



# **Declarative and Procedural Knowledge**

## **Year 2**

# Contents

Introduction .....	3
Introduction to Purple Mash.....	4
Route Explorers .....	5
The Internet .....	6
Creating Pictures .....	7

# Introduction

It is important to note that for simplicity and to demonstrate strand coverage, units have been put into their 'best fit' strand as per the Scheme of Work Overview document.

## Key Stage 1

- In many units, children will be furthering online understanding and concepts of technology (DL) through making digital content (IT and CS)

## Key Stage 2

- Children will develop an understanding of the capabilities of the World Wide Web (CS) while searching online (IT).
- They will be developing their understanding of appropriate online behaviour (DL) skills while learning about searching the Internet (IT).

## Both Key Stages

- At all times children will be learning about using technology safely and respectfully (DL).
- In most units for all strands, children will be developing their general information technology skills (IT).
- This overlap, repetition and reinforcement helps give children a deeper understanding of the knowledge and skills across all strands, and of their integrated nature in the real world.

\*For more detailed information to assess pupils, see the assessment statements at the end of each unit and repeated in the Assessment document for each year group.

# Introduction to Purple Mash

<b>National Curriculum Links</b>	<b>Dominant objectives for this unit:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private.
----------------------------------	--

Declarative - By the end of the unit the students will know that:	Procedural – By the end of the unit the students will know how to:
<ul style="list-style-type: none"> <li>It is important to log in to a site, the importance of keeping passwords safe and the need to log out at the end of a session.</li> </ul>	<ul style="list-style-type: none"> <li>Access Purple Mash from home and school.</li> <li>Log out of Purple Mash.</li> <li>Give reasons why it is important to keep a password safe and not share it with other people.</li> </ul>
<ul style="list-style-type: none"> <li>An avatar is a virtual representation of a person suitable for use online.</li> </ul>	<ul style="list-style-type: none"> <li>Make and edit their own avatar.</li> </ul>
<ul style="list-style-type: none"> <li>The 2Do system is used to set work for children within Purple Mash.</li> </ul>	<ul style="list-style-type: none"> <li>Open 2Dos.</li> <li>Save 2Dos.</li> <li>Hand in 2Dos and communicate with their teacher via the 2Do.</li> </ul>
<ul style="list-style-type: none"> <li>Online sites have a main page called the <b>homepage</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Access the Purple Mash homepage when on the site.</li> </ul>
<ul style="list-style-type: none"> <li>Online sites often use an alert system to communicate with the user.</li> </ul>	<ul style="list-style-type: none"> <li>Access alerts within Purple Mash.</li> </ul>
<ul style="list-style-type: none"> <li>To move to a different activity in Purple Mash, you must first close the current one.</li> </ul>	<ul style="list-style-type: none"> <li>Close activities in Purple Mash.</li> </ul>
<ul style="list-style-type: none"> <li>Many online sites, including Purple Mash, have an area for an individual's work that is accessible only to the individual (and in Purple Mash to their teacher as well).</li> </ul>	<ul style="list-style-type: none"> <li>Access their work area.</li> <li>Save work in their work area.</li> <li>Locate and open work they have done previously in their work folder.</li> </ul>
<ul style="list-style-type: none"> <li>To access Purple Mash programs, you use the Tools area.</li> </ul>	<ul style="list-style-type: none"> <li>Open a specified tool.</li> </ul>
<ul style="list-style-type: none"> <li>You can access non-visible parts of a screen using scrolling.</li> </ul>	<ul style="list-style-type: none"> <li>Scroll up and down and from side to side where applicable.</li> </ul>
<ul style="list-style-type: none"> <li>You can use a physical or on-screen keyboard to type upper and lower-case letters and spaces.</li> </ul>	<ul style="list-style-type: none"> <li>Type upper- and lower-case letters and spaces using the device provided.</li> </ul>

# Route Explorers

<b>National Curriculum Links</b>	<b>Dominant objectives for this unit:</b> <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> <li>• Create and debug simple programs.</li> <li>• Use logical reasoning to predict the behaviour of simple programs.</li> </ul>
----------------------------------	--

Declarative - By the end of the unit the students will know that:	Procedural – By the end of the unit the students will know how to:
<ul style="list-style-type: none"> <li>• The combination of a direction and a distance is known as a command in 2Go.</li> </ul>	<ul style="list-style-type: none"> <li>• Input commands</li> </ul>
<ul style="list-style-type: none"> <li>• Commands can be input into 2Go to control the movement of a screen turtle in four directions.</li> </ul>	<ul style="list-style-type: none"> <li>• Input purposeful commands in 2Go to move the turtle in a specific direction towards a goal.</li> </ul>
<ul style="list-style-type: none"> <li>• Planning a route is important in order to input the correct commands.</li> </ul>	<ul style="list-style-type: none"> <li>• Use techniques such as finger movements to plan a route.</li> </ul>
<ul style="list-style-type: none"> <li>• Routes can be programmed to perform more than one command in a sequence.</li> </ul>	<ul style="list-style-type: none"> <li>• Input several commands into a sequential algorithm layout and run this code to move the turtle along the programmed route.</li> <li>• Reset the turtle to the starting position to re-run the code.</li> </ul>
<ul style="list-style-type: none"> <li>• A list of instructions for a route is the algorithm for the route.</li> </ul>	<ul style="list-style-type: none"> <li>• Plan the route by writing the algorithm first and then inputting the commands.</li> </ul>
<ul style="list-style-type: none"> <li>• Errors (bugs) occur because commands have been input incorrectly.</li> <li>• Fixing the errors is called debugging.</li> </ul>	<ul style="list-style-type: none"> <li>• Make logical attempts to debug code for routes.</li> <li>• Reset, debug and re-run the code to test routes.</li> </ul>

# The Internet

<b>National Curriculum Links</b>	<b>Dominant objectives for this unit:</b> <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Recognise common uses of information technology beyond school.</li> </ul>
----------------------------------	--

Declarative - By the end of the unit the students will know that:	Procedural – By the end of the unit the students will know how to:
<ul style="list-style-type: none"> <li>• The Internet is a global network of connected computers around the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the difference between the Internet and the World Wide Web, recognising that they describe different things.</li> </ul>
<ul style="list-style-type: none"> <li>• An internet connection allows people to communicate with others over the internet. This is commonly known as being online.</li> <li>• An internet connection can be made using wires or wirelessly.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain that wi-fi describes a wireless internet connection.</li> </ul>
<ul style="list-style-type: none"> <li>• A browser is used to access websites and webpages of the World Wide Web</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise a web browser.</li> </ul>
<ul style="list-style-type: none"> <li>• The World Wide Web refers to the documents and pages someone sees when using a browser.</li> </ul>	<ul style="list-style-type: none"> <li>• Find information on the school's website by viewing the different webpages.</li> </ul>
<ul style="list-style-type: none"> <li>• Smart devices are those that can connect to the internet.</li> </ul>	<ul style="list-style-type: none"> <li>• Decide whether a device is a smart device.</li> <li>• Give examples of smart devices.</li> </ul>
<ul style="list-style-type: none"> <li>• The 'front page' of a website is known as the home page</li> </ul>	<ul style="list-style-type: none"> <li>• Navigate to the Purple Mash homepage and to the school's website homepage.</li> </ul>
<ul style="list-style-type: none"> <li>• Webpages have links that, when clicked, display other webpages.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a link on a webpage of the school's website.</li> </ul>
<ul style="list-style-type: none"> <li>• Websites can be found using a browser that contains a search engine.</li> </ul>	<ul style="list-style-type: none"> <li>• Use keywords to search for information using a search engine.</li> </ul>

# Creating Pictures

<b>National Curriculum Links</b>	<b>Dominant objectives for this unit:</b> <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>
----------------------------------	--

<b>Declarative - By the end of the unit the students will know that:</b>	<b>Procedural – By the end of the unit the students will know how to:</b>
<ul style="list-style-type: none"> <li>• Digital art tools usually have a choice of painting effects. Painting effects can be combined to help a user make pictures of varying styles.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore the range of painting effects in 2Paint.</li> <li>• Observe how the painting effects give different results.</li> <li>• Produce digital images in traditional art styles using digital painting effects.</li> </ul>
<ul style="list-style-type: none"> <li>• The size of an onscreen painting tool brush stroke can be manipulated.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the brush tool slider to change the size of brush strokes to achieve the desired effects.</li> </ul>
<ul style="list-style-type: none"> <li>• Intensity of colours can be manipulated digitally.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the dilute tool to manipulate the intensity of any selected colour.</li> </ul>
<ul style="list-style-type: none"> <li>• Outline features in a digital art program help a user compose an image.</li> </ul>	<ul style="list-style-type: none"> <li>• Make use of outline features, such as selecting, resizing, and editing outlines, to enhance their digital art.</li> </ul>