COMPUTING YEAR 3/4

What I will know by the end of the

key stage

I will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

I will use sequence, selection, and repetition in programs; work with variables and various forms of input and output. I will use logical reasoning to explain how some simple

algorithms work and to detect and correct errors in algorithms and programs.

I will 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.

I will use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

I will 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. I will use technology safely, respectfully and responsibly; recognise

acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

What I should already know - Understand selection in computer programming. • Understand how an IF statement works. • Understand how to use coordinates in computer programming. • Understand the 'repeat until' command. • Understand how an IF/ELSE statement works. • Understand what a variable is in programming. • Use a number variable. • Create a playable game.

Understand how children can protect themselves from online identity theft. • Understand that information put online leaves a digital footprint or trail and that this can aid identity theft. • Identify the risks and benefits of installing software including apps. • Understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. • Identify appropriate behaviour when participating or contributing to collaborative online projects for learning. • Identify the positive and negative influences of technology on health and the environment. • Understand the importance of balancing game and screen time with other parts of their lives.

Format cells as currency, percentage, decimal to different decimal places or fraction. • Use the formula wizard to calculate averages. • Combine tools to make spreadsheet activities such as timed times tables tests. • Use a spreadsheet to model a real-life situation. • Add a formula to a cell to automatically make a calculation in that cell.

Recall and Remember!

Add information to your knowledge mind map regularly to help you to reflect on, and remember what you have learnt throughout the unit. At the end of the unit, work in a small group to create a fun quiz on purple mash for your friends to complete! Alternatively, have a go at the Purple Mash Quizzes for these units online!

Skills I may use from other subjects

Maths: Use my knowledge of measurement, graphs and tally charts.

Literacy: I can use my reading and comprehension skills to further my knowledge.

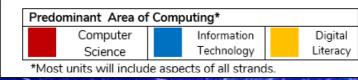
Science: Use my knowledge of observations and collecting data.

Key Skills I will learn and use

- I will be able to analyse problems.
- I will give opinions and respond to ideas.
- I will ask questions and discuss with my peers.

I will gain an understanding of the principles and concepts of computer science.

Key Computing Concepts



Animation To decide what makes a good, animated film or cartoon and discuss favourite animations. To learn how animations are created by hand. To find out how 2Animate animations can be created in a similar way using technology. To learn about onion skinning in animation. To add backgrounds and sounds to animations. Introducing 'stop motion' animation.

To input simple instructions in 2Logo

To use 2Logo to create letter shapes

To use and build procedures in 2Logo.

Logo

Writing for different audiences

To learn the structure of the language of 2Logo.

To share animation the class blog.

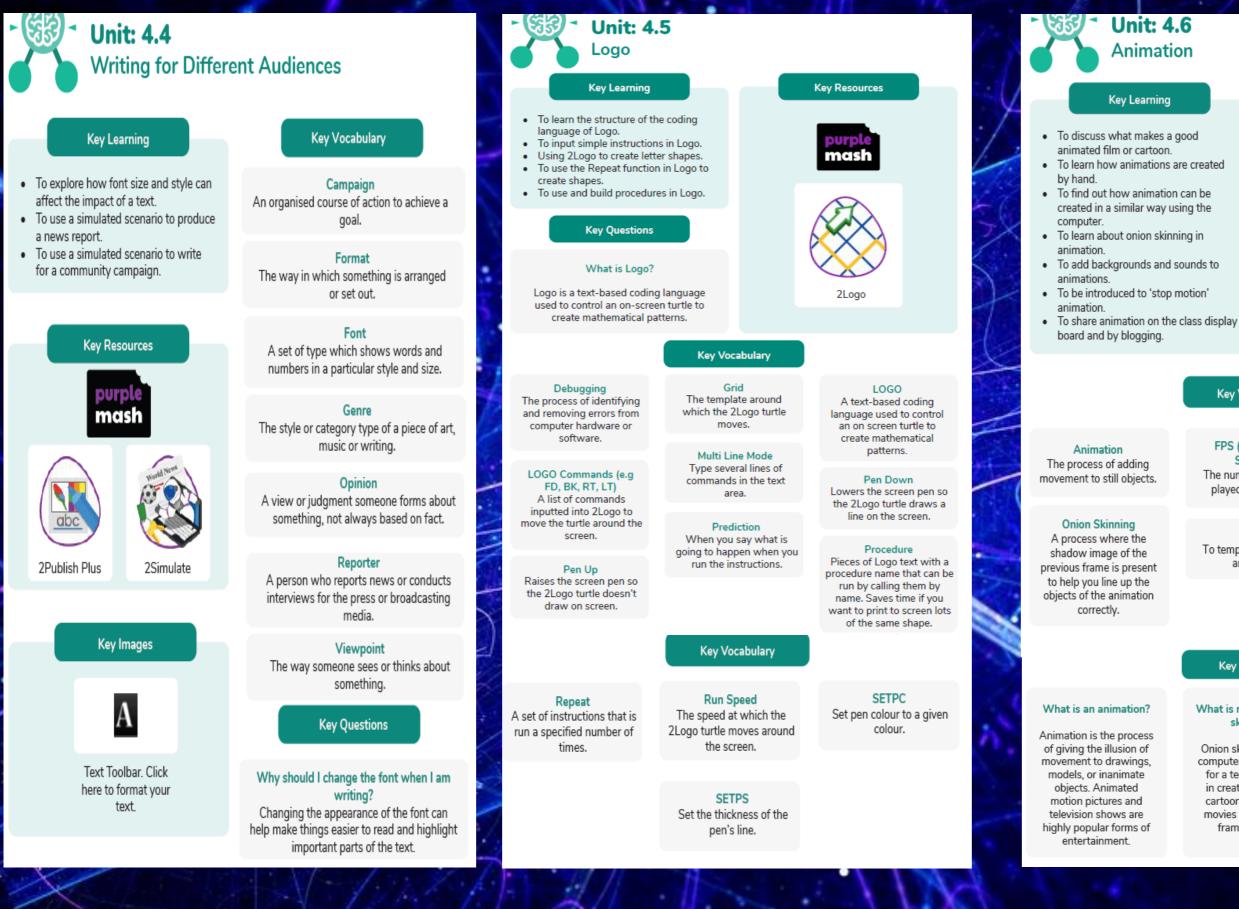
Opportunities for teaching diversity, equality and expanding cultural capital: A visit to a local museum of computing. Significant people - Computing pioneers embedded in subject journey. E-safety champions Internet Safety Day Computing club

What I will learn by the end of the units:

To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign.

To use the Repeat command in 2Logo to create shapes

COMPUTING - YEAR 3/4 KNOWLEDGE ORGA



Key Resources





2Animate

Key Vocabulary

FPS (Frames Per Second) The number of frames played per second.

Pause To temporarily stop the animation.

Stop motion

Frame

A single image in an

animation.

A technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement.

Key Questions

What is meant by onion skinning?

Onion skinning is a 2D computer graphics term for a technique used in creating animated cartoons and editing movies to see several frames at once.

What is meant by stop motion animation?

Stop motion animation is a filming technique in which objects (such as clay models) are photographed in a series of slightly different positions so that the objects seem to move.