

Knowledge Organiser Computing Spreadsheets and Coding Year 1/2

What I have already learnt ELG's

- I show resilience and perseverance in the face of a challenge.
- I can talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.
- I have developed my small motor skills so that I can use a range of tools competently, safely and confidently.
- I have used IT equipment to explore, use and refine a variety of artistic effects to express their ideas and feelings.
- I have tried new activities and show independence, resilience and perseverance in the face of challenge.
- I have learnt the reasons for rules, know right from wrong and try to behave accordingly.
- I know how to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function

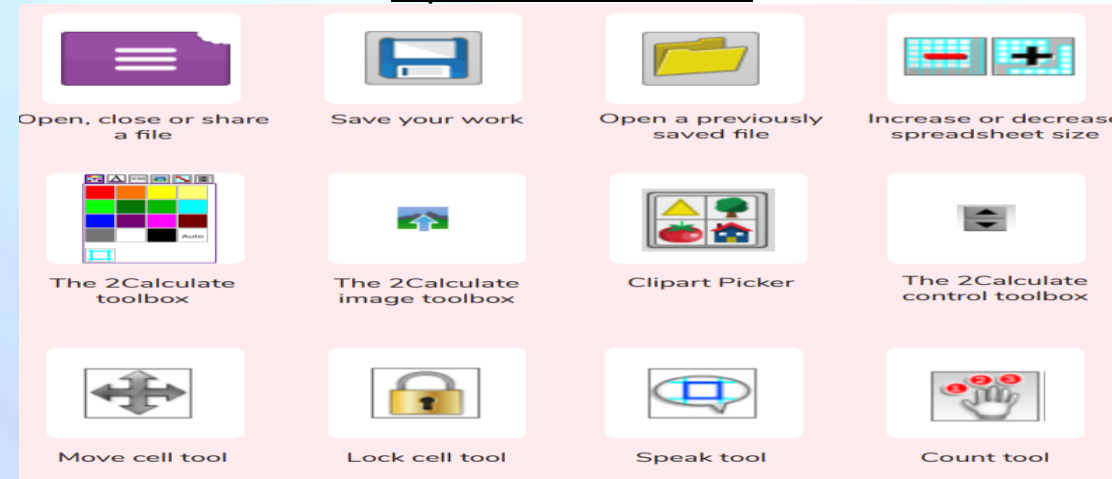
Recall and Remember

Quiz Unit 1.7 Coding
[Purple Mash by 2Simple](#)
 Quiz Unit 1.8 Spreadsheets
[Purple Mash by 2Simple](#)
 Quiz Unit 2.1 Coding
[Purple Mash by 2Simple](#)

What I will have learnt by the end of my Key Stage

- I will know how what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- I will know how to create and debug simple programs
- I will know how to use technology purposefully to create, organise, store, manipulate and retrieve digital content
- I will know common uses of information technology beyond school
- I will know how to use technology safely and respectfully, keeping personal information private; identify where to go for help and support when I have concerns about content or contact on the internet or other online technologies

Key skills I will learn/use



Key Concepts/Strands

- Computing Science
- Information Technology
- Digital Literacy

My skills and knowledge that I may use from other subjects

Literacy- I can use my literacy skills to read and input data
Mathematics- I can use my mathematical skills to read and interpret diagrams and graphs

Opportunities for teaching Diversity, Equality (including protected characteristics) and expanding Cultural Capital

Show children examples of contrasting countries and cultures that do not have the same opportunities as we have

- [Educational video: The Third World for kids | Happy Learning](#)
- [Technology of the Future | Safe Search \(safesearchkids.com\)](#)

Key Knowledge

- To understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- To create and debug simple programs
- To use logical reasoning to predict the behaviour of simple programs
- To use technology purposefully to create, organise, store, manipulate and retrieve digital content
- To recognise common uses of information technology beyond school
- To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

What I will have learnt by the end of this unit

Unit 1.8 Spreadsheets

To know what a spreadsheet program looks like.

- To locate 2Calculate in Purple Mash.
- To enter data into spreadsheet cells.
- To use 2Calculate image tools to add clipart to cells.
- To use 2Calculate control tools: lock, move cell, speak and count.

Unit 1.7 Coding

To understand what instructions are and predict what might happen when they are followed.

- To use code to make a computer program.
- To understand what object and actions are.
- To understand what an event is.
- To use an event to control an object.
- To begin to understand how code executes when a program is run.
- To understand what backgrounds and objects are.
- To plan and make a computer program.

Unit 2.1 Coding

- To understand what an algorithm is.
- To create a computer program using an algorithm.
- To create a program using a given design.
- To understand the collision detection event.
- To understand that algorithms follow a sequence.
- To design an algorithm that follows a timed sequence.
- To understand that different objects have different properties.
- To understand what different events, do in code.
- To understand the function of buttons in a program.
- To understand and debug simple programs.

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Key Vocabulary Unit 2.1 Coding

Object

An element in a computer program that can be changed using actions or properties.

Predict

Say what you think will happen when a piece of code is run.

Properties

All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.

Run

To cause the instruction in a program to be carried out.

Scale

The size of an object in 2Code.

Scene

A visual aspect of a program.

Sequence

When a computer program runs commands in order.

Sound

This is a type of output command that makes a noise.

Test

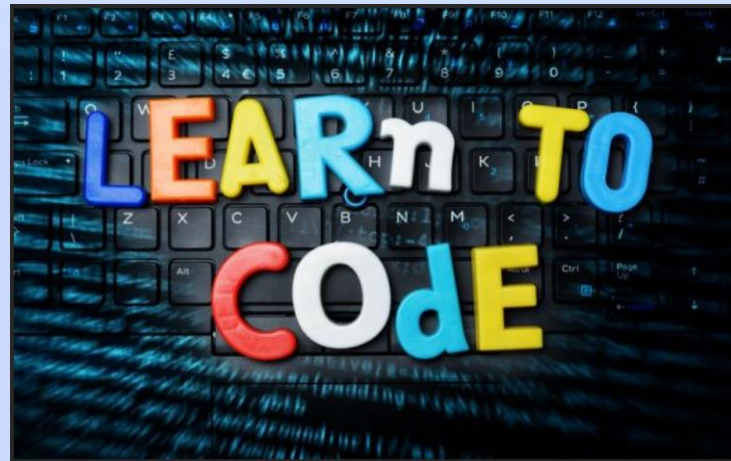
When code is run to check that it works correctly.

Text

Typed letters on the screen.

Timer

Use this command to run a block of commands after a timed delay or at regular intervals.



Key Vocabulary Unit 1.7 Coding

Instruction

Detailed information about how something should be done or operated.

Object

Items in a program that can be given instructions to move or change in some way (action).

Output

Information that comes out of the computer e.g. sound that comes out of the speakers.

Plan

When coding, a plan means including the objects and actions into a written document that shows what the program should look like (the design) and what the objects should do (the actions).

Programmer

A person who writes computer programs. Sometimes called a coder.

Properties

These determine the look and size of an object. Each object has properties such as the image, scale and position of the object. Run This is what you do when you click the Play button in 2Code: The program runs



Key Vocabulary Unit 1.8 Spreadsheets

Button

An object you click that performs an action. E.g. print.

Key Vocabulary Cell

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

Calculations

Maths calculations can be entered into a cell. For example the total of two cells can be added together using a calculation that appears in a new cell.

Clip-art

A library of images that a user can choose from and insert in a file.

Column

Horizontal reference points for the cells in a spreadsheet.

Count tool

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

Data

A collection of information, used to help answer questions. Delete Removes contents such as the contents in a cell.

Image

A drawing or photograph that users can import into a file.

Lock cell

This feature lets a user lock a cell so its contents can't be deleted.

Move cell

The move tool lets a user move the contents of a cell to a new cell.

Row

Vertical reference points for cells in a spreadsheet.

Speak tool

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

Spreadsheet

A computer program that represents information in a grid of rows and columns.

Value

Images can have values given to them. For example, an apple could be given a value of 1 and a pear a value of 2