COMPUTING: Knowledge, Skills and Understanding Progression Document

Computing Curriculum Aims

At Violet Way Academy, we aim to prepare our children for a rapidly changing technological world. Technology is everywhere and will play an important role in our pupils' lives now and in the future. We aim to model and educate pupils on how to use technology positively, responsibly and safely through our computing lessons and within the wider curriculum.

We choose to use Purple Mash Computing because it is a powerful, comprehensive, inclusive and accessible programme aligned to the National Curriculum and EYFS Framework, and beyond, with full schemes of work intended to facilitate teachers in achieving the very best outcomes for pupils, regardless of starting points. It exposes pupils to a wide variety of computing knowledge, skills, experiences and real-life scenarios which supports the notion of Cultural Capital; providing the foundations that lead to well-rounded global citizens. The learning for each year group in Purple Mash is broken into units covering three main components:
- Computer Science
- Information Technology
- Digital Literacy

All children will experience high-quality computing teaching, supported by a comprehensive Scheme of Work. Any children with identified SEND may have work additional to and different from their peers in order to access the curriculum dependent upon their needs. Within the units are opportunities for all children to make good progress and achieve, this includes supporting children through scaffolding and more structured activities or extending learning through open ended application of skills. The Purple Mash Computing Scheme of Work enables children to learn knowledge, skills and understanding, including subject-specific vocabulary, during structured tutorials and provides opportunities for them to master and apply their knowledge, skills and understanding in more open-ended scenarios.

Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression and build on and embed knowledge, skills and understanding. If children are keeping up with our computing curriculum, they are deemed to be making good or better progress. We monitor the impact of our computing curriculum through pupil voice, learning walks, reflective staff feedback and moderation.

Online Safety

We greatly value the use of technology in a safe and respectful manner. As well as teaching children about online safety through their computing lessons, we also take part in the National Safer Internet Day every year, to positively reinforce the key messages around staying safe online with pupils and parents. This allows us to implement an effective and engaging approach to online safety while meeting our safeguarding duties as outlined in the KCSIE September 2021 guidance. Parents are made aware of online safety issues through the school website, newsletters, home learning activities and in-school workshops.

EYFS Reception

Although the EYFS Framework (2021) does not make explicit reference to computing, at Violet Way Academy we recognise that learning about computing and technology is important for our Reception children. This will ensure that pupils enter Year 1 with a foundational of knowledge of computing. Rather than a scheme with set lessons, the early years resources are designed to integrate into the day-today routine and set-up of an early years setting with opportunities for using Mini Mash as part of the Early Years curriculum. Our Reception Computing Curriculum is designed to enable our youngest pupils to develop a familiarity with technology, digital equipment and vocabulary. The Purple Mash Scheme of Work for Reception is planned across all seven areas of learning (Communication and Language; Personal, Social and Emotional Development; Physical Development; Literacy; Mathematics; Understanding the World; and Expressive Art and Design). It is a flexible approach to meet the needs and interests of the children and provides teachers with lots of lesson ideas that support children's development of knowledge, skills and understanding Computing for Reception is centred around activities that focus on building children's listening skills, curiosity, creativity and problem solving, whilst introducing them to Purple Mash programmes and features, such as:

- 2Paint a Picture for creating digital pictures
- Mini Mash topic based picture stories to read
- Simple City for creating a familiar environment
- Slideshows for exploring topics of interest
- 2Design and 2Make to explore and create 3D model designs

In addition, the Computing scheme for Reception includes the development of early computing skills, such as mouse, keyboard, drawing skills, use of robot toys, how to look after a computer, individual login and safety and privacy online.

Computing at Violet Way in Reception means:
- taking a photograph with tablet or camera
- watching video clips and slideshows to support their learning across the curriculum
- listening to music and using digital technology to create their own music
- recording their voice (for singing, storytelling or building sentences verbally)
- following and creating basic instructions to make objects on screen move or direct vehicles
- exploring maps, jigsaws and accessing a variety of games to support their learning across all areas of learning
- searching for information on the internet
- using digital technology to support their learning (by planning models or recording their ideas, for example)
- exploring mechanical and digital toys

KS1 Computing Curriculum Overview

6-week Learning Unit blocks:	Learning Unit 1 Y1 Me and My Environment Y2 Healthy Me	Learning Unit 2 Y1 Castles Y2 The Man on the Moon	Learning Unit 3 Y1 Explorers Y2 Adventures in Africa	Learning Unit 4 Y1 Carnival of the Animals Y2 Fire of London		Learning Unit 5 Y1 Time Travellers Y2 Amazing Animals	Learning Unit 6 Y1 Our Town Y2 The Something
Year 1	**Unit 1.1 Online Safety and Exploring Purple Mash** Covering NC objectives: 1f) use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	**1.6 Animated story books** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content 1e) recognise common uses of information technology beyond school	**1.5 Maze Explorers** Covering NC objectives: 1a) understand what algorithms are and how they are implemented as programs on digital devices 1b) create and debug simple programs 1c) use logical reasoning to predict the behaviour of simple programs	**1.8 Spreadsheets** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**1.2 Grouping and sorting** Covering NC objectives: 1a) understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**1.9 Technology outside of school** Covering NC objectives: 1e) recognise common uses of information technology beyond school	**1.7 Coding** Covering NC objectives: 1a) understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 1b) create and debug simple programs 1c) use logical reasoning to predict the behaviour of simple programs 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content
Year 2	**2.1 Coding** Covering NC objectives: 1a) understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 1b) create and debug simple programs 1c) use logical reasoning to predict the behaviour of simple programs 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**2.2 Online Safety** Covering NC objectives: 1f) use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	**2.7 Making Music** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**2.5 Effective Searching** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content 1e) recognise common uses of information technology beyond school	**Unit 2.4 Questioning** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**2.3 Spreadsheets** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content	**2.6 Creating Pictures** Covering NC objectives: 1d) use technology purposefully to create, organise, store, manipulate and retrieve digital content

Predominant Areas of Computing: NB: most units will include aspects of all strands	Computer Science	Information Technology	Digital Literacy

Purple Mash Computing Scheme of Work: Knowledge Organisers

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

purple mash

Tools

Paint Projects   2Connect   2Count   2Explore
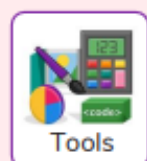
Key Vocabulary

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.

Icon
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.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2simple

Purple Mash Computing Scheme of Work: Knowledge Organisers

Unit: 1.1
Online Safety and Exploring Purple Mash

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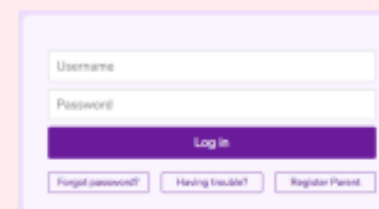A selection of programs which help you carry out different tasks.

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
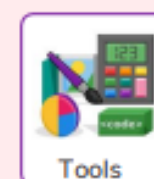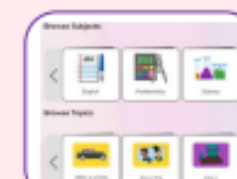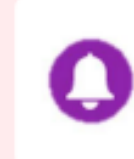
Log in Screen

Avatar

Save your work

Tools

Tools section of Purple Mash

Subjects & Topics

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.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2simple

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

purple mash
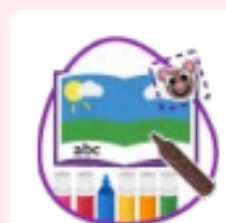
2Create a Story

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.

2 simple

Key Images
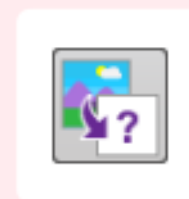
Open, close or share a file
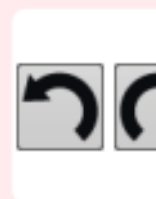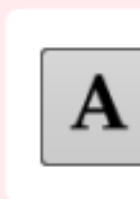
Plan out your story

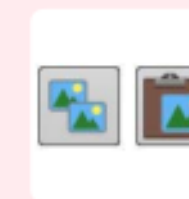Play your story

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.

2 simple

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

purple mash

2Go
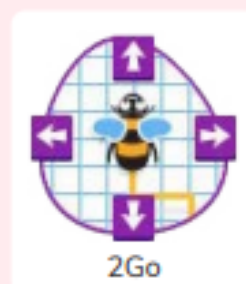
Key Vocabulary

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.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

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

purple mash

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.

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: 1.2
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

purple mash

2Do It Yourself

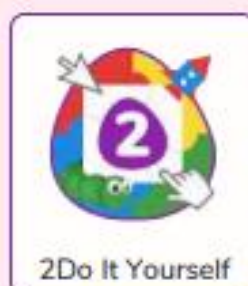### Key Vocabulary

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.

2 simple

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

purple mash

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.

2 simple

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

purple mash

2Dos
2Dos

Free code chimp

Tools
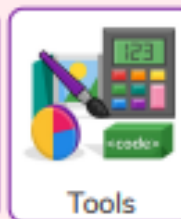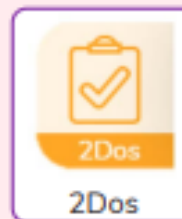
Key Vocabulary

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.'

2 simple

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.

2 simple

Y1 Teacher Progression Overview:

|	Computer Science			Information Technology	Digital Literacy	
Statement	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Create and debug simple programs.	Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Recognise common uses of information technology beyond school.	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
Outcome	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program.	Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.	When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.	Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.

Year 2 Computing Curriculum - – Purple Mash Knowledge Organisers for Teachers

Unit: 2.1
Coding

Key Learning

- To understand what an algorithm is.
- To create a computer program using an algorithm.
- To create a program using a given design.
- To understand the collision detection event.
- To understand that algorithms follow a sequence.
- To design an algorithm that follows a timed sequence.
- To understand that different objects have different properties.
- To understand what different events do in code.
- To understand the function of buttons in a program.
- To understand and debug simple programs.

Key Resources

purple mash

2Dos

Free code chimp

Tools
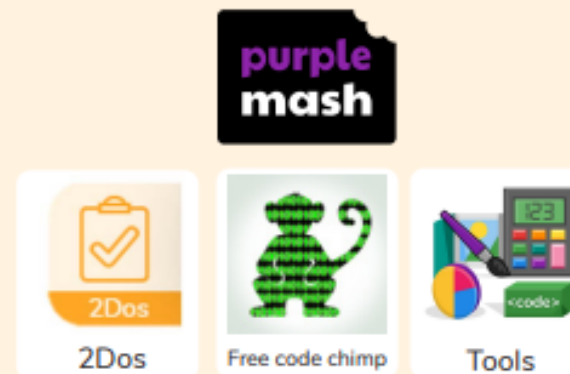
Key Vocabulary

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

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

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

Button
An object on the screen which can be clicked on.

Collision Detection
Detecting when two characters on the screen touch each other.

Debug/Debugging
Looking for any problems in the code, fixing and testing them.

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

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

Key Pressed
Pushing down a key on the device's keyboard.

Nesting
When you write a command inside something else e.g. a block of commands could be nested inside a timer.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware
2simple

Unit: 2.1
Coding

Key Vocabulary

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

Predict
Say what you think will happen when a piece of code is run.

Properties
All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.

Run
To cause the instruction in a program to be carried out.

Scale
The size of an object in 2Code.

Scene
A visual aspect of a program.

Sequence
When a computer program runs commands in order.

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

Test
When code is run to check that it works correctly.

Text
Typed letters on the screen.

Timer
Use this command to run a block of commands after a timed delay or at regular intervals.

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

Key Questions

What is an algorithm? Why is it useful in coding?

An algorithm is a step-by-step set of instructions used to solve a problem or achieve an objective. A clear algorithm can help you to create code that does what it is supposed to do.

Why is it important to know there are different object types?

Different object types can do different actions. For example, in 2Code, an animal object can do actions such as up, down and stop. A turtle goes forward, backward, pen down and pen up.

If you are good at coding, you don't need to debug. Is this true?

All coders need to debug to make sure that their program works correctly, and the code does what they intended. As you get better at coding, your programs will get more complex and debugging gets even more important.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware
2simple

Unit: 2.2
Online Safety

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.

Key Resources

Sharing

2Email

Key Vocabulary

Search
Look for information (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
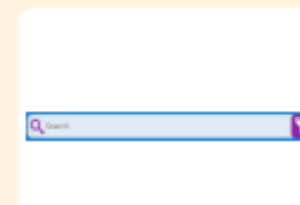The information about a person that exists on the Internet as a result of their online activity.
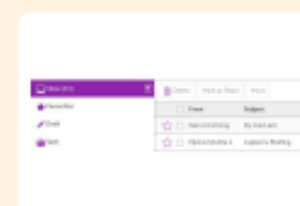

Unit: 2.2
Online Safety

Key Images

Display board

Search Bar

Inbox

Email sender

Email subject

Send the email
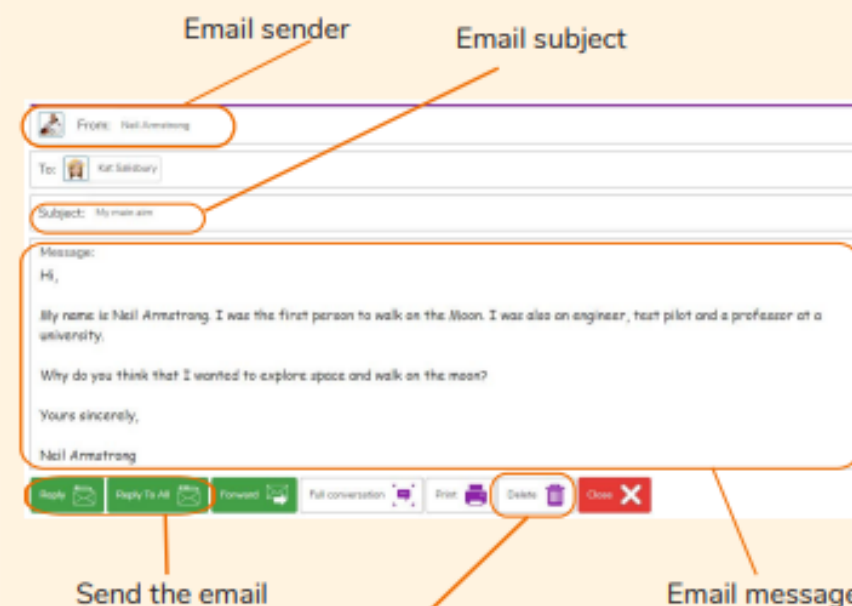
Delete the email

Email message

Key Questions

Why is a search bar useful?
The search bar on Purple Mash or on a website helps the user to quickly find the resources they are looking for.

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.

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.

Unit: 2.7
Making Music

Key Learning

- To make music digitally using 2Sequence.
- To explore, edit and combine sounds using 2Sequence.
- To edit and refine composed music.
- To think about how music can be used to express feelings and create tunes which depict feelings.
- To upload a sound from a bank of sounds into the Sounds section.
- To record and upload environmental sounds into Purple Mash.
- To use these sounds to create tunes in 2Sequence.

Key Resources

purple mash

2Sequence

Key Vocabulary

bpm
The number of beats played in a minute.

Instrument
An object or device for producing musical sounds.

Soundtrack
A recording of the musical accompaniment of a film.

Composition
A creative work, especially a poem or piece of music.

Music
Vocal or instrumental sounds (or both) played alone or combined.

Tempo
The speed at which a passage of music is, or should be, played.

Digitally
By means of digital or computer technology.

Sound Effects (Sfx)
A sound other than speech or music made artificially for use in a play, film, or piece of music.

Volume
How loud a piece of music is.

Key Images
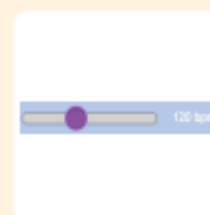
Open, save and share a piece of your music

Change the number of quavers in the music

Loop or unloop the piece of music

Play the composed tune

Changes the beats per minute in the music

Increase or decrease the volume of an instrument

Choose the digital instrument to use

Delete the music

Key Questions

What is meant by digital music?

Digital music is made using a computer or other device. Digital music allows the computer to copy the sound made by instruments and combine them together to make a piece of music.

How can I change how my music sounds?

You can change how your digital music sounds in many ways. One way is to increase the tempo of the music or vary the volume of each instrument in the piece.

What is it meant by the tempo of the music?

Tempo is measured in BPM, or beats per minute. One beat every second is 60 BPM.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

Unit: 2.5
Effective Searching

Key Learning

- To understand the terminology associated with searching.
- To gain a better understanding of searching on the Internet.
- To create a leaflet to help someone search for information on the Internet.

Key Resources

purple mash

Google
Ask
bing
YAHOO!
Aol.

Key Vocabulary

Internet
A global computer network providing a variety of information and communication facilities, consisting of interconnected networks and computers.

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

Search Engine
A program that searches for and identifies items on the World Wide Web.

Key Questions

How can I search the Internet?

The easiest way to search the Internet is using a search engine. The search engine crawls the Internet looking for answers to the search enquiry. Google is a popular search engine.

2simple

Unit: 2.4
Questioning

Key Learning

- To learn about data handling tools that can give more information than pictograms.
- To use yes/no questions to separate information.
- To construct a binary tree to identify items.
- To use 2Question (a binary tree database) to answer questions.
- To use a database to answer more complex search questions.
- To use the Search tool to find information.

Key Resources

purple mash

2Count   2Investigate   2Question

Key Vocabulary

Pictogram
A diagram that uses pictures to represent data.

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

Avatar
An icon or figure representing a person in a video game, Internet forum or other online format.

Question
A sentence written or spoken to find information.

Binary Tree
A simple way of sorting information into two categories.

Database
A computerised system that makes it easy to search, select and store information.

Data
Facts and statistics collected together that can provide information.

2simple

Unit: 2.3
Spreadsheets

Key Learning

- To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine.
- To learn how to copy and paste in 2Calculate.
- To use the totalling tools.
- To use a spreadsheet for money calculations.
- To use the 2Calculate equals tool to check calculations.
- To use 2Calculate to collect data and produce a graph.

Key Resources
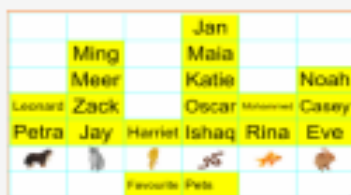
purple mash

9 × 3 =

2Calculate

Key Questions

Why would you copy and paste when using a spreadsheet?

You might want to rearrange the information in the spreadsheet. It will save you entering the same information many times if you want to repeat things in different cells.

How could a spreadsheet help you when you are planning some shopping?

You could use it to store the process and work out how much it would cost to buy the things that you wanted.

Look at the graph made in 2Calculate showing the class' favourite pets. Which is the most popular?

		Jan		
	Ming	Maia		
	Meer	Katie		Noah
Leonard	Zack	Oscar	Mohammed	Casey
Petra	Jay	Harriet	Ishaq	Rina	Eve

Favourite Pets

Key Vocabulary

Backspace key
Use this key to delete the character before the current cursor position.

Copy and Paste
A way to copy information from the screen into the computer's memory and paste it elsewhere without re-typing.

Columns
Vertical reference points for the cells in a spreadsheet.

Cells
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.

Delete key
Use this key to remove the contents of a cell.

Equals tool
Tests whether the entered calculation in the cells to the left of the tool has the correct answer in the cell to the right of the tool.

Image Toolbox
Use this to insert images into cells.

Lock tool
This tool prevents cell values being changed.

Move cell tool
This tool makes a cell's contents moveable by drag-and-drop methods.

Rows
Vertical reference points for the cells in a spreadsheet.

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.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2simple

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2simple

Unit: 2.6
Creating Pictures

Key Learning

- To learn the functions of the 2Paint a Picture tool.
- To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir).
- To recreate Pointillist art and look at the work of pointillist artists such as Seurat.
- To learn about the work of Piet Mondrian and recreate the style using the lines template.
- To learn about the work of William Morris and recreate the style using the patterns template.
- To explore surrealism and eCollage.

Key Resources

purple mash
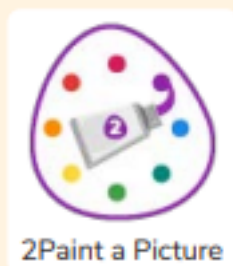
2Paint a Picture

Key Vocabulary

Impressionism
The impressionist movement began in the 1860s and became most popular in the 1870s and 1880s. It differed from the common art of the time because it wasn't religious art, showing scenes from religious stories or specific events, but was just intended to capture a scene at a moment. The art gave an 'impression' of the scene.

Palette
Within computer graphics, this is the range of colours or shapes available to the user.

Share
An instance of posting or reposting something on a social media website or application.

Pointillism
Pointillism was a development of impressionism. It was invented mainly by George Seurat and Paul Signac. Pointillist paintings are created by using small dots in different colours to build up the whole picture. Colours are placed near each other rather than mixed.

Surrealism
Explored the subconscious areas of the mind. The artwork often made little sense as it was usually trying to depict a dream or random thoughts.

Template
Something that serves as a model for others to copy.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

Key Images

Choose the style you want to paint in

Open, Save and Share your picture

Choose a background for your picture

Undo and redo

Zoom in and Zoom out

Outline options

Eraser and colour palettes

Fill tool and pen thickness

Key Questions

What are the main features of Impressionism?

Impressionism is a style of painting that focuses on the effects of light and atmosphere on colours and forms. Impressionist artists often used broken brush strokes.

What are the main features of Pointillism?

Pointillism is a painting technique developed by the artist George Seurat. It involves using small, painted dots to create areas of colour that together form a pattern or picture.

What are the main features of Surrealism?

Surrealistic art is characterized by dream-like visuals, the use of symbolism and collage images. Several prominent artists came from this movement, including Renee Magritte, Salvador Dali, and Max Ernst.

Need more support? Contact us:
Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

2 simple

Y2 Teacher Progression Overview:

	Computer Science			Information Technology	Digital Literacy	
Statement	**Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.**	**Create and debug simple programs.**	**Use logical reasoning to predict the behaviour of simple programs.**	**Use technology purposefully to create, organise, store, manipulate and retrieve digital content.**	**Recognise common uses of information technology beyond school.**	**Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.**
Outcome	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.	Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.	Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.	Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content