PURPLE MASH COMPUTING SCHEME OF WORK - KNOWLEDGE ORGANISER
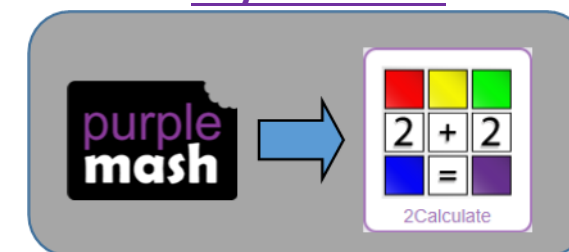
Unit: 6.3 – Spreadsheets

Key Learning

To use a spreadsheet to investigate the probability of the results of throwing many dice.

Using the formula wizard to add a formula to a cell to automatically make a calculation in that cell.

To create graphs showing the data collected.

To type in a formula for a cell to automatically make a calculation in that cell.

Using a spreadsheet to create computational models and answer questions.

Key Resources

Key Vocabulary

Average – Symbols used to represent comparing two values

Advance mode – A mode of 2Calculate in which the cells have references and can include formulae.

Copy and Paste – A way to copy information from the screen into the computer's memory and paste it elsewhere without re-typing.

Columns – Vertical reference points for the cells in a spreadsheet.

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

Charts – Use this button to create a variety of graph types for the data in the spreadsheet.

Count (how many) tool – Counts the number of whatever value object is in the cell to its immediate left and puts the answer in the cell to its immediate right.

Dice – When clicked, this will simulate a dice roll by switching to one of the faces of a die.

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.

Formula – Use the formula wizard or type into the formula bar to create a formula in a cell, this will calculate the value for the cells based upon the value of other cells in the spreadsheet.

Formula Wizard – The wizard guides you in creating a variety of formulae for a cell such as calculations, totals, averages, minimum and maximum for the selected cells.

Move cell tool – This tool makes a cell's contents moveable by drag-and-drop methods.

Random tool – Click to give a random value between 0 and 9 to the cell.

Rows - Vertical reference points for the cells in a spreadsheet.

Spin Tool – Adds or subtracts 1 from the value of the cell to its right.

Spreadsheet - A computer program that represents information in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells.

Timer – When placed in the spreadsheet, click the timer to adds 1 to the value of the cell to its right every second until it is clicked again.

Key Images

Open the main menu

Save your work

Open a previously saved file

Increase or decrease spreadsheet size

Advanced mode

Formula wizard

Format cell toolbox

Charts

Totals toolbox

Image Tools

Controls Toolbox

Move   Dice

Equals   Count

To copy   Ctrl C   To cut   Ctrl X   To paste   Ctrl V

Key Questions

How would you add a formula so that the cell shows the total of a column of cells?

Use the formula wizard advanced total tool or type a formula into the cell by using the '=' symbol, mathematical operators and cell references.

What is a computational model and what it can be used for?

Modelling in Computing means creating or using a simulation (a model) of a real-life situation, on a computer. It represents the data of a situation. For example; budgeting for a party; working out how big a field needs to be for a certain number of animals; working out the best price for an item or using the existing data to predict what time your shadow will be a certain length.

If you were going to use a spreadsheet to plan your dream holiday. What data would you collect to cost the trip?

Ideas could include:

Include travel; comparing the cost of different methods, airports, airlines, different companies and discounts such as rail cards.

Cost of accommodation of different types, trips out, food, passports, immunisations.