Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 1

Technology Uses/ Sorting

Key Vocabulary

Technology
Science and engineering knowledge put into practical use to solve problems or invent useful tools.

How does technology make our lives easier?

Technology has made life easier in many areas. It is now much easier to communicate around the world. Messages that used to take weeks to reach the sender can now be sent and received in seconds. We are surrounded by technology from your toys, to machines in your house to systems that control traffic and planes.

Key Vocabulary

Sort
Put things together by features they have in common.

Criteria
A way in which something is judged.

Coding

Key Vocabulary

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

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

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

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

Repeat
This command can be used to make a block of commands run a set number of times or forever.

When clicked
An event command. It makes code run when you click on something (or press your finger on a touchscreen).

Scale
The size of an object in 2Code.

When Key
An event command. It makes code run when you press the specified key on the keyboard.

Key Images

Open, close or share a file.

Save your work.

Watch the instruction video.

Open design mode in 2Code.

Switch to code mode in 2Code.

A repeat code block.

A timer code block.

An object property.

Spreadsheets

Key Vocabulary

Arrow keys
On a standard keyboard these can be used to move around the cells of a spreadsheet.

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

Lock tool
This tool prevents cell values being changed.

Backspace key
Use this key to delete the character before the current cursor position.

Clipart
Simple pictures and symbols available for computer users to add to documents.

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

Cursor
An indicator on a computer screen identifying the point that will be affected by input from the user. Often a blinking vertical line.

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.

Rows
Vertical reference points for the cells in a spreadsheet.

Columns
Vertical reference points for the cells in a spreadsheet.

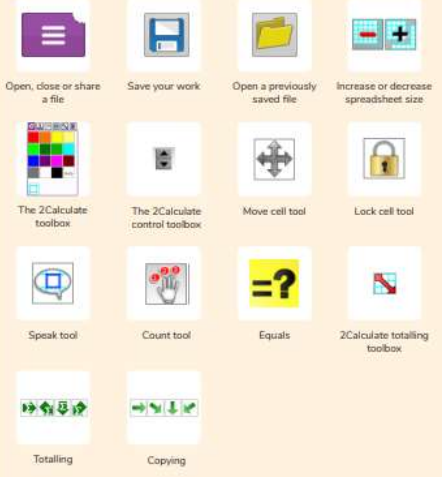
Delete key
Use this key to remove the contents of a cell.

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

Image Toolbox
Use this to insert images into cells.

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

Key Images



Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 2

Spreadsheets

Key Vocabulary

Backspace key
Use this key to delete the character before the current cursor position.

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.

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.

Delete key
Use this key to remove the contents of a cell.

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.

Image Toolbox
Use this to insert images into cells.

Lock tool
This tool prevents cell values being changed.

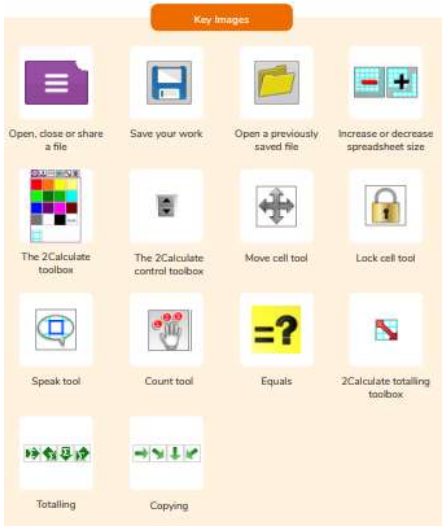
Move cell tool
This tool makes a cell's contents moveable by drag-and-drop methods.

Rows
Vertical reference points for the 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.

Key Images



Handling Data

Key Vocabulary

Pictogram
A diagram that uses pictures to represent data.

Question
A sentence written or spoken to find information.

Data
Facts and statistics collected together that can provide information.

Collate
Collect and combine (texts, information, or data).

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.

Key Images

Coding

Key Vocabulary

Action
Types of commands, which are run on an object. They could be used to move an object or change a property.

Algorithm
A precise step by step set of instructions used to solve a problem or achieve an objective.

Bug
A problem in a computer program that stops it working the way it was designed.

Character
A type of object in 2Code that can be programmed to change actions or properties.

Code block
A group of commands that are joined together and are run when a specific condition is met or when an event occurs.

Code Design
Design what your program will look like and what it will do.

Command
A single instruction in a computer program.

Debug/Debugging
Looking for any problems in the code, ixing and testing them.

Design Mode
Used to create the look of a 2Code computer program when it is run.

Key Images

Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 3

Email

Key Vocabulary

Communication
The sharing or exchanging of information by speaking, writing, or using some other medium such as email.

Email
Messages sent by electronic means from one device to one or more people.

Compose
To write or create something.

Send
To make an email be delivered to the email address it is addressed to.

Report to the teacher
A way in 2Email to tell the teacher if you have received an email that makes you feel upset or scared.

Attachment
A file, which could be a piece of work or a picture, that is sent with the email.

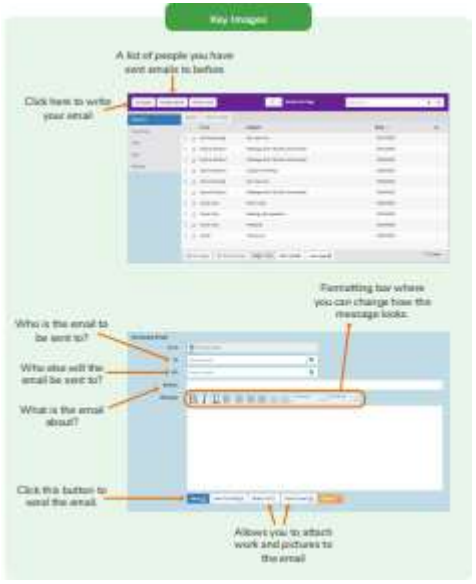
Address book
A list of people who you regularly send an email to.

Save to draft
Allows you to save an email that you are working on and send it later.

Password
A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as email.

CC
A way of sending a copy of your email to other people so they can see the information in it.

Formatting
Allows you to change the way the text of an email looks. For example, you can make the text bold or underline it.



Spreadsheets/ Typing

Key Vocabulary

< > =
Symbols used to represent comparing two values. a < b means 'a is less than b'. a > b means 'a is greater than b'. a = b means 'a is equal to b'. These can be combined, for example a =< b means 'a is equal to or less than b'.

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.

Delete key
Use this key to remove the contents of a cell.

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.

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

Rows
Vertical reference points for the cells in a spreadsheet.

Spin Tool
Clicking on this in a cell will increase or decrease the value in the cell to the right by 1.

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.

Key Vocabulary

Posture
The correct way to sit at the computer.

Top row keys
The keys on the top row of the keyboard.

Home row keys
The keys on the middle row of the keyboard.

Bottom row keys
The keys on the bottom row of the keyboard.

Space bar
The bar at the bottom of the keyboard.

Left Keys

Right Keys

Coding

Key Vocabulary

Event
Something that causes a block of code to be run.

If
A conditional command. This tests a statement. If the condition is true, then

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

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

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

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

Repeat
This command can be used to make a block of commands run a set number of times or forever.

Computer Simulation
A program that models a real-life situation.

Selection
This is a conditional/ decision command. When selection is used, a program will choose a different

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

Variable
A named area in computer memory. A variable has a name and a value. The program can change this variable value.

Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 4

Searches and hardware

Key Vocabulary

Easter egg
An unexpected or undocumented feature in a piece of computer software or on a DVD, included as a joke or a bonus.

Internet
A global computer network providing a variety of information and communication facilities.

Internet browser
A software application used to locate and display Web pages.

Search
To look for information. In this case on the Internet.

Search engine
A program that searches for and identifies items in a database. Used especially for finding sites on the World Wide Web.

Spoof website
Website spoofing is the act of creating a website, as a hoax, with the intention of misleading readers that the website has been created by a different person or organisation.

Website
A set of related web pages located under a single domain name.

Key Vocabulary

Motherboard
A printed circuit board containing the main parts of a computer or other device, with connectors for other circuit boards to be slotted into.

CPU
The part of a computer in which operations are controlled.

RAM
Allows programs to store information to help the computer run more quickly.

Graphics card
A printed circuit board that controls the output to a display screen.

Network card
An electronic device that connects a computer to a computer network.

Monitor
A screen which displays an image generated by a computer.

Speakers
a device for letting you hear sounds generated by the computer.

Keyboard and mouse
external devices

Animation/ Music

Key Vocabulary

Animation
A process by which still pictures appear to move.

Flipbook
A book with pictures drawn in a way that makes them appear to move when the pages are flicked.

Frame
A single image in an animation.

Onion skinning
A process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly.

Background
A non-moving image that appears behind the animated images.

Play
Press this button to make the animation start.

Sound
Music or oral effects that can be added to the animation.

Stop motion
A technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement.

Video clip
A short piece of film or animation.

Key Vocabulary

Pitch
How high or low the sound of a note is.

Rhythm
A pattern of long and short sounds and silences.

Pulse
The steady beat of a piece of music.

Tempo
How slow or fast a piece of music is.

Dynamics
How loud or quiet a sound is.

Texture
The way that different sounds and music elements are layered together to create a piece of music.

Melody
A sequence of notes which make up a tune.

Rippler
The tool which when clicked, begins the ripple of sound.

House music
A style of electronic disco music which uses a range of different beats and synth sounds.

Left Keys

Right Keys

Coding

Key Vocabulary

If
A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.

If/Else
A conditional command. This tests a statement. If the condition is true, then the commands inside the 'if block' will be run. If the condition is not met, then the commands inside the 'else block' are run.

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

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

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

Repeat
This command can be used to make a block of commands run a set number of times or forever.

Selection
This is a conditional/ decision command. When selection is used, a program will choose a different outcome depending on a condition.

Simulation
A model that represents a real or imaginary situation.

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

Variable
A named area in computer memory. A variable has a name and a value. The program can change this variable value.

Key Vocabulary

Action
Types of commands, which are run on an object. They could be used to move an object or change a property.

Alert
This is a type of output. It shows a pop-up of text on the screen.

Algorithm
A precise step by step set of instructions used to solve a problem or achieve an objective.

Bug
A problem in a computer program that stops it working the way it was designed.

Code Design
Design what your program will look like and what it will do.

Command
A single instruction in a computer program.

Control
These commands determine whether parts of the program will run, how often and sometimes, when.

Debug/Debugging
Looking for any problems in the code, fixing and testing them.

Design Mode
Used to create the look of a 2Code computer program when it is run.

Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 5

Game Creator

Key Vocabulary

Animation
Creating an illusion of movement.

Computer game
A game played using a computer, typically a video game.

Customise
Modify (something) to suit an individual or task.

Evaluation
The making of a judgement about the value of something.

Image
In this case, a picture displayed on the computer screen.

Instructions
Detailed information about how something should be done or operated.

Interactive
Responding to a user's input on a computer or device.

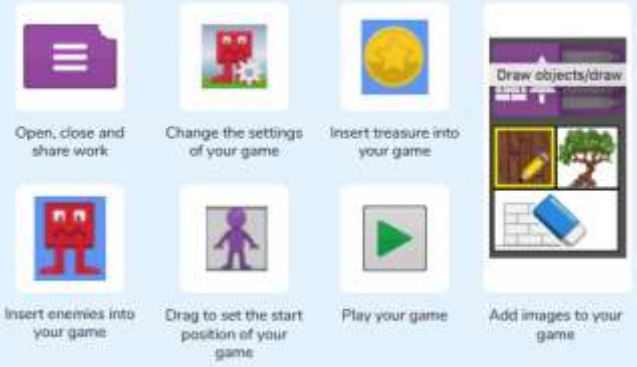
Screenshot
An image of the data displayed on the screen of a computer or mobile device.

Texture
High frequency detail or colour information on a computer-generated graphic.

Perspective
Representing three-dimensional objects on a two-dimensional surface to give the right impression of their height, width, depth, and position in relation to each other.

Playability
A measure of either the ease by which a video game may be played, or of the overall quality of its gameplay.

Key Images



Concept Maps

Key Vocabulary

Audience
People giving attention to something.

Collaboratively
Something that is produced by, or involves, two or more parties working together.

Concept
An idea.

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

Connection
A relationship or link between two nodes or ideas.

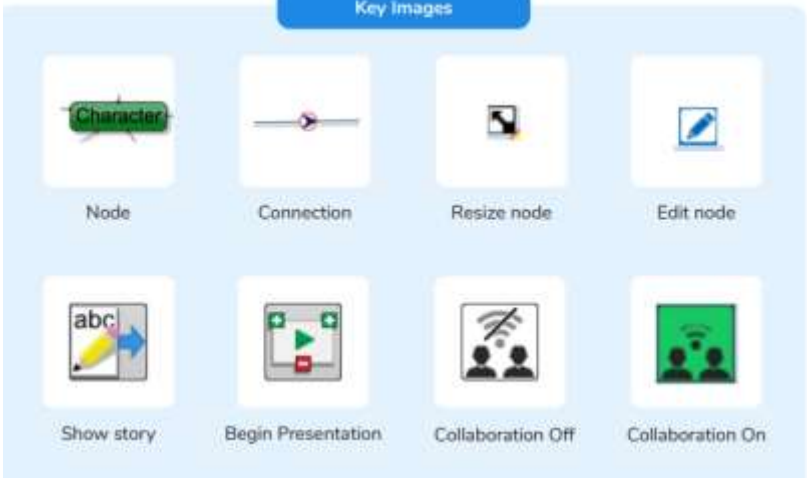
Idea
An opinion or belief.

Node
A way to represent concepts or ideas.

Thought
An idea or opinion produced by thinking or occurring suddenly in the mind.

Visual
A picture, piece of film or display used to illustrate or accompany something.

Key Images



Coding

Key Vocabulary

If
A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.

If/Else
A conditional command. This tests a statement. If the condition is true, then the commands inside the 'if block' will be run. If the condition is not met, then the commands inside the 'else block' are run.

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

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

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

Repeat
This command can be used to make a block of commands run a set number of times or forever.

Selection
This is a conditional/ decision command. When selection is used, a program will choose a different outcome depending on a condition.

Simulation
A model that represents a real or imaginary situation.

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

Variable
A named area in computer memory. A variable has a name and a value. The program can change this variable value.

Key Vocabulary

Action
Types of commands, which are run on an object. They could be used to move an object or change a property.

Alert
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Algorithm
A precise step by step set of instructions used to solve a problem or achieve an objective.

Bug
A problem in a computer program that stops it working the way it was designed.

Code Design
Design what your program will look like and what it will do.

Command
A single instruction in a computer program.

Control
These commands determine whether parts of the program will run, how often and sometimes, when.

Debug/Debugging
Looking for any problems in the code, fixing and testing them.

Design Mode
Used to create the look of a 2Code computer program when it is run.

Whitley Abbey Primary School

Hand in Hand We Learn

Knowledge Organiser - Computing – Year 6

Networking

Key Vocabulary

Internet
A global computer network providing a variety of information and communication facilities consisting of interconnected networks using standardized communication protocols.

World Wide Web
An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

Network
Several interconnected computers, machines, or operations.

Local area network (LAN)
A computer network that links devices within a building or group of adjacent buildings, especially one with a radius of less than 1 km.

Wide area network (WAN)
A computer network in which the computers connected may be far apart, generally having a radius of more than 1 km.

Router
A device which forwards data packets to the appropriate parts of a computer network.

Network cables
Used to connect and transfer data and information between computers and routers.

Wireless
The ability to transmit data from one device to another without using wires.

Spreadsheets (google)

Key Vocabulary

Alignment
How the contents of a cell is lined up and arranged.

Calculate
A spreadsheet's ability to complete calculations in a cell by using the = sign.

Cell
Each box on a spreadsheet is a cell. It can contain a variety of data such as letters, numbers, symbols and calculations.

Cell reference
The letter and number combination which shows a cells location on the page.

Chart
A tool which is used to display information in a form of a graph.

Column
The letter labelled columns going vertically down the sheet.

Formula(e)
A group of letters, numbers, or other symbols which represent a mathematical rule. It allows a spreadsheet to carry out calculations.

Function
Ready-made mathematical formulae which help you quickly carry out calculations.

Range
A collection of selected cells: all the numbers you want to appear in a calculation. For example, A1:A12 includes all the cells from A1 to A12.

Row
The numbered rows going horizontally across the sheet.

Spreadsheet
The main part of the page of a software tool used to organise information.

Style
How the contents of a cell is presented.

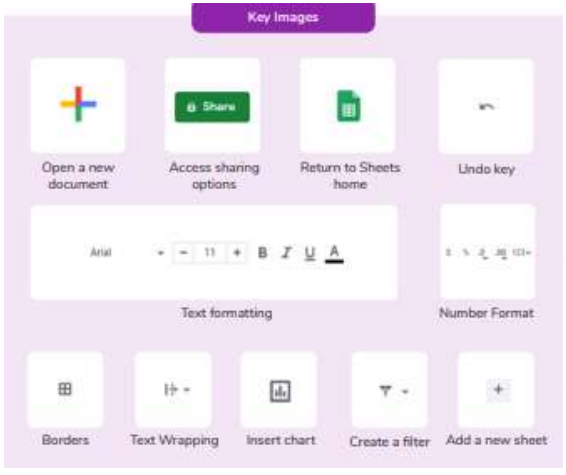
Sum
A function which adds together the totals in a range of cells.

Text Wrapping
This displays the cells contents on multiple lines rather than one long line, allowing all the contents to be shown.

Value
What the data in a cell represents. This could be certain text e.g. blue/green, a date, or a number.

Workbook
A file can contain more than one 'sheet'. The complete file is called a spreadsheet workbook.

Key Images



Coding

Key Vocabulary

Action
Types of commands, which are run on an object. They could be used to move an object or change a property.

Alert
This is a type of output. It shows a pop-up of text on the screen.

Algorithm
A precise step by step set of instructions used to solve a problem or achieve an objective.

Bug
A problem in a computer program that stops it working the way it was designed.

Code Design
Design what your program will look like and what it will do.

Command
A single instruction in a computer program.

Control
These commands determine whether parts of the program will run, how often and sometimes, when.

Debug/Debugging
Looking for any problems in the code, fixing and testing them.

Key Vocabulary

Event
Something that causes a block of code to be run.

Get Input
This puts the text that a user types into the computer's temporary memory to be used to control the program flow.

If
A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.

If/Else
A conditional command. This tests a statement. If the condition is true, then the commands inside the 'if block' will be run. If the condition is not met, then the commands inside the 'else block' are run.

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

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

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

Repeat
This command can be used to make a block of commands run a set number of times or forever.

Sequence
This is when a computer program runs commands in order. In 2Code this can also include "repeat" or a timer.

Selection
This is a conditional/ decision command. When selection is used, a program will choose a different outcome depending on a condition.

Simulation
A model that represents a real or imaginary situation.

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

Variable
A named area in computer memory. A variable has a name and a value. The program can change this variable value.