



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

Log in

Using a username and password to access a system.

Username

A name that is used by a person to access an online site.

Password

A series of letters, numbers and special characters that is entered after the username to access an online site. In Purple Mash, this can also be a series of pictures.

Avatar

A digital picture to represent someone.

My Work

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

Log out

Leaving a computer system.

Topics

The area on Purple Mash that contains ready-made resources.

Save

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

Notification

A system that lets you know if you have something to look at. On Purple Mash this is shown by a bell.

Tools

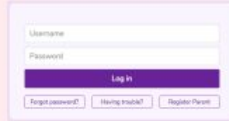
The area on Purple Mash with the different learning apps.



Unit: 1.1

Online Safety and Exploring Purple Mash

Key Images



Log in Screen



Avatar



Save your work



Tools

Tools section of Purple Mash



Topics

Topic section of Purple Mash



Alerts

This picture shows you if you have any notifications



Work

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.

What I already know:

I recognise that a range of technology is used in places such as homes and schools.

I select and use technology for particular purposes.



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 Resources



2Do It Yourself

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.

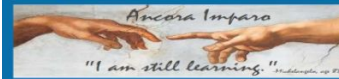
Key Vocabulary

Sort

Put things together by features they have in common.

Criteria

A way in which something is judged.



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know:

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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

Pictogram

A diagram that uses pictures to represent data.

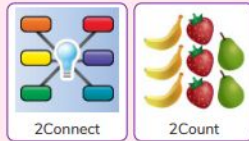
Data

Facts and statistics collected together that can provide information.

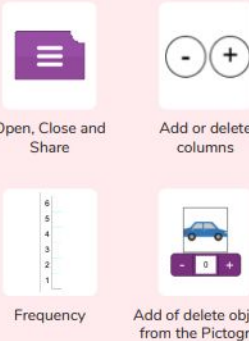
Collate

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

Key Resources



Key Images



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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

Instruction

Information about how something should be done.

Algorithm

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

Computer

An electronic device for storing and processing data.

Program

To provide (a computer or other machine) with coded instructions.

Debug

To find and remove errors from computer hardware or software.

Key Resources



Paint Projects

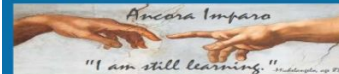
Key Questions

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.



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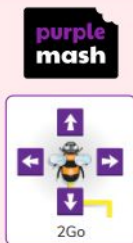


Unit: 1.5 Maze Explorers

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

Direction

A course along which someone or something moves.

Rewind

Move back several steps or to the start.

Left turn

To move the object in an anti-clockwise direction.

Challenge

A task or situation that tests someone's abilities.

Forward

To move in the direction that one is facing or travelling.

Debug

To find and remove errors from computer hardware or software.

Arrow

A mark or sign resembling an arrow, used to show direction or position.

Backwards

To move in the opposite direction to which one is facing.

Instruction

Information about how something should be done.

Undo

Cancel or reverse the instruction.

Right turn

To move the object in a clockwise direction.

Algorithm

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

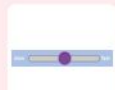


Unit: 1.5 Maze Explorers

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.

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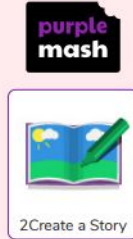


Unit: 1.6 Animated Story Books

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

Process of giving the illusion of movement to drawings and models.

Font

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

Sound Effect

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

E-Book

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

File

A piece of work on the computer.

Display Board

A way to share your work on Purple Mash.



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?

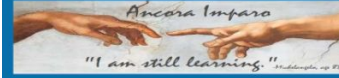
With 2Create a Story, you can create e-books including animated pages, sounds, narration and music.

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.



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Unit: 1.7 Coding

Key Learning

- To understand what coding means.
- To use design mode to set up a scene.
- To add characters.
- To use code blocks to make the character perform actions.
- To use collision detection.
- To save and share work.
- To know the save, print, open and new icon.

Key Resources

purple
mash



2Dos



Free code chimp



Tools

Key Vocabulary

Action

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

Character

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

Coding

Writing instructions that can be interpreted by a computer to create a program.

Background

The part of the program design that shows behind everything else. It sets the scene for the story or game.

Code block

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

Collision Detection

Detecting when two characters on the screen touch each other.

Button

An object on the screen which can be clicked on.

Code Design

Design what your program will look like and what it will do.
Coder - A person who writes computer code.

Command

A single instruction in a computer program.

Design Mode

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



Unit: 1.7 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.

Sound

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

Object

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

Scale

The size of an object in 2Code.

When clicked

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

Stop command

A command that stops a character moving.

When Key

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

Program

In 2Code, this is several commands that run purposefully together.

Key Questions

What is coding?

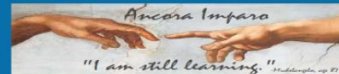
Writing instructions in a way that a computer can interpret them to make a program.

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.



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Unit: 1.8 Spreadsheets

Key Learning

- To know what a spreadsheet program looks like.
- How to open 2Calculate in Purple Mash.
- How 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.



2Calculate

Key Resources

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

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

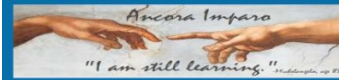
This tool will speak the contents of a cell containing a number each time the value changes.

Spreadsheet

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

Image Toolbox

Use this to insert images into cells.



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Purple Mash Computing Scheme of Work: Knowledge organisers

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

Technology

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

Key Resources



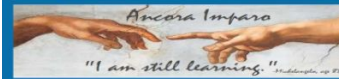
Key Questions

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.



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