Declarative and Procedural Knowledge

Year 5

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 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 to 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.
• 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.

Quizzing

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**:
• There are different types of quiz, suitable for different purposes.	• Select the best type of quiz to make for the task.
• Within 2Quiz, there are different types of quiz questions, suitable for different purposes.	• Select the most suitable type of quiz question based on topic and variety.
• The success of a quiz can be determined by considering the level, interests and capability of the audience, the subject matter, the enjoyability, visual variety and feedback to the user.	• Design successful quizzes that meet a specific brief by making use of the full functionality within 2Quiz.
• Additional features and enhancements, including title screens, feedback screens, and content screens can maximise the success of a quiz.	• Explore the additional features, selecting which to use and how to make best use of these.
• Settings, including quiz style, time limits, feedback settings and feedback sounds change the look and feel of a quiz.	• Explore the settings, selecting which to use to create the best outcome for a quiz.

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 contains a set of data that can be searched and sorted to retrieve information.	• Use the functionality of the 2Investigate database tool to work with data.
• A table-based database contains records and fields.	• Identify, create and edit records and fields of a database.
• Database tools support interpreting data using functionality including sorting, filtering, grouping and searching.	• Sort, group and arrange information in a database. • Search for information in a database. • Answer questions involving the interrogation of a database.
• Collaborative databases allow multiple people to work on one set of data at the same time.	• Add records to a collaborative database. Interrogate the data of a collaborative database.
• A well-designed database has built-in validation to ensure correct data formatting.	• Design a database with validation included.
• Queries can be built using the database tools to answer specific questions about the data.	• Use the query builder to specify conditions for the data returned. • Use conditional operators correctly when building a database query.
• Some table-based databases have multiple tables of related data. These can be linked on common fields to build complex queries across multiple tables.	• Build complex queries across multiple tables to answer questions about the data.
• Databases support the production of automated reports using fields within the data.	• Produce automated reports using fields within the data.

Game Creator

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**:
• There are criteria which determine the playability of a video game.	• Evaluate the playability of a video game.
• 3D games can be made using the 2DIY 3D tool.	• Make a 3D game using the key functions of the 2DIY 3D game creator tool.
• To maximise playability, it is important to plan and design a game before making it.	• Use a design document to plan the theme and aim, characters and game world, game features, timing, character movement and interaction for a 3D game.
• The visual properties of a game should fit with the theme and add a feeling of immersion to the experience.	• Choose and design appropriate textures for the game world walls, floors, lighting, hazards and scenery.
• The audio properties of a game should fit with the theme and add a feeling of immersion to the experience.	• Choose or compose appropriate sound effects and music for the game.
• The design of baddie sprites and collectable quest items is a key aspect of game creation.	• Design the collectable quest items and add movement, sound effects and actions. • Consider where to place the collectable quest items so it is possible to finish the game. • Place sprites in the game in such a way as to provide challenge but not make it impossible to play. • Select appropriate penalties for encountering an enemy.
• It is important to give the player good instructions to enable them to enjoy playing the game.	• Create useful instruction screens for players.
• Evaluation is important so a game can be improved.	• Evaluate games made by their peers using given criteria. • Read evaluations of their game from others. • Make appropriate improvements to their game.