, as most of the computing can be completed 'offline', excluding the extension.

Some teachers may find the '**annotate**' tool on the interactive slideshow particularly useful when gathering responses for the tally chart on Slide 16.

Lesson 2: Creating Questions and Presenting Data

Aim

- To ask an appropriate question, gather data using a tally chart and present it using digital tools.

Success Criteria

- I can create a clear question to collect data.
- I can independently record responses in a tally chart.
- I can present my data digitally.

Preparation

- Set **2Count** as a 2Do.
- Print enough copies of the **Data Recording Sheet** for the class.
- (Optional Extension) Set **2Graph** as a 2Do.

Please find all lesson resources and additional teaching notes below.

Resources

- [Slideshow - Lesson 2](#)
- [2Count](#)
- [Data Recording Sheet](#)
- [2Graph](#)

Teaching Notes

Teachers may find it useful to display Slide 13 on the interactive whiteboard whilst the children complete their tasks.

Lesson 3: Yes or No Questions

Aim

- To begin to explore how yes or no questions can be used to sort data.

Success Criteria

- I understand that 'Yes' or 'No' questions are closed questions that have one answer.
- I can use 'Yes' or 'No' questions to help me narrow down a choice.
- I understand that 'Yes' or 'No' questions can be used to help sort items into two groups.

Preparation

- Print enough of the **Animal Sorting Cards** for the class. This activity can be completed individually or with a partner.
- Print enough of the **Sorting Animals Activity** for the class.
- (Optional Extension) Print enough of the **Avatar Guess Who** activity for children who may reach the extension.

Please find all lesson resources and additional teaching notes below.

Resources

- [Slideshow - Lesson 3](#)
- [Animal Sorting Cards](#)
- [Sorting Animals Activity](#)
- [Avatar Guess Who](#)

Teaching Notes

This lesson does **not** require children to use devices. Please bear this in mind before delivering this lesson, as most of the computing will be completed 'offline'.

Some teachers may wish to take photographs of the different ways that children have sorted the Animal Sorting Cards to capture evidence of their reasoning and group discussion.

Lesson 4: Exploring Branching Databases

Aim

- To understand how branching databases work and practise navigating them to find answers.

Success Criteria

- I can explain how a branching database uses yes or no style questions in a step-by-step order.
- I can follow yes or no questions in a branching database to identify an object.
- I can use 2Question to navigate a digital branching database.

Preparation

- Set **More Aliens! - 2Question** as a 2Do.
- Print enough **More Aliens - Questions** sheets for the class.
- Print a copy of the **More Aliens - Answers** sheet for the teacher (if necessary).

Please find all lesson resources and additional teaching notes below.

Resources

- [Slideshow - Lesson 4](#)
- [More Aliens! - 2Question](#)
- [More Aliens - Questions](#)
- [More Aliens - Answers](#)

Teaching Notes

During the activity, children will access the branching database in 'Play Mode' which means that they won't be able to see or view the whole 'tree' at any given time.

Once the activity has been completed by all children, teachers may wish to show the content on Slide 13, which shows the full **More Aliens** branching database in full. This may help to further consolidate knowledge of branches and 'yes' or 'no' routes being followed.

Assessment

The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Emerging

- Children can collect simple data with support and begin to use tally charts or pictograms with guidance. They can answer yes/no questions and are starting to understand that grouping information can help with sorting. They need support when using or following a branching database.

Expected

- Children can collect and record data using a tally chart and pictogram in 2Count. They can ask clear yes/no questions to help sort items and follow a branching database to identify an object. They understand that data helps to answer questions and make decisions.

Exceeding

- Children can independently collect and present data using digital tools and suggest relevant yes/no questions for effective sorting. They can confidently navigate and interpret branching databases and might have even began to create their own. They can explain how question types affect how clearly data is organised.