

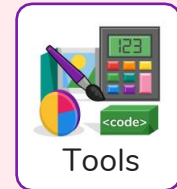
## Unit: 1.1

# Online Safety and Exploring Purple

### Key Learning

- To log in safely.
- To learn how to find saved work in the Online Work area and find teacher comments.
- To learn how to search Purple Mash to find resources.
- To become familiar with the icons and types of resources available in the Topics section.
- To start to add pictures and text to work.
- To explore the Tools and Games section of Purple Mash.
- To learn how to open, save and print.
- To understand the importance of logging out.

### Key Resources



### Key Vocabulary

#### Alert

A system that lets you know if you have something to look at.

#### Avatar

A digital picture to represent someone.

#### Button

An area where you click to make something happen.

#### Device

A piece of electrical equipment made for a purpose.

#### File Name

The name given to an online piece of work.

#### Icon

An image on a web page that you can click on to navigate to somewhere.

#### Log in

Using a username and password to access a system.

#### Log out

Leaving a computer system.

#### Menu

A button which gives the user different options.

#### My Work Area

The place on Purple Mash where your work is stored. Only you and your teachers can access this.

#### Notification

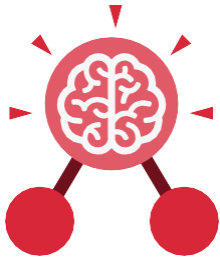
A message telling you about something.

#### Password

A series of letters, numbers and special characters that is entered after the username to access an online site.

#### Private

Keeping information restricted from other people.



## Unit: 1.1

# Online Safety and Exploring Purple Mash

### Purple Mash Tools

A selection of programs which help you carry out different tasks.

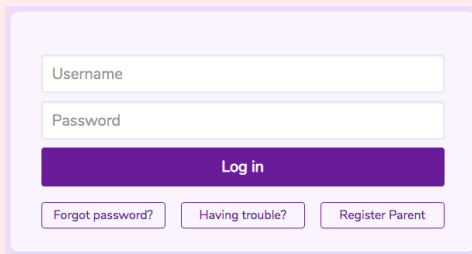
### Saving

Store your work as you create something so it can be accessed later.

### Search

A way of finding specific resources you want to look at.

## Key Images



Log in Screen



Avatar



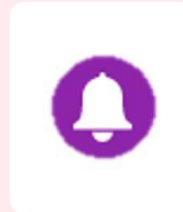
Save your work



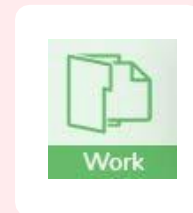
Tools section of Purple Mash



Subjects & Topics



This picture shows you if you have any notifications



The area of Purple Mash where your work is stored

## Key Questions

### What is a password and why should we keep them safe?

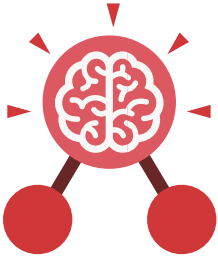
A password is a secret word or phrase that allows a user to access a website. Passwords are like toothbrushes in that they should not be shared with anyone else.

### What is a digital avatar?

In Purple Mash, an avatar is a picture you create in the software to represent you. It is safer to use an avatar on the Internet than have a picture of yourself.

### Where is my work stored on Purple Mash?

In Purple Mash, most of the work you save will be saved in the My Work section of Purple Mash. The only person that can see this work is the teacher and you.



## Unit: 1.2

### Grouping and Sorting

#### Key Learning

- To sort items using a range of criteria.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.

#### Key Questions

##### In what ways can we sort objects?

We can sort objects by different criteria. These include the size of the objects, the colour of the objects or the number of sides the object has. The criteria will depend on the type of objects being sorted.

#### Key Resources



2Do It Yourself

#### Key Vocabulary

##### Criteria

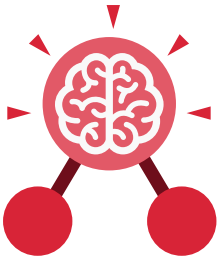
A way in which something is judged.

##### Groups

Objects arranged and put together because they have features in common.

##### Sort

Put things together by features they have in common.



## Unit: 1.3 Pictograms

### Key Learning

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.

### Key Vocabulary

#### Collect Data

Gathering facts and information.

#### Compare

Looking at what is the same and what is different.

#### Data

A collection of information, used to help answer questions.

#### Pictogram

A diagram that uses pictures to represent data.

#### Record Results

Writing down what you have found out.

#### Title

The name given to a piece of work.

### Key Resources

purple  
mash



2Connect



2Count

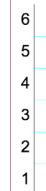
### Key Images



Open, Close and Share



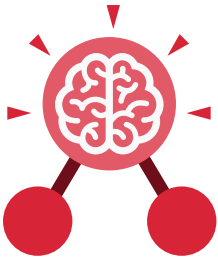
Add or delete columns



Frequency



Add or delete objects from the Pictogram



## Unit: 1.4 Lego Builders

### Key Learning

- To compare the effects of adhering strictly to instructions to completing tasks without complete instructions.
- To follow and create simple instructions on the computer.
- To consider how the order of instructions affects the result.

### Key Vocabulary

#### Algorithm

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

#### Code

Instructions that a programmer enters into a computer that cause the computer to perform a certain way.

#### Computer

An electronic device for storing and processing data.

#### Debugging

To find and remove errors from computer hardware or software.

#### Instructions

Detailed information about how something should be done or operated.

#### Program

An algorithm that has been coded into something that can be run by a machine, e.g., a computer or a robot.

### Key Resources



purple  
mash



Paint Projects

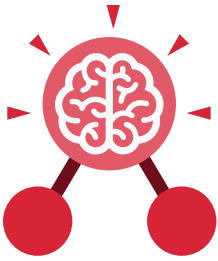
### Key Questions

#### What is an instruction?

An instruction takes you through something step by step so that you can successfully complete a task.

#### Why do we need to debug code?

When you write code, it won't always work correctly first time. When you search for the errors and correct them, this is known as debugging.

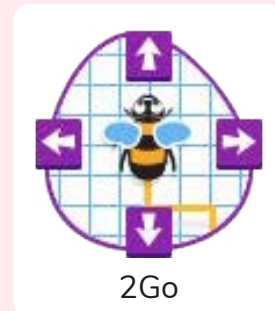


## Unit: 1.5 Maze Explorers

### Key Learning

- To understand the functionality of the direction keys.
- To understand how to create and debug a set of instructions (algorithm).
- To use the additional direction keys as part of an algorithm.
- To understand how to change and extend the algorithm list.
- To create a longer algorithm for an activity.
- To set challenges for peers.
- To access peer challenges set by the teacher as 2Dos.

### Key Resources



### Key Vocabulary

#### Algorithm

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

#### Challenge

A task to be completed.

#### Command

An action such as left command.

#### Direction

The path that something travels. For example, a robot moving forwards, backwards or diagonal.

#### Instruction

Detailed information about how something should be done or operated.

#### Left and Right

A position which relates to something. For example, make the fish move left of the screen.

#### Route

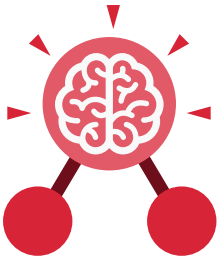
A path an object or thing takes to get somewhere.

#### Undo

If we make a mistake, we can press the undo button.

#### Unit

A unit such as make the turtle move 2 units (squares).



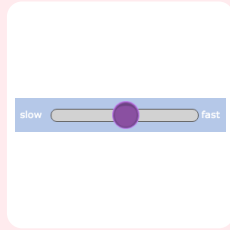
## Unit: 1.5

### Maze Explorers

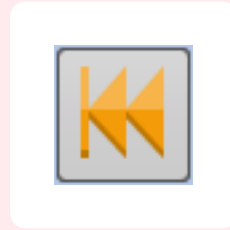
#### Key Images



Open, close or share a file



Change the speed in which the screen object moves



Rewind an instruction



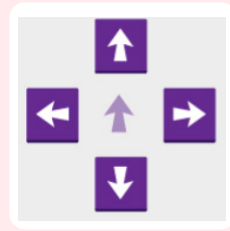
Undo an instruction



Change the settings in 2Go



Change the colour of the path that the object leaves in 2Go



Control the direction in which the object moves

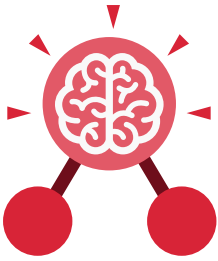
#### Key Questions

##### What is 2Go?

2Go is a program that allows you to move an object around the screen using either the arrows or by creating a simple sequence of instructions.

##### How do I undo a mistake on 2Go?

In 2Go, you can either click on the undo button to go back one step or the rewind button to go back to the start of the challenge.



## Unit: 1.6

# Animated Story Books

### Key Learning

- To introduce e-books and the 2Create a Story tool.
- To add animation to a story.
- To add sound to a story, including voice recording and music the children have composed.
- To work on a more complex story, including adding backgrounds and copying and pasting pages.
- To share e-books on a class display board.

### Key Resources



### Key Vocabulary

#### Animation

An object that moves on screen.

#### Background

An image inserted into a file that sits behind text, objects, or buttons.

#### Clip-art Gallery

A place in software such as 2Create a Story where a library of images can be found and inserted into a file.

#### E-book

A book that can be read on the computer or on a tablet.

#### Edit

Edit means to change something. For example, change some text to improve it.

#### Font

The style of text used in a piece of writing on a computer or tablet.

#### Sound

Sounds can be uploaded into software from a file or created.

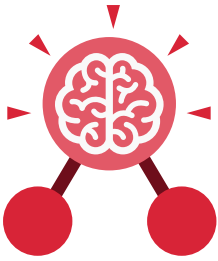
#### Sound Effect

A sound other than speech or music made for use in a play, film or computer file.

#### Text

Words, letters, numbers or symbols entered into a computer, such as writing text in 2Create a Story.





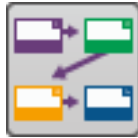
## Unit: 1.6

# Animated Story Books

### Key Images



Open, close or share a file



Plan out your story



Play your story



Add animation and sounds to the story



Choose a story background



Undo or redo the last action



Choose the font for the story



Copy and paste

### Key Questions

#### What is 2Create a Story?

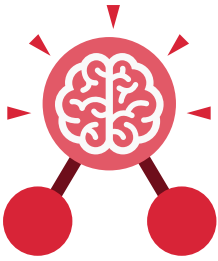
With 2Create a Story, you can create e-books including animated pages, sounds, narration and music.

#### What is an animated story?

An animated story is a story where the images in the foreground can move in a variety of ways.

#### How can I make my story better?

As well as adding animation to the story, it can be improved by adding sounds or sound effects to the different pages.



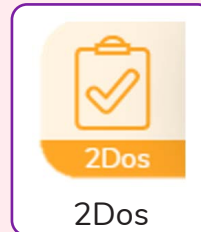
## Unit: 1.7

### Coding

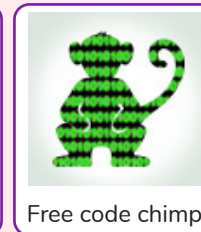
#### Key Learning

- 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.

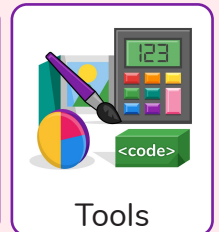
#### Key Resources



2Dos



Free code chimp



Tools

#### Key Vocabulary

##### Action

The way that objects change when programmed to do so. For example, move.

##### Algorithm

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

##### Background

In 2Code the background is an image in the design that does not change.

##### Code

Instructions that a programmer enters into a computer that cause the computer to perform a certain way.

##### Coding

Writing instructions that the computer can process (understand) to make programs (software).

##### Command

A single instruction in 2Code.

##### Debug/ Debugging

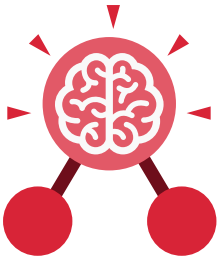
Fixing code that has errors so that the code will run the way it was designed.

##### Event

An occurrence that causes a block of code to be run. The event could be the result of user action such as the user pressing a key or clicking the screen.

##### Execute

This is the proper word for when you run the code. We say, 'the program (or code) executes.'



## Unit: 1.7

### Coding

#### Key Vocabulary

##### 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 Questions

##### What is coding?

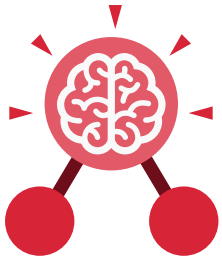
Writing instructions in a way that a computer can interpret them to make a program.

##### Why is it useful to design before coding?

It helps you to get a clear idea of what you want your program to do. You can use the design to decide which objects you need to add, what to call them and what actions they should perform.

##### How can you make characters move in a 2Code program?

In design mode, add a character. Change properties such as the name and scale. Exit from design mode and drag your character's code block into the coding window. From the properties menu, select right, left, up or down.



# Unit: 1.7

## Coding

### Key Images



Open, close or share a file



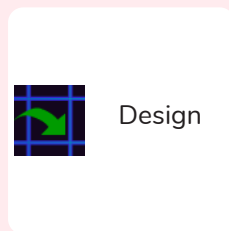
Save your work



Watch the instruction video



Get a hint when you are stuck in 2Code



Open design mode in 2Code



Switch to code mode in 2Code



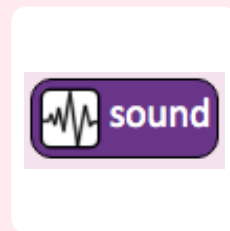
The background object



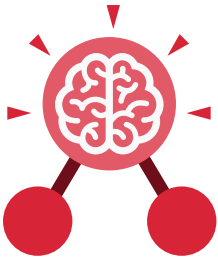
A 'when clicked' code block



An object property



Sound output block



## Unit: 1.8

### Spreadsheets

#### Key Learning

- 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.

#### Key Resources



2Calculate

#### Key Questions

##### What does a spreadsheet look like?

It has a grid of cells. These are in rows and columns.

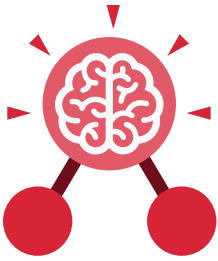
The cells can be coloured, and you can type into them. You can use the toolbox to do different things with the data in the cells.

##### How could you use a spreadsheet to add up values?

You can enter numbers and operators such as +, -, x in the cells. Entering an equals sign in the correct cell will perform calculations.

##### How could you use the count and speak tools?

The count tool will count the number of cells containing the same value or colour as it. The speak tool will say this number each time you click on the cell or the number changes.



## Unit: 1.8

# Spreadsheets

### Key Vocabulary

#### Button

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

#### Clip-art

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

#### Data

A collection of information, used to help answer questions.

#### Lock cell

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

#### Speak tool

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

#### 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.

#### Column

Horizontal reference points for the cells in a spreadsheet.

#### Delete

Removes contents such as the contents in a cell.

#### Move cell

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

#### Spreadsheet

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

#### 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 that matches the value of the cell to the left of the tool.

#### Image

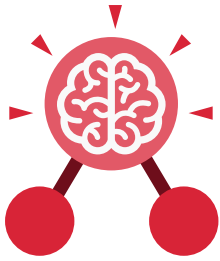
A drawing or photograph that users can import into a file.

#### Row

Vertical reference points for cells in a spreadsheet.

#### 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.



# Unit: 1.8

## Spreadsheets

### Key Images



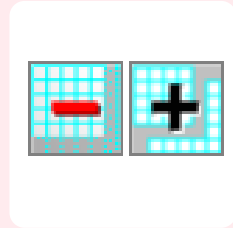
Open, close or share a file



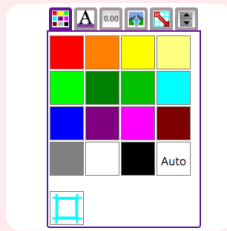
Save your work



Open a previously saved file



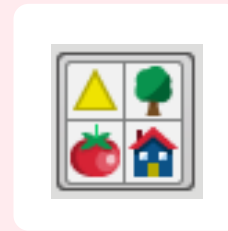
Increase or decrease spreadsheet size



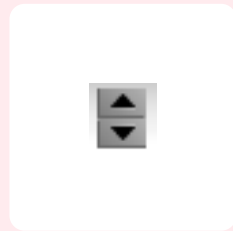
The 2Calculate toolbox



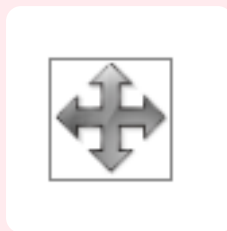
The 2Calculate image toolbox



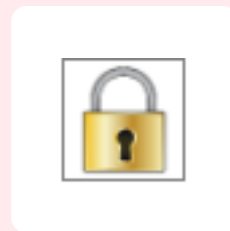
Clipart Picker



The 2Calculate control toolbox



Move cell tool



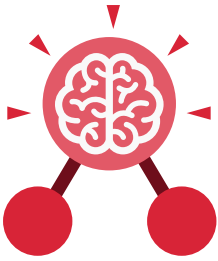
Lock cell tool



Speak tool



Count tool



## Unit: 1.9

# Technology Outside School

### Key Learning

- To walk around the local community and find examples of where technology is used.
- To record examples of technology outside school.

### Key Vocabulary

#### Computer

An electronic device for storing and processing data.

#### Technology

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

### Key Resources



2Publish Plus

### Key Questions

#### What is technology?

Technology is the use of knowledge to invent new devices or tools. Throughout history, technology has made people's lives easier.

#### 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.