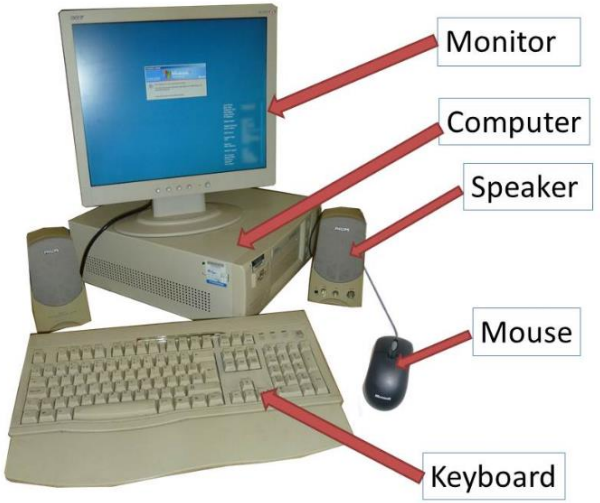
Year 1 Computing Must Knows- Introduction to Computing

Vocabulary

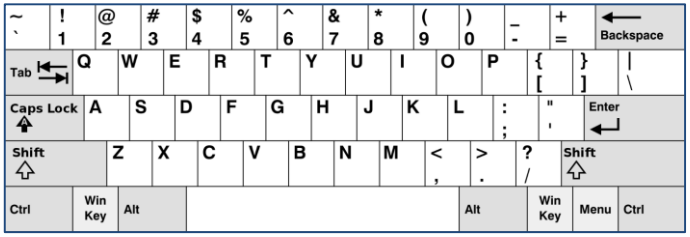
Computer
Monitor
Mouse
Keyboard
Speakers
Headphones
Username
Password
Save
Save as
Open
Type
Print
Cursor
Laptop
Double click
Log on
Log off

You can save a copy of the work you do on the computer in a folder. You can open it to edit it



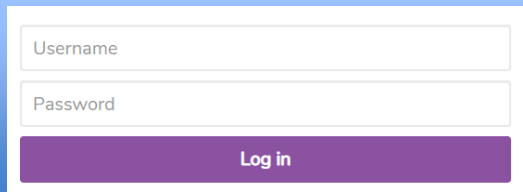
The cursor moves around the screen when you move the mouse. You can select items by clicking the left button on the mouse.

Left button

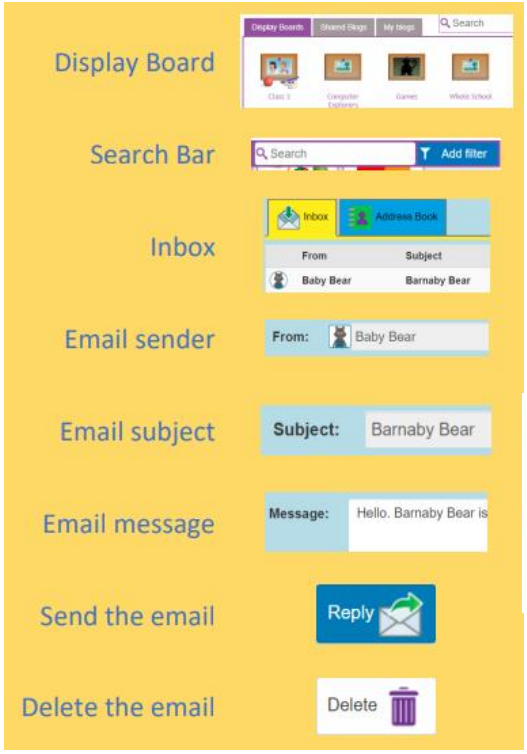


The keyboard is set out in a special way. It is not in alphabetical order. You need to know where the letters are to help you type easily.

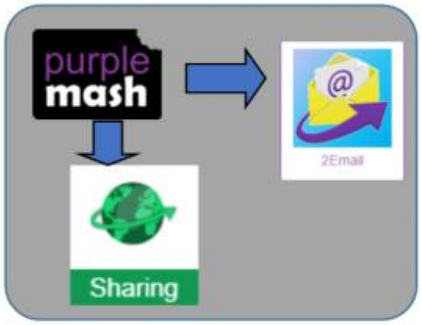
You have your own account for Purple Mash with your own username and password



Year 2 Computing Must Knows- Online Safety



Key Resources



The display board on Purple Mash is somewhere we can share our work safely with others

Key Vocabulary

Search – Look for information in (in a database or the World Wide Web) using a search engine.

Displayboard – In Purple Mash, this is a tool that enables you to share work with a wide audience.

Internet – A way to send information from one computer to another anywhere in the world using technology such as phones, satellites and radio links.

Sharing – Post or repost (something) on a website.

Email – Messages distributed by electronic means from one computer user to one or more people.

Attachment – A computer file sent with an email.

Digital Footprint – The information about a person that exists on the Internet as a result of their online activity.

What is meant by my Digital Footprint?

A digital footprint is a term used to describe the traces of yourself that you leave online. With every website you visit, you leave a trail or footprint showing that you've been there.

What is an email?

An email is a way of sending messages electronically from one device to another. An email can have items such as pictures and videos attached to it.

Key Learning

To know how to refine searches using the Search tool.

To use digital technology to share work on Purple Mash to communicate and connect with others locally.

To have some knowledge and understanding about sharing more globally on the Internet.

To introduce Email as a communication tool using 2Respond simulations.

To understand how we should talk to others in an online situation.

To open and send simple online communications in the form of email.

To understand that information put online leaves a digital footprint or trail.

To identify the steps that can be taken to keep personal data and hardware secure.

Year 3 Computing Must Knows- 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.
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.
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.
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 the commands inside the block will be 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.
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.
Selection - This is a conditional/decision command. When selection is used, a program will choose a different outcome depending on a condition.
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.

Open the main menu

Save your work

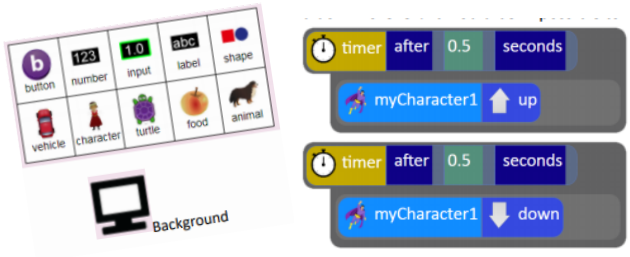
Open design mode in 2Code

Switch to code mode in 2Code

An 'if' command

Creating a variable in 2Code

A change variable block



This is what the block code looks like in 2Code

What is the difference between the different object types in 2Code Gibbon level?

The different objects have different properties. This makes then suitable for different type of programs.

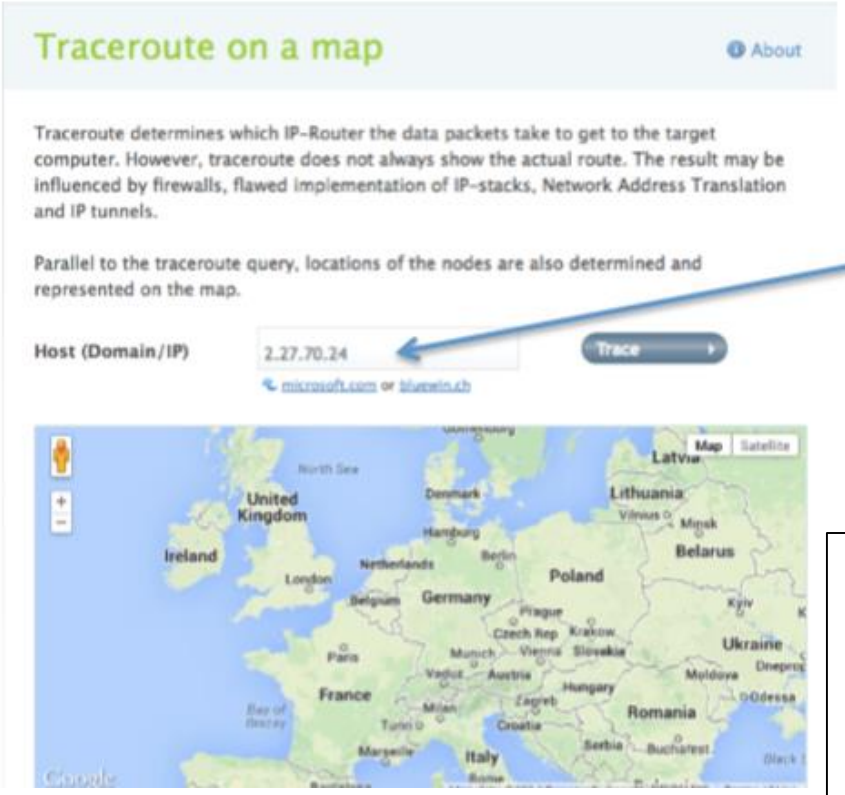
- Buttons can only be clicked and have their colour and text changed.
- Vehicles have speed and angle.
- Characters have movement in 4 directions
- Turtles have rotation, pen up and down.

What does selection mean in coding and how can you achieve this in 2Code?

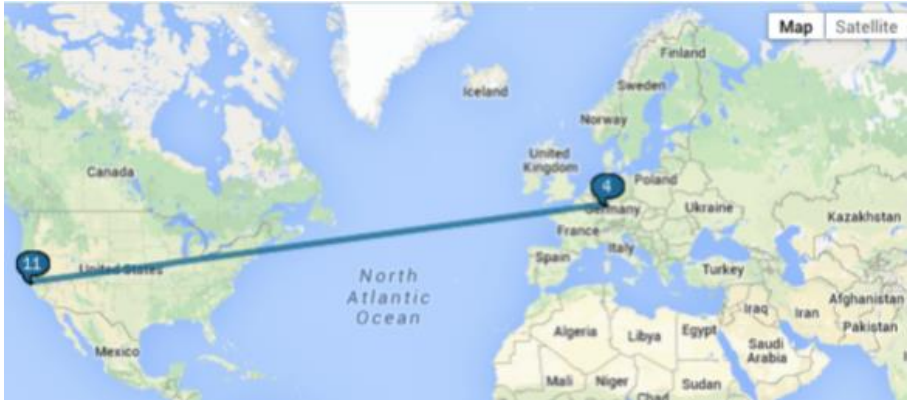
The code will contain commands that require a decision and the next code to run will depend upon the outcome of this decision. In 2Code we used the 'if' command for selection.

Year 4 Computing Must Knows- Networks

Vocabulary
Network-a group of connected things or people
LAN- Local Area Network
The Internet- the infrastructure of all the computers and other devices such as servers and routers networked together to form the Internet
World Wide Web (WWW)- the collection of web pages held on the Internet in servers.
Browser- a special piece of software (a program), which allows us to ask a server for a webpage and lets us look at the web page when the server sends it to us
URL- a website's address
Traceroute- a tool that allows us to track where in the world the servers are that are holding the web pages we want to view
Email- messages sent by electronic means from one device, to one or more people
Communication- examples- talk, email, video call, phone, text, Whatsapp, blog, comments on online platforms.
Collaberation- working together
Domain name- a domain name identifies a network domain, or it represents an Internet Protocol (IP) resource



We can use traceroute to see where in the world the servers are that hold the data for different web pages



Jon@gmail.com

Name user has selected for their account.

The domain of the email service provider.

Year 5 Computing Must Knows- 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 Learning

To understand the need for visual representation when generating and discussing complex ideas.

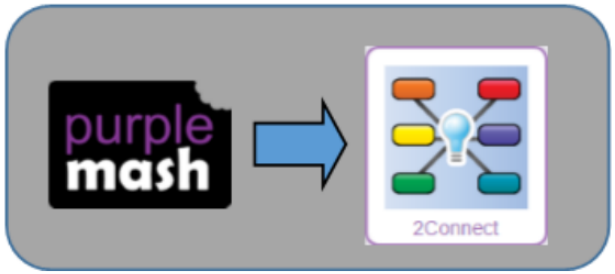
To understand and use the correct vocabulary when creating a concept map.

To create a concept map.

To understand how a concept map can be used to retell stories and present information.

To create a collaborative concept map and present this to an audience.

Key Resources



What is a concept map?

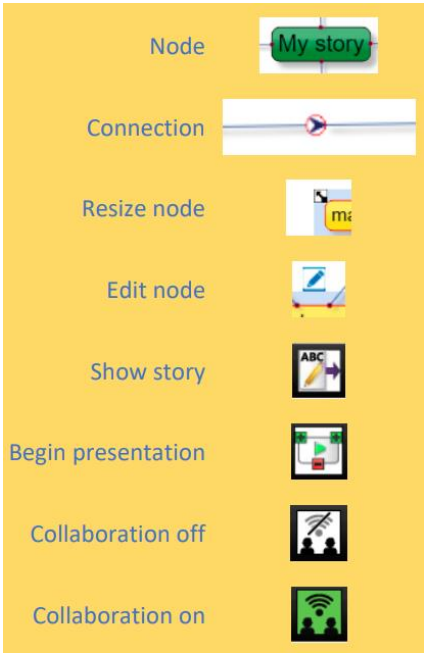
A concept map is a pictorial way of showing relationships between concepts and ideas. A concept map allows you to show information, pictures and links to support an idea or concept.

How is information arranged on a concept map?

On a concept map ideas or concepts are organised into nodes which are linked together with lines to show how the concepts and ideas link together.

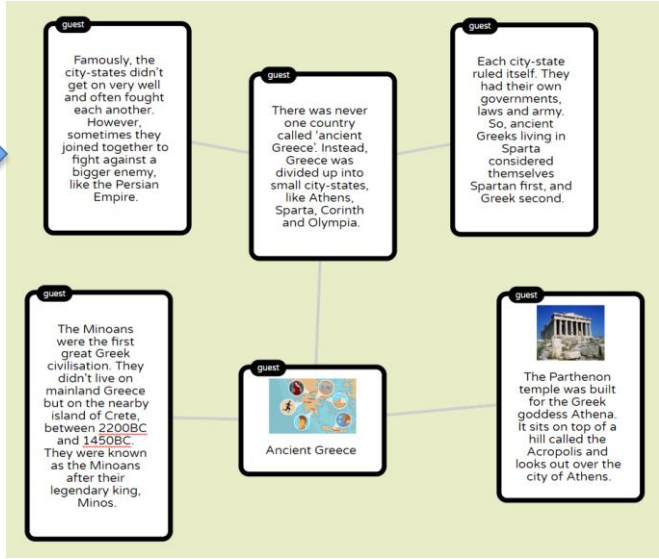
How does a concept map help share ideas?

A concept map in 2Connect allows many users to contribute to the map which means that ideas or concepts can be quickly amended or additional information provided.



popplet

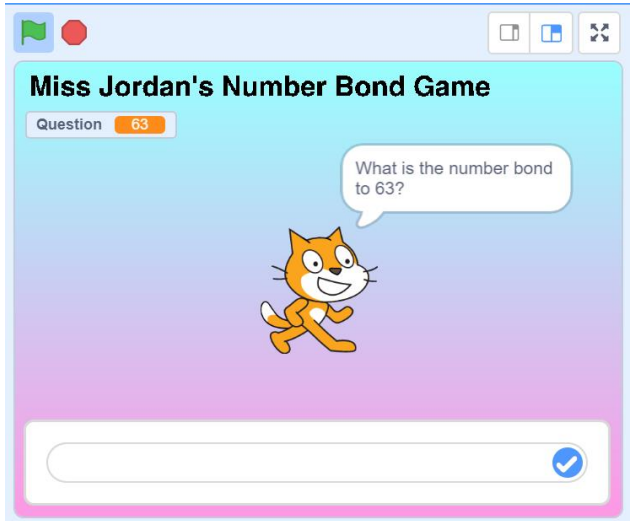
Children will be able to transfer their skills from Purple Mash to Popplet.



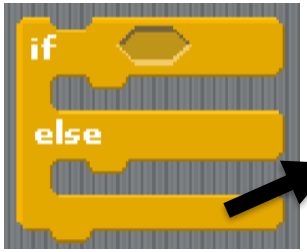
Year 6 Computing Must Knows- Scratch 3 programming

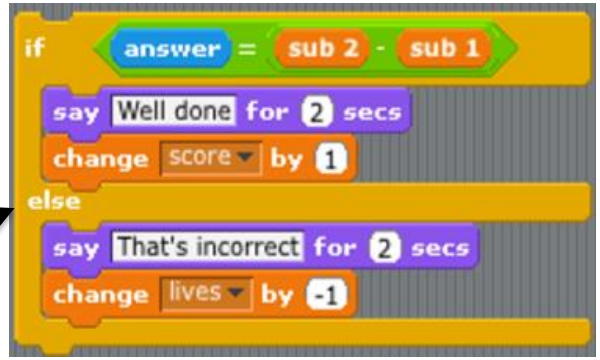
You are able to save files to the computer and load files into Scratch (separate instructions for this)

The operator block is used with more complexity in this unit and is linked with variables.



The if/else block is used in this unit for conditional selection





Vocabulary

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.

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

If then else - A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run, if not then something else happens

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

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

Forever loop- will continue the code until commanded to stop

Bitmap image-A bitmap image depends on resolution in that it contains a fixed number of pixels to represent the image data.

Vector image-artwork made up of points, lines, and curves that are based upon mathematical equations, rather than a solid colored square pixels.

Variable- a programming concept that will enable a number value to be stored and changed in a program