purple mash

Declarative and Procedural Knowledge

Year 3

Contents

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 behaviour online (DL) skills while learning how to search 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

National Curriculum Links	Dominant objectives for this unit: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

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:
• 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.	• Access Purple Mash from home and school. • Log out of Purple Mash. • Give reasons why it is important to keep a password safe and not share it with other people.
• An avatar is a virtual representation of a person suitable for use online.	• Make and edit their own avatar.
• The 2Do system is used to set work for children within Purple Mash.	• Open 2Dos. • Save 2Dos. • Hand in 2Dos and communicate with their teacher via the 2Do.
• Online sites have a main page called the **homepage**.	• Access the Purple Mash homepage when on the site.
• Online sites often use an alert system to communicate with the user.	• Access alerts within Purple Mash.
• To move to a different activity in Purple Mash, you must close the current activity.	• Close activities in Purple Mash.
• 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).	• Access their work area. • Save work in their work area. • Locate and open work they have done previously in their work folder.
• To access Purple Mash programs, you use the Tools area.	• Open a specified tool.
• You can access non-visible parts of a screen using scrolling.	• Scroll up and down and from side to side where applicable.

Route Planners

National Curriculum Links	Dominant objectives for this unit:
	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

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:
• The combination of a direction and a distance is known as a command in 2Go.	• Input commands
• Commands can be input into 2Go to control the movement of a screen turtle in four directions.	• Input purposeful commands in 2Go to make the turtle move in a particular direction towards a goal.
• The turtle can be set to rotate by angles of 90° or 45° both clockwise and anticlockwise.	• Input commands that rotate the turtle to face the desired direction for movement using both 90° and 45° angles.
• Planning a route is important to ensure the correct commands are input.	• Use techniques such as finger movements to plan a route.
• A list of instructions for a route is called an algorithm.	• Plan the route by first writing the algorithm and then inputting the code commands.
• Routes can be programmed to perform more than one command in a sequence.	• Input several commands into a sequential algorithm layout and run this code to move the turtle along the programmed route. • Reset the turtle to the starting position to re-run the code.
• Routes can be programmed to repeat a sequence of commands a set number of times.	• Use the repeat algorithm layout for 2Go commands. • Anticipate the effect of the repeat and use logical reasoning to decide upon when this layout is useful to accomplish a task.
• Errors (bugs) occur because commands have been input incorrectly. • Fixing the errors is called debugging.	• Make logical attempts to debug code for routes. • Reset, debug and re-run the code to test routes.

Email

National Curriculum Links	Dominant objectives for this unit:
	• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • Understand computer networks, including the Internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration.

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:
• There are different methods of communication and they each have strengths and weaknesses.	• Explain the advantages and disadvantages of different communication methods. • Choose an appropriate communication method for a task.
• Emails are a form of digital communication. • They can be sent and received almost instantly to anyone with an email address.	• Make use of 2Email to communicate within school.
• Common features of email software are the inbox, the 'To' address field, the sender email address, the subject, the message text, compose and reply functions.	• Make use of these common features of email software to communicate digitally.
• Alerts can be used to notify a person that they have unread email.	• Check alerts for new messages and respond to these.
• Address books can be saved in the email software. This provides a convenient way to send emails without typing the full email address each time.	• Use the address book within 2Email to find contacts. • Send emails to multiple contacts using the address book.
• Pictures, documents and other file types can be attached to emails.	• Identify the attachment icon. • Select files to attach to an email and send. • Be cautious of emails that have attachments. • Discuss the advantages and disadvantages of being able to send attachments with emails.
• There are risks related to use of email.	• Recognise a concerning email/contact. • Identify who a trusted contact is. • Report any concern to a trusted adult and use the report to teacher feature in 2Email. • Consider consent when sharing content digitally. • Recognise personal and private information and know what is not appropriate to share with the recipient.

Branching Databases

National Curriculum Links	Dominant objectives for this unit:
	• Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

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:
• A database is a collection of data organised in a way that it can be searched, and information found easily.	• Explain what a database is. • Provide examples of common uses of a database such as the school's attendance database.
• Branching databases are structured using binary choices. • A binary question is one that can be answered with 'yes' or 'no'.	• Identify binary questions that could be used to sort items. •
• When using a binary database, the questions eliminate data until just one record is left, the item can then be identified.	• Use a binary database in 2Question to identify items.
• Branching databases can be created using programs such as 2Question.	• Add records to a 2Question database then sort the record using binary questioning to create the database.
• It is important to test and debug when creating branching databases so that it works as intended.	• Work through all routes of a branching database to test whether it works as intended. • Identify and fix bugs in the database.