

### Unit: 1.1

# **Online Safety and Exploring Purple Mash**

#### 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.

#### Device

A piece of electrical equipment made for a purpose.

#### Log in

Using a username and password to access a system.

#### My Work Area

The place on Purple Mash where your work is stored. Only you and your teachers can access this. Avatar A digital picture to represent someone.

### File Name

The name given to an online piece of work.

#### Log out Leaving a computer system.

Notification A message telling you about something.

#### Private Keeping information restricted from other people.

#### Button

An area where you click to make something happen.

#### lcon

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

#### Menu

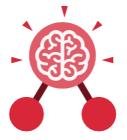
A button which gives the user different options.

#### Password

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



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## **Unit: 1.1** Online Safety and Exploring Purple Mash

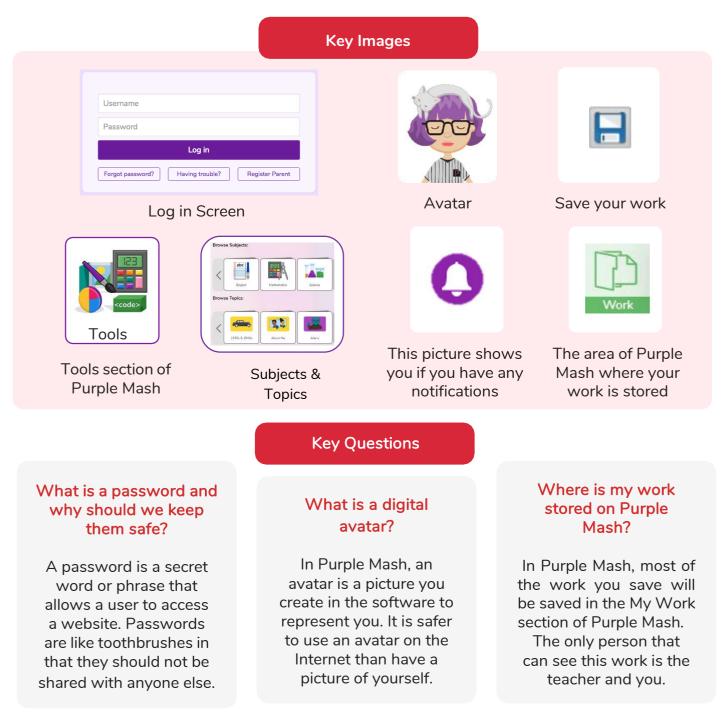
Purple Mash Tools A selection of programs which help you carry out different tasks.

# 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.







# Unit: 1.2 Grouping and Sorting

#### Key Learning

- To sort items using a range of criteria.
- To begin to think logically about the steps of a process.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.
- To introduce the term 'algorithm' to describe logically following a process.

#### **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 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.

#### Algorithm

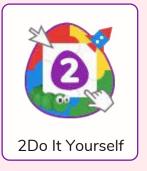
A precise, step-by-step set of instructions used to solve a problem or achieve an objective.

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Key Resources







# **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.

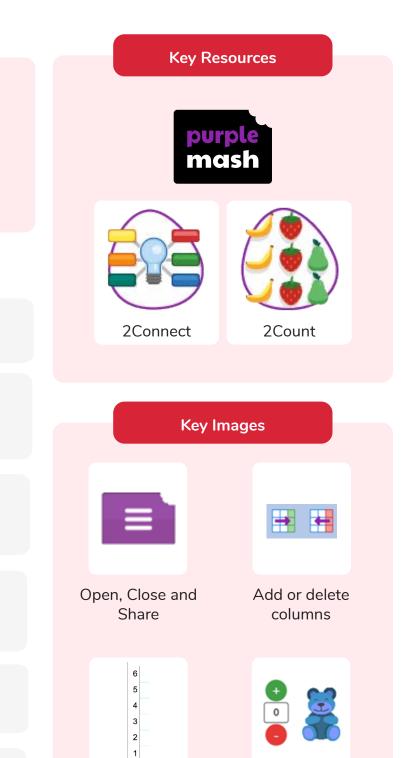
#### Pictogram

A diagram that uses pictures to represent data.

#### **Record Results**

Writing down what you have found out.

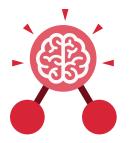
**Title** The name given to a piece of work.



Frequency

Add of 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

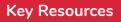
To find and remove errors from computer hardware or software.

#### 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 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.







### Algorithm

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

#### Direction

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

#### Route

A path an object or thing takes to get somewhere. Challenge A task to be completed.

**Key Vocabulary** 

#### Instruction

Detailed information about how something should be done or operated.

#### Undo

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

Command An action such as left command.

#### Left and Right

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

#### Unit

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





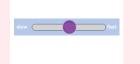
Unit: 1.5 Maze Explorers

#### **Key Images**

Open, close or share a file



Change the settings in 2Go



Change the speed in which the screen

object moves

Rewind an instruction



Undo an instruction



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** 

2Create a Story

Key Vocabulary

#### Animation

An object that moves on screen.

#### E-book

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

#### Sound

Sounds can be uploaded into software from a file or created. Background An image inserted into a file that sits behind text, objects, or buttons.

#### Edit

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

#### Sound Effect

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

#### **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.

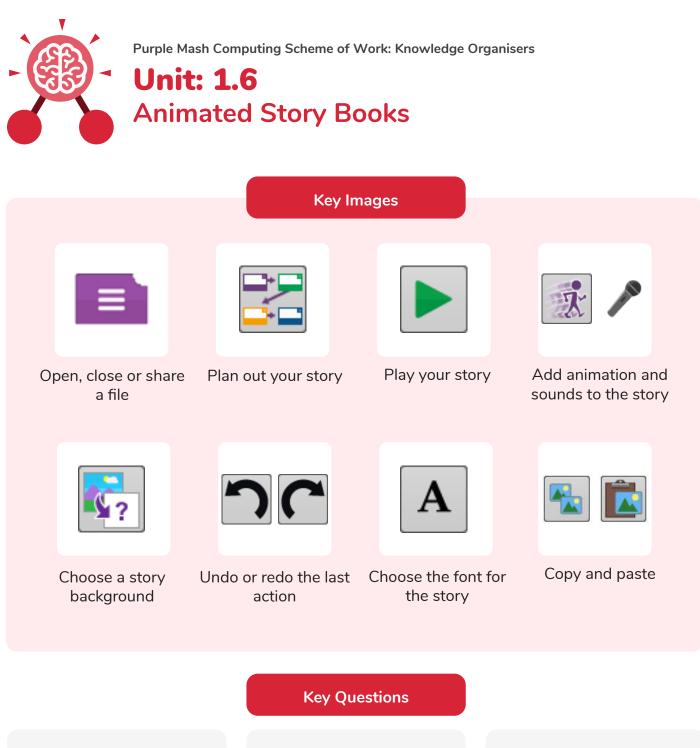
#### Font

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

#### Text

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





# 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.



#### Action

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

#### Code

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

#### Debug/ Debugging

Fixing code that has errors so that the code will run the way it was designed. Algorithm A precise, step-by-step set of instructions used to solve a problem or achieve an objective.

**Key Vocabulary** 

#### Coding

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

#### **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.

#### Background

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

#### Command

A single instruction in 2Code.

#### 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.

#### 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).

#### Object

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

#### Programmer

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

#### Run

This is what you do when you click the Play button in 2Code: The program runs.

#### Output

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

#### **Properties**

These determine the look and size of an object. Each object has properties such as the image, scale and position of the object.

#### What is coding?

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

#### **Key Questions**

# 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.



Purple Mash Computing Scheme of Work: Knowledge Organisers   Unit: 1.7   Coding					
Open, close or share	Save your work	<b>?</b> Watch the	Get a hint when you		
a file	Exit Design	instruction video	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				



Purple Mash Computing Scheme of Work: Knowledge Organisers **Unit: 1.8 Spreadsheets Key Images** Open, close or share Save your work Open a previously Increase or decrease saved file spreadsheet size a file 🖪 🗛 🚥 🛃 💽 The 2Calculate **Clipart Picker** The 2Calculate The 2Calculate control toolbox toolbox image 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 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?

2Publish Plus

**Key Resources** 

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.

