purple mash

Computing

Scheme of Work

Year 2 Overview

Y 2

Contents

Introduction

This document contains an overview of the units included in the Purple Mash Computing Scheme of Work for Year 2.

For detailed lesson plans and other information, see the documents for the individual units themselves.

Most lessons assume that children are logged onto Purple Mash with their own individual usernames and passwords, so their work will be saved in their own folders automatically and can be easily reviewed and assessed by the class teacher. If children have not used and logged onto Purple Mash before then they will need to spend some time before starting these lessons, learning how to do this. Children can be supported by having their printed logon cards (produced using Create and Manage Users) to hand.

Lesson plans also make use of the facility within Purple Mash to set activities for pupils which they can then complete and hand-in online (2Dos). This enables you to assess their work easily as well as distribute resources to all pupils. If children have not opened 2Dos before then they will need more detailed instructions about how to do this. A teacher's guide to 2Dos can be found in the teacher's section: 2Dos Guide.

If you are currently using a single login per class or group and would like to set up individual logins yourself, then please see our guide to doing so at Create and Mange Users. Alternatively, please contact support at support@2simple.com or 0208 203 1781.

To force links within this document to open in a new tab, right-click on the link then select 'Open link in new tab'.

Linking the lessons to curriculum objectives

At the end of this document you will find a breakdown showing how the units relate to the curricula of England, Wales, Northern Ireland and Scotland. Within each unit document is a section called Assessment Guidance with exemplars of how a child at emerging, expected and exceeding level of achievement could demonstrate this in their work through the unit. These statements could also be used for reporting.

This information can be used in association with the Purple Mash Data Dashboard to make and record judgements about children's outcomes and demonstrate progress over time.

For more information about the Data Dashboard see the Data Dashboard manual or view the videos within the Data Dashboard tool.

Differentiation

Where appropriate, guidance has been given on how to simplify tasks within lessons or challenge those who are ready for more stretching tasks.

Year 2 Whole Year Overview

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
YEAR 2	**Unit 2.1 Coding** **Number of Weeks –** 5 **Main Programs –** 2Code					**Unit 2.2 Online Safety** **Weeks** – 2 **Programs** - Writing Templates Display boards 2Respond (2Email)			**Unit 2.3 Spreadsheets** **Weeks** – 4 **Programs** – 2Calculate				**Unit 2.4 Questioning** **Weeks** – 5 **Programs** – 2Question, 2Investigate 2Calculate					**Unit 2.5 Effective Searching** **Weeks** – 3 **Programs** – Browser 2Quiz Writing Templates			**Unit 2.6 Creating Pictures** **Weeks** – 5 **Programs** – 2Paint A Picture Writing Templates					**Unit 2.7 Making Music** **Weeks** – 3 **Programs** – 2Sequence			**Unit 2.8 Presenting Ideas** **Weeks** – 4 **Programs** – 2Connect (Mind Map) 2Create a Story (ebook) 2Quiz Writing Templates			

Year 2 Unit Overview

Unit 2.1 – Coding

Lesson	Aims	Success Criteria
1	• To understand what an algorithm is. • To create a computer program using simple algorithms.	• Children can explain that an algorithm is a set of instructions. • Children can describe the algorithms they created. • Children can explain that for the computer to make something happen, it needs to follow clear instructions.
2	• To compare the Turtle and Character objects. • To use the button object. • To understand how use the Repeat command. • To understand how to use the Timer command.	• Children know that the Turtle and Character objects have different properties and move in different ways. They can begin to make choices about which object type to use. • Children are beginning to understand that the Repeat and Timer commands both make objects repeat actions but function differently and the type of object can affect which is the best command to use. • Children can include a button in their programs.
3	• To know what debugging means. • To understand the need to test and debug a program repeatedly. • To debug simple programs.	• Children can explain what debug (debugging) means. • Children have a clear idea of how to use a design document to start debugging a program. • Children can debug simple programs. • Children can explain why it is important to save their work after each functioning iteration of the program they are making.
4	• To create programs using different kinds of objects whose behaviours are limited to specific actions. • To predict what the objects will do in other programs, based on their knowledge of what the object is capable of. • To discuss how logic helped them understand that they could only predict specific actions, as that is what the objects were limited to.	• Children can create a computer program using different objects. • Children can predict what the objects in classmates' programs will do, based on my knowledge of the objects' limitations, e.g. a turtle can only move in specific ways. • Children can explain how they know that certain objects can only move in certain ways
5	• To use all the coding knowledge, they have learned throughout their programming lessons to create a more complex program that tells a story.	• Children can plan and use algorithms in programs successfully to achieve a result. • Children can plan and use algorithms in programs successfully to achieve the desired a result. • Children can code a program using a variety of objects, actions, events and outputs successfully.

Unit 2.2 – Online Safety

Lesson	Aims	Success Criteria
1	To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. 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.	• Children can use the search facility to refine searches on Purple Mash by year group and subject. • Children can share the work they have created to a display board. • Children understand that the teacher approves work before it is displayed. • Children are beginning to understand how things can be shared electronically for others to see both on Purple Mash and the Internet.
2	To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they aren't there in front of us. To open and send simple online communications in the form of email.	• Children understand how 2Repond can teach about how to use email. • Children can open and send an email to a 2Respond character. • Children have discussed their own experiences and understanding of what email is used for. • Children have discussed what makes us feel happy and what makes us feel sad?
3	To understand that information put online leaves a digital footprint or trail. To begin to think critically about the information they leave online. To identify the steps that can be taken to keep personal data and hardware secure.	• Children can explain what a digital footprint is. • Children can give examples of things that they wouldn't want to be in their digital footprint.

Unit 2.3 - Spreadsheets

Lesson	Aims	Success Criteria
1	Reviewing prior use of spreadsheets	• Children can explain what rows and columns are in a spreadsheet. • Children can open, save and edit a spreadsheet. • Children can add images from the image toolbox and allocate them a value. • Children can add the count tool to count items.
2	Copying and Pasting Totalling tools	• Children can use copying a pasting to help make spreadsheets. • Children can use tools in a spreadsheet to automatically total rows and columns. • Children can use a spreadsheet to solve a mathematical puzzle.
3	Using a spreadsheet to add amounts	• Children can use images in a spreadsheet. • Children can work out how much they need to pay using coins by using a spreadsheet to help calculate.
4	Creating a table and block graph	• Children can create a table of data on a spreadsheet. • Children can use the data to create a block graph manually.

Unit 2.4 – Questioning

Lesson	Aims	Success Criteria
1	To show that the information provided on pictogram is of limited use beyond answering simple questions.	• Children understand that the information on pictograms cannot be used to answer more complicated questions.
2	To use YES or No questions to separate information.	• Children have used a range of yes/no questions to separate different items.
3	To construct a binary tree to separate different items.	• Children understand what is meant by a binary tree. • Children have designed a binary tree to sort pictures of children.
4	Use 2Question (a binary tree) to answer questions.	• Children understand that questions are limited to 'yes' and 'no' in a binary tree. • Children understand that the user cannot use 2Question to find out answers to more complicated questions. • Children have matched the 2Simple Avatar pictures to names using a binary tree.
5	To use a database to answer more complex search questions. To use the search tool to find information.	• Children understand what is meant by a database. • Children have used a database to answer simple and more complex search questions.

Unit 2.5 – Effective Searching

Lesson	Aims	Success Criteria
1	To understand the terminology associated with searching.	• Children can recall the meaning of key internet terms. • Children have completed a quiz about the Internet.
2	To gain a better understanding about searching on the Internet.	• Children can identify the basic parts of a web search engine search page. • Children have learnt to "read" a web search results page. • Children can search for answers to a quiz on the internet.
3	To create a leaflet to help someone search for information on the Internet.	• Children have created a leaflet to consolidate their knowledge of effective Internet searching.

Unit 2.6 – Creating Pictures

Lesson	Aims	Success Criteria
1	To be introduced to 2Paint A Picture. To look at the impressionist style of art (Monet, Degas, Renoir).	• Children can explain what is meant by impressionist art. • Children can use 2Paint a Picture to create art based upon this style.
2	To recreate pointillist art and look at the work of pointillist artists such as Seurat.	• Children can explain what pointillism is. • Children can use 2Paint a Picture to create art based upon this style.
3	To look at the work of Piet Mondrian and recreate it using the Lines template.	• Children can describe the main features of Piet Mondrian's work. • Children can use 2Paint a Picture to create art based upon his style.
4	To look at the work of William Morris and recreate it using the Patterns template.	• Children can describe the main features of art that uses repeating patterns. • Children can use 2Paint a Picture to create art by repeating patterns in a variety of ways. • Children can combine more than one effect in 2Paint a Picture to enhance their patterns.
5	To explore surrealism and eCollage	• Children can describe surrealist art. • Children can use the eCollage function in 2Paint a Picture to create surrealist art using drawing and clipart.

Unit 2.7 – Making Music

Lesson	Aims	Success Criteria
1	To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence.	• Children understand what 2Sequence is and how it works. • Children have used the different sounds within 2Sequence to create a tune. • Children have explored how to speed up and slow down tunes. • Children understand what happens to the tune when sounds are moved.
2	To add sounds to a tune they've already created to change it. To think about how music can be used to express feelings and create tunes which depict feelings.	• Children have added sounds to a tune they've already created to change it. • Children have considered how music can be used to express feelings. • Children can change the volume of the background sounds. • Children have created two tunes which depict two feelings.
3	To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it into the Sounds section. To create their own tune using the sounds which they have added to the Sounds section.	• Children have uploaded and used their own sound chosen from a bank of sounds. • Children have created, uploaded and used their own recorded sound. • Children have created their own tune using some of the chosen sounds.

Unit 2.8 – Presenting Ideas

Lesson	Aims	Success Criteria
1	To explore how a story can be presented in different ways.	• Children have examined a traditional tale presented as a mind map, as a quiz, as an e-book and as a fact file. • Children know that digital content can be represented in many forms.
2	To make a quiz about a story or class topic.	• Children have made a quiz about a story using 2Quiz. • Children can talk about their work and make improvements to solutions based on feedback received.
3	To make a fact file on a non-fiction topic.	• Children have extracted information from a 2Connect file to make a publisher fact file on a non-fiction topic. • Children have added appropriate clipart. • Children have added an appropriate photo. • Children know that data can be structured in tables to make it useful.
4	To make a presentation to the class.	• Children can use a variety of software to manipulate and present digital content and information. • Children can collect, organise and present data and information in digital content. • Children can create digital content to achieve a given goal by combining software packages.

English National Curriculum Objectives (Key Stage 1)

National Curriculum Objective	Strand	Units
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Computer Science	2.1
Create and debug simple programs	Computer Science	2.1
Use logical reasoning to predict the behaviour of simple programs.	Computer Science	2.1
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Information Technology	2.3 2.4 2.5 2.6 2.7 2.8
Recognise common uses of information technology beyond school	Digital Literacy	2.5*
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.	Digital Literacy	2.2*

*And in other units when appropriate.