Declarative and Procedural Knowledge

Year 6

Contents

Introduction

The Declarative and Procedural Knowledge documents are designed to support teachers in understanding the intended learning outcomes of each unit. They outline the specific knowledge and skills that children should acquire and demonstrate by the end of their learning.

- Declarative Knowledge sets out what children will ***know***. This includes facts, concepts, definitions, and key ideas that form the foundation of the unit.
- Procedural Knowledge sets out what children will ***be able to do***. This focuses on the skills and processes children should develop and apply when using technology.

These documents are used to:

- Provide teachers with a clear overview of learning expectations for each unit.
- Ensure consistency of teaching and progression of knowledge and skills across year groups.
- Support planning, teaching, and assessment by highlighting the essential outcomes to focus on.
- Reinforce the balance between understanding (knowing) and application (doing) in computing.

This document aims to help teachers see the bigger picture of what children will learn, how they will apply it, and how these elements connect across the computing curriculum.

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 children **will know that**:	**Procedural** – By the end of the unit the children **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.
• To access activities related to a specific topic, you can use the Topics area.	• Find activities on a specified topic.
• You can access non-visible parts of a screen using scrolling.	• Scroll up and down and from side to side where applicable.
• Purple Mash includes collaborative tools.	• Recommend a tool to use for collaborative group or class work.

Networks

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 children **will know that**:	**Procedural** – By the end of the unit the children **will know how to**:
• A network describes a group of connected computers that can share information and hardware resources.	• Identify types of computer networks locally and globally. • Explain the hardware resources that a network might share.
• LAN and WAN are different kinds of networks,	• Explain the difference between LAN and WAN.
• Certain hardware is required to create a network.	• Create a network diagram that includes hardware such as a router and different connected devices and peripherals.
• Networks can be wired or wireless or a combination of both.	• Identify the terms Wi-Fi, mobile data and 5G as pertaining to wireless network connections.
• The difference between the World Wide Web and the Internet.	• Describe the difference between the Internet and World Wide Web giving examples of the services that both provide.
• Web browsers are used to access the World Wide Web.	• Give examples of web browser tools.
• The existence of networks has opened online communication.	• Give examples of online communication. • Give safety tips related to online communication
• Internet filtering and censorship are both used to make parts of the internet less accessible for different reasons.	• Explain the differences between internet filtering and censorship and why they are used.

Graphing

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 children **will know that**:	**Procedural** – By the end of the unit the children **will know how to**:
• Graphing helps to make sense of datasets and draw conclusions related to the collected data	• Create a variety of graphs and interpret these to draw conclusions.
• There are different types of graphs. The data and the question that needs answering will determine the best graph type to produce.	• Create a variety of graph types and determine the best format to represent specified data.
• Comparative bar charts can be used to visually compare several datasets.	• Create a comparative bar chart using the 2Graph tool. • Present the graph with a title, key and axis labels.
• Graphs can be exported from a graphing tool such as 2Graph and imported into other documents.	• Export graphs from 2Graph and import them into a 2Publish file.
• Pie charts represent data as parts of a whole.	• Use 2Graph and 2Calculate to create pie charts and then interpret what they show. • Compare the use of each tool in relation to graph production.
• Line graphs are used to represent the relationship between two variables as they change over time.	• Decide when a line graph would be the most appropriate graphing format. • Create line graphs and use a graphing tool to add titles, labels and select the best scale for display. • Create line graphs showing multiple datasets and use these to draw conclusions about the data.

Blogging

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 children **will know that**:	**Procedural** – By the end of the unit the children **will know how to**:
• A blog is a regularly updated webpage, written about a particular topic.	• Give examples of topics for existing or prospective blogs.
• Blogs consist of several blog posts.	• Create a blog post.
• A well written blog post has certain features that make the blog clear and easy to understand and increase reader engagement.	• Plan the hook, look and feel, conclusion and reader engagement for a blog post.
• The 'hook' draws the reader into the blog.	• Use an appropriate hook for a blog post by including either a quote, a story, a question or an observation to grab the reader's interest.
• The look and feel of a blog post makes it clear for the reader to access the information.	• Write a blog post that is easy to follow, uses lists or bullets, bolds key information and uses an appropriate conversational style.
• The conclusion of a blog post ties the information in the post together.	• Write a conclusion that summarises the main points of the post and might give the reader advice.
• The process of writing a blog post requires planning, drafting, revising and editing before publication.	• Follow the plan, draft, revise and edit process before publishing a blog post.
• Engaging with readers is crucial to the success of a blog.	• Read and respond to comments on their blog post. • Use commenting to increase engagement and guide future blog posts.
• Moderation exists to make the blogging environment a safe place for its readership and authors.	• Decide whether content conforms to appropriate netiquette guidance. • Report posts or comments that violate community or legal guidelines.

Data Detectives

National Curriculum Links	**Dominant objectives for this unit:** • Select, use and combine a variety of software 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 children **will know that**:	**Procedural** – By the end of the unit the children **will know how to**:
• A database contains data organised in such a way that it can be queried to find useful information.	• Identify tables, records and fields. • Explain the data types contained within each field on a record. • Identify any format types applied to fields. • Use query tools to find useful information.
• Query tools exist to help users of a database find information from data stored within it.	• Use the filter tool to create conditions. • Use the grouping tool to group related information together as part of a query. • Use the calculate tool to apply calculations to selected data that provides meaningful results. • Use the sort tool to change the order records are presented according the field selected and the value order (increase/decrease).
• Chart tools can be used to make graphs from data contained within a database.	• Use the chart tool to select specific fields from a database for the x and y values on a graph. • Select the most appropriate graph type to display selected data so it makes sense in relation to a query given.
• Some databases will need multiple tables of data.	• Identify differences in data held in individual tables that make a complete database. • Explain why the data can't be all held on one table.
• Queries can be created that query data from multiple tables.	• Link tables together by using a common field. • Produce queries that query data from linked tables.
• Bespoke multiple conditions can be made that help a user find the exact information being asked.	• Create multiple condition and can join those using the AND/OR operator. • Use the AND/OR operator correctly and recognise the difference between the two and the impact this has on results when run. • Use brackets to contain multiple conditions and apply a general condition that applies to all conditions made.