

**Pioneer Federation**  
**Medium term plan**  
**Cycle B, Term 5**  
**ICT**



**Subject:** Purple Mash unit 2.3 Spreadsheets

**Key Concept/ Theme:** • To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine. • To learn how to copy and paste in 2Calculate. • To use the totalling tools. • To use a spreadsheet for money calculations. • To use the 2Calculate equals tool to check calculations. • To use 2Calculate to collect data and produce a graph.

**Prior Learning links:** EYFS: Children have been exposed to the layout of purple mash and have had experience of using a variety of technology including interactive whiteboards, ipads and using a keyboard.

**Cycle A**

Unit 1.8 Spreadsheets • Introduce 2Calculate • Spreadsheet navigation • Adding images • Vocab: cell, column, row

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**Key Vocabulary**

**Block Graph**

This is a type of graph that displays data with blocks. These can be made using cells, colours and labels in 2Calculate.

**Copy**

This feature copies the contents of highlighted cells without deleting the contents of them into a clipboard.

**Drag**

Contents of a cell can be dragged to another cell using the drag tool in 2Calculate.

**Label**

A way to identify data in a spreadsheet. For example a label heading for ice cream flavours children like.

**Table**

Tables can be created in 2Calculate, these have headings and are a neat way to display data.

**Cell**

An individual section of a spreadsheet grid. It contains data or calculations.

**Count tool**

In 2Calculate, this counts the number of cells with a value of the cell to the left of the tool.

**Equals**

This symbol can be used in 2Calculate to find the answer to a calculation.

**Row**

Boxes running horizontally in a spreadsheet.

**Total**

In 2Calculate the total tool will calculate the total of all cells above, below or next to it dependent on which total tool used.

**Column**

Boxes running vertically in a spreadsheet.

**Data**

A collection of information, used to help answer questions.

**Equals tool**

Tests whether the entered calculation in the cells to the left of the tool has the correct answer in the cell to the right of the tool.

**Speak tool**

This tool will speak the contents of a cell containing a number each time the value changes.

**Vocabulary:**

**Pioneer Federation**  
**Medium term plan**  
**Cycle B, Term 5**  
**ICT**

Key Images



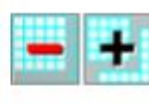
Open, close or share a file



Save your work



Open a previously saved file



Increase or decrease spreadsheet size



The 2Calculate toolbox



The 2Calculate control toolbox



Move cell tool



Lock cell tool



Speak tool



Count tool



Equals



2Calculate totalling toolbox



Totalling



Copying

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**Cycle B, Term 5**  
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**Resources needed for each lesson – 2dos to set.**

Lesson 1:

- Counting machine spreadsheet - The children made these in year 1; this is to remind them what they have done before in 2Calculate.
- Example – Pencils Counting Machine
- You can select the following objectives when setting the 2Do to make future assessment easier:

**Edit Objectives** ✕

Year:	Y2	▼
Subject:	Computing	▼
Strand:	IT	▼

Use technology purposefully to create, organise, store, manipulate and retrieve digital content. ✔

Lesson 2

Magic Squares Example File.

- Completed Magic Squares (Solutions).
- You can select the following objectives when setting the 2Do to make future assessment easier:

**Edit Objectives** ✕

Year:	Y2	▼
Subject:	Computing	▼
Strand:	IT	▼

Use technology purposefully to create, organise, store, manipulate and retrieve digital content. ✔

Lesson 3

**Pioneer Federation**  
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**Cycle B, Term 5**  
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Examples of coins. It would be useful if the children are familiar with how pence and pounds are written e.g., 17p is the same as £0.17 as the spreadsheet will automatically display as £s.

- Shop 1- Example Spreadsheet
- Shop 2 – Example Spreadsheet
- You can select the following objectives when setting the 2Do to make future assessment easier:

**Edit Objectives** ×

Year:	Y2	▼
Subject:	Computing	▼
Strand:	IT	▼

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

**Lesson 4**

- Example File: Ice Cream Choice
- Challenge 1 (School / TV).
- Challenge 2 (School/TV).
- You can select the following objectives when setting the 2Do to make future assessment easier:

**Edit Objectives** ×

Year:	Y2	▼
Subject:	Computing	▼
Strand:	IT	▼

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

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**Cycle B, Term 5**  
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<p>1.</p> <p>Unit 2.6</p> <p>Lesson 1</p>	<p><b>Deeper learning question:</b> How can you tell if it is working properly</p> <p><b>Reconnection:</b> recap previous spreadsheet learning</p> <p><b>LO:</b> To review the work done in 2Calculate in year 1. To revise spreadsheet related vocabulary. To use some 2Calculate tools that were introduced in year 1</p> <p><b>Activity:</b> Go over new key vocab for lesson.</p> <p>Go over vocab and success criteria. Activity 1 – Recap on colouring cells Recap adding images, making draggable and setting values. Children to have a go. ecap how counting machines work. The next slide contains some things for children to try. Launch example of ‘Pencils Counting Machine.’ Children create their own counting machine of choice, they might want to adapt the example (<b>Launcher top right of slide</b>).</p> <p><b>Go over vocab and success criteria</b></p> <p><b>Extension: Extend children by getting them to add four groups to sort various numbers. Children could add to existing spreadsheet.</b></p>
<p>2.</p> <p>Unit 2.6</p> <p>Lesson 2</p>	<p><b>Deeper learning question:</b> Do you think a spreadsheet can help us make magic squares and check if our numbers add up correctly?</p> <p><b>Reconnection:</b> recap previous vocab from last lesson.</p> <p><b>LO:</b> To use copying, cutting and pasting shortcuts in 2Calculate. To use 2Calculate totalling tools. To use 2Calculate to solve a simple puzzle.</p> <p><b>Activity:</b> Go over new key vocab for lesson.</p>

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	<p>Launch 2 Calculate blank file and remind how we do this (Launcher top right of slide. Use the slide to explain what a magic square is. Children identify what a magic square is and if spreadsheets can help them test numbers add up correctly.</p> <p>Explain to children they need to create the pattern they see on the slide and how to make numbers in cells moveable.</p> <p>Explain we need a gap of 3 columns to provide space to perform calculations on rows and columns. Children move numbers to provide space by using cut and copy.</p> <p><b>Note: if using an iPad, copy X and Paste V cannot be used. The content of each cell can be moved individually by tapping and dragging one cell at a time.</b></p> <p>Model using the totalling tool to add up the numbers in rows and columns. Children have a go at adding totalling tool next to each row and column (<b>Launch example file top right of slide</b>).</p> <p>Model making a larger square. Children to use copy and paste to make larger squares.</p> <p><b>*Note: for iPads, the content of each cell can be moved individually by tapping and dragging one cell at a time.</b></p> <p><b>Go over vocab and success criteria</b></p> <p><b>Extension: Extend the children. Children to create a repeated addition machine by using a total at the end of 5 or so columns. In each column before the total, they test typing a 5 in and watch what the total does.</b></p>
<p>3.</p> <p>Unit 2.6</p> <p>Lesson 3</p>	<p><b>Deeper learning question: Can you use the exact coins needed?</b></p> <p><b>Reconnection:</b> Go over vocab and techniques learnt.</p> <p><b>LO:</b> To explore the capabilities of a spreadsheet in adding up coins to match the prices of objects.</p> <p><b>Activity:</b> Go over new vocab for the lesson.</p> <p>Launch 2 Calculate from top right of slide. Use the slide to support children in adding food images to their own spreadsheet and adding simple prices. <b>*Specify price format re knowledge of decimals.</b></p> <p>Children colour multiple cells and the same food images to make a shop front.</p> <p>Demonstrate using coins with values to check which coins are needed to pay for an item (<b>Launch shop 1 example spreadsheet top right of the slide</b>).</p> <p><b>*Be aware of decimal understanding when representing monetary value.</b></p> <p>Children test coins that make given amounts for items of food. Deepen understanding of tools by using the 'equals tool' (<b>Launch Shop 2 example spreadsheet top right of the slide</b>).</p> <p>Go over vocab and success criteria.</p>

**Pioneer Federation**  
**Medium term plan**  
**Cycle B, Term 5**  
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	<p><b>Extension</b> Share extension. Children to explore the fewest (least) amount of coins needed to make amounts up to 30p using 2Calculate.</p>
<p>Unit 2.6  Lesson 4</p>	<p><b>Deeper learning question: When would a block graph be useful?</b></p> <p><b>Reconnection:</b> Recap vocab from previous lesson.</p> <p><b>LO: To add and edit data in a table layout.</b></p> <p><b>To use the data to manually create a block graph</b></p> <p><b>Activity:</b> Go over new vocab for the lesson.</p> <p>Explain today’s task ‘collecting data to create a table and block graph’ and share the Key Vocabulary and definitions.</p> <p>Demonstrate creating a title (<b>Launch 2Calculate blank file top right of slide</b>).</p> <p><b>*Select either desktop of iPad icon to go to the relevant next slides.</b></p> <p><b>Use slide 7 (slide 9 iPads)</b> to support children in creating labelled columns and entering data (<b>Launch ice cream choice example file top right of slide</b>).</p> <p>Use <b>slide 8 (slide 10 iPads)</b> to show children how to add images and manipulate them in order to show different flavours. Then children to add labels and colour code cells to match flavours.</p> <p><b>Use slide 7 (slide 9 iPads)</b> to support children in creating labelled columns and entering data.</p> <p>Use <b>slide 8 (slide 10 iPads)</b> Demonstrate using the move tool to drag names to make a graph due to screen size limitations.</p> <p>Go over vocab and success criteria.</p> <p><b>Extension: Explain to children that they are to attempt to collect data using the two tables given and convert into block graph (Launch the example files for challenge 1 and 2 on the slide).</b></p>
	<p><b>End of unit quiz &amp; reflect on gaps from the unit:</b></p> <p>Unit 2.6 Quiz – found on unit page on PM</p> <p>Questions:</p> <p>Label the sections in 2calculate</p> <p>Which of these icons would you click on to add more cells to a spreadsheet?</p>



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Look at this spreadsheet. What is it designed to do?

What name is given to an individual section of a spreadsheet where data or images can be added?

Which of these icons would you use to total together a row of numbers?

Match the action to the icon.

What would happen if you clicked in a cell and then held down the control (CTRL) key, then pressed the C key?

In the spreadsheet shown below, what does the tool shown in the grey cell do?

What does this image show?

Look at this spreadsheet showing how children travelled to school. How has the graph been made?

Vocab from unit check.

**End Points:**

Why would you copy and paste when using a spreadsheet? You might want to rearrange the information in the spreadsheet. It will save you entering the same information many times if you want to repeat things in different cells.

How could a spreadsheet help you when you are planning some shopping? You could use it to store the process and work out how much it would cost to buy the things that you wanted.

Look at the graph made in 2Calculate showing the class' favourite pets. Which is the most popular?

**Evaluation:** What have the end of unit quizzes, pupil self-reflections and termly work told you about what the children can remember and recall? What are the gaps? Ensure that the areas that need further reinforcement are documented in the next subject unit MTP. **Plan in time to revisit gaps within units, determined by the quizzes.**

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