Purple Mash Computing Scheme: Knowledge Organiser

Year 1
Data Explorers

Key Learning

- To think carefully about the steps of grouping items.
- To group items using a computer.
- To be able to sort different items.
- To understand that data is information that can be collected and used.
- To understand that data can be shown using pictures.

Key Resources

Sorting and Grouping quizzes

2Count

Key Vocabulary

Algorithm
A set of instructions in order.

Criteria
A way in which something is grouped or sorted.

Data
A collection of information, used to help answer questions.

Group
To put similar things together.

Pictogram
A diagram that uses pictures to represent data.

Sort
To put things into an order.

Key Questions

Give some examples of criteria used for grouping or sorting shapes.

Colour, number of sides or corners, size etc.

What word describes a set of instructions in order?

Algorithm

Give some examples of pictogram that you could collect data for on the theme of weather.

Weather this week, weather in different places, favourite kinds of weather.

Key Images

Burger menu

Save

Add or remove a record for the data

Purple Mash Computing Scheme: Knowledge Organiser

Year 1

Creating and Following Instructions

Key Learning

- To understand that an algorithm is a set of instructions.
- To follow and create simple instructions on a device.
- To sequence algorithms that require a correct order.

Key Resources


Paint Projects


Sequencing Quizzes

Key Vocabulary

Algorithm
A set of instructions in order.

Coding
Writing instructions for a computer, telling it what to do, step-by-step.

Computer Bug
Bug is the word used to describe an error in the way that a computer program works.

Debugging
To find and remove bugs (errors) from a computer program.

Instructions
How something should be done.

Program
A set of instructions (an algorithm) that tells a computer what to do.

Key Questions

What kinds of activities would require an instruction to be followed?
Any activity where the order in which you do things and the things that are done is important. For example, baking a cake, getting dressed or writing a word.

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.

Purple Mash Computing Scheme: Knowledge Organiser

Year 1

Introduction to Purple Mash

Key Learning

- To login and create my own avatar on Purple Mash.
- To open an activity and then save the work to the 'My Work' area.
- To understand how to complete work in the 2Dos area in Purple Mash.

Key Resources

2Dos

Work Area


Tools

Key Vocabulary

Avatar
A picture to represent someone.

File Name
The name given to an online piece of work.

Home Page
The main page for a website that you use to reach all the other areas.

Icon
The image on a button on a device that helps you to know what it does.

Login
Using a username and password to access a system.

Logout
Leaving a computer system.

Password
Letters, numbers and special characters that you type after the username to access an online site. In Purple Mash, this can also be a series of pictures.

Save
A way of keeping your work so you can open it again later.

2Do
Work given by your teacher to complete on Purple Mash.

Purple Mash Computing Scheme: Knowledge Organiser

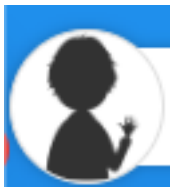
Year 1

Introduction to Purple Mash

Key Images

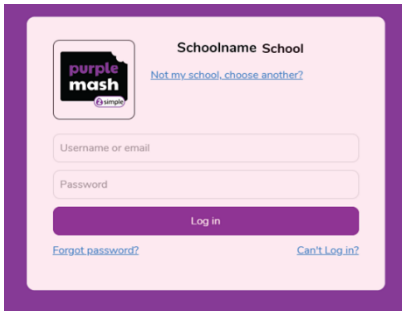
Burger menu

Save



Avatar

Paint Projects



Login screen

Logout

Key Questions

What is a password?

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.

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.

Purple Mash Computing Scheme: Knowledge Organiser

Year 1
Making Beats

Key Learning

- To compare music made using computers and music played by real instruments.
- To explore mixing the sounds of different instruments using the 2Beat tool.
- To compose a tune to match a picture of a scene.
- To compose a beat to match a picture of a scene.

Key Resources

2Explore

2Beat

Key Vocabulary

Beat
The steady, regular pulse that you can tap your foot to or clap along with.

Compose
To create your own piece of music.

Digital
Using a computer, tablet, or phone to create something such as art, music or writing.

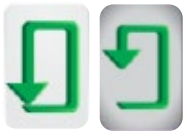
Musical Instrument
Something you play to make music.

Tempo
The speed of a piece of music.

Tune
The part of the music that you can hum or sing along to.

Key Images

Controls



Control looping

Record composition

Change Tempo

Change length

2Explore instruments

Key Questions

What are some differences between live music and digital music?

Live music is music created by playing musical instruments. Digital music is created using computer programs that can make sounds.

What parts of the music can you change using a digital music tool?

The types of instrument sounds, the tune, the beat, the tempo, the length of the composition, the loudness of different sounds and whether the composition repeats.

Purple Mash Computing Scheme: Knowledge Organiser

Year 1
Technology Around Us

Key Learning

- To know what the word technology means.
- To know what technology is used in school.
- To consider the purposes of technology used in the wider world.
- To identify parts of a device and know how to use devices safely.

Key Resources

Writing Templates

Key Vocabulary

Device
A tool or machine that helps people to do things.

Digital Technology
Technology that uses electricity and computing to manage and share information.

Electronic
A tool or device that uses electricity to work.

Hardware
The physical parts of a computer, such as the monitor, keyboard and mouse.

Technology
Using scientific knowledge to make tools that solve problems.

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.

Purple Mash Computing Scheme: Knowledge Organiser

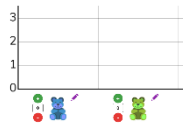
Year 2
Questioning

Key Learning

- To understand how data can be used to help answer a question.
- To ask an appropriate question, gather data using a tally chart and present it using digital tools.
- To begin to explore how yes or no questions can be used to sort data.
- To understand how branching databases work and practise navigating them to find answers.

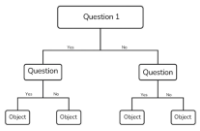
Key Images

Tally Chart



Pictogram

Yes or No Questions



Branching Database

Key Vocabulary

Branching Database
A type of database that uses yes or no questions to help sort and identify objects.

Pictogram
A diagram that uses pictures to represent data.

Closed Question
A question that offers a set of answers or options for a person to choose from.

Sorting
The process or operation of ordering items and data in a certain way.

Data
A collection of information, used to help answer questions.

Tally Chart
A table used to record and count data using tally marks.

Open Question
A question that can't be answered with yes or no and requires extra detail.

Yes or No Question
A type of closed question that is answered using the words 'Yes' or 'No'.

Key Questions

Why does a question need to be asked to gather data?
Asking a question allows a person to collect meaningful data instead of random facts and figures.

How is asking yes or no questions different to asking a regular question?
A yes or no question is a closed question. It only gives two possible answers.

Why are yes or no questions useful?
They help a person to sort and group objects and help to narrow down a choice.

Purple Mash Computing Scheme: Knowledge Organiser

Year 2
Route Explorers

Key Learning

- To use the direction keys in 2Go to move the turtle along a route.
- To use units of distance along with the direction keys in 2Go to move along a route.
- To write instructions to complete more than one step of a route at once.
- To build up instructions for a longer route.

Key Resources

2Go

Key Vocabulary

Algorithm
A set of instructions in order.

Coding
Creating instructions for a computer, telling it what to do, step-by-step.

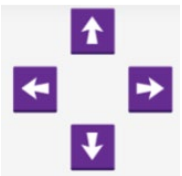
Computer Bug
Bug is the word used to describe an error in the way that a computer program works.

Command
An action such as, turn left'.

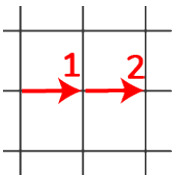
Debugging
To find and remove bugs (errors) from a computer program.

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

Key Images



Direction commands



Distance commands

Undo

Command layouts\algorithms

Rewind

Key Questions

What does a 2Go Command include?
A direction and a distance.

How do you work out the distance for a command?
Count the grid squares that the turtle must move.

If your commands take the turtle on the wrong route, how do you get back to the start?
Click on the rewind button and then debug the code.

How many commands can be in a program?
Up to 10 commands.

Purple Mash Computing Scheme: Knowledge Organiser

Year 2
The Internet

Key Learning

- To understand how the internet, the World Wide Web and a browser work together.
- To understand the different types of hardware used to access the internet and their functions.
- To understand the difference between a website and a webpage and use a school website to find information.
- To understand the difference between a browser and a search engine, and to practise searching for information safely.

Key Images

Browsers

Wi-Fi

Smart Device

Key Vocabulary

Browser
A program used for displaying and navigating between web pages.

Smart Device
A device, like a TV, phone, or watch, that can connect to the internet.

Home Page
Often the first page of a website.

Webpage
A single page of information on a website.

Internet
A way to send information from one device to another anywhere in the world.

Wi-Fi
A way to connect to the internet without wires.

Search Engine
A website that helps us find information on the internet. Example: Google or Kiddle.

World Wide Web
The web pages and documents you see when you are browsing online.

Key Questions

What is the difference between a website and a webpage?
A webpage is just one page on a website. A website is a collection of webpages.

What makes a device a smart device?
A smart device is something that is able to connect to the internet.

Can you explain what a browser does?
A browser is a tool for displaying and navigating between webpages.