

COMPUTING YEAR 5/6

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 have already learnt:

Design a playable game with a timer and a score. • Plan and use selection and variables. • Understand how the launch command works. • Use functions and understand why they are useful. • Understand how functions are created and called. • Use flowcharts to create and debug code. • Create a simulation of a room in which devices can be controlled. • Understand how user input can be used in a program. • Understand how 2Code can be used to make a text-adventure game. Identify benefits and risks of mobile devices broadcasting the location of the user/device. • Identify secure sites by looking for privacy seals of approval. • Identify the benefits and risks of giving personal information. • Review the meaning of a digital footprint. • Have a clear idea of appropriate online behaviour. • Begin to understand how information online can persist. • Understand the importance of balancing game and screen time with other parts of their lives. • Identify the positive and negative influences of technology on health and the environment. Use a spreadsheet to investigate the probability of the results of throwing many dice. • Use a spreadsheet to calculate the discount and final prices in a sale. • Use a spreadsheet to plan how to spend pocket money and the effect of saving money • Use a spreadsheet to plan a school charity day to maximise the money donated to charity.

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:

Blogging

To identify the purpose of writing a blog.
To identify the features of a successful blog.
To plan the theme and content for a blog.
To understand how to write a blog and a blog post.
To consider the effect upon the audience of changing the visual properties of the blog.
To understand how to contribute to an existing blog.
To understand how and why blog posts are approved by the teacher.
To understand the importance of commenting on blogs.

Text Adventures

To find out what a text adventure is.
To use 2Connect to plan a story adventure.
To make a story-based adventure using 2Create a Story.
To introduce an alternative model for a text adventure which has a less sequential narrative.
To use written plans to code a map-based adventure in 2Code.

Networks

To learn about what the Internet consists of.
To find out what a LAN and a WAN are.
To find out how the Internet is accessed in school.
To research and find out about the age of the Internet.
To think about what the future might hold.

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.

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.

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!

Key Questions

What is a blog?

A blog is a website or webpage that is regularly updated by the author. A blog also allows the reader to post comments or opinion based on what is written.

What can a blog be about?

A blog can be written about any subject. You could write a blog about school such as information about the subject you are studying. Alternatively, you could write a blog about your favourite team or movie.

How are the audience involved in a blog?

A key feature of blogs is that the audience can leave a comment or opinion about what they have read on the blog.

What is a text based adventure?

A text based adventure is a type of game that uses text rather than graphics to tell the story. The player normally selects the next move from a series of text based options.

Why is it important to plan a text based adventure?

Text based adventures can often be complicated and give the player lots of options about what to do next. Planning the game ensures the player doesn't make a decision that has no outcome.

What is the difference between the Internet and the World Wide Web?

The Internet is a global network of networks while the Web, also referred formally as the World Wide Web (www) is collection of information which is accessed via the Internet.

What is the difference between a LAN and a WAN?

Both are networks that connect computers together. A LAN (Local Area Network) is normally for computers connected less than 1KM distance, whilst a WAN (Wide Area Network) extends over a large geographical area.

Key Vocabulary

Approval
The act of acknowledging something is appropriate.

Archive
In this case, where older blog or vlog posts are stored.

Blog
A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

Collaborate
Work jointly on an activity or project.

Commenting
To express an opinion or reaction in speech or writing.

Blog post
A piece of writing or other item of content published on a blog.

Vlog
A personal website or social media account where a person regularly posts short videos.

Text-based Adventure
A computer game that uses text instead of graphics.

Debug\ Debugging
Fixing code that has errors so that the code will run the way it was designed to.

Sprite
A computer graphic which may be programmed to move on-screen.

Selection
When selection is used, a program will choose a different outcome depending on a condition.

Function
In this context, a section of code that gets run when it is called from the main code. A function in a program is usually a piece of code that gets run lots of times.

Key Resources

purple mash



2Create a Story



2Connect



2Blog



2Connect

Hub\Switch

The connection point for networks where data packets from many locations converge and are then sent out to different devices.

Internet

A global computer network providing a variety of information and communication facilities consisting of interconnected networks using standardized communication protocols.

Local area network (LAN)

A computer network that links devices within a building or group of adjacent buildings, especially one with a radius of less than 1 km.

Router

A device which forwards data packets to the appropriate parts of a computer network.

World Wide Web

An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

Wi-Fi

A facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.

Network

Several interconnected computers, machines, or operations.

Wide area network (WAN)

A collection of local-area networks (LANs) or other networks that communicate with one another over a large physical area or even globally.

Key Computing Concepts

Predominant Area of Computing*

	Computer Science		Information Technology		Digital Literacy
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*Most units will include aspects of all strands.



Create an adventure story in 2Create a Story



Add sound to the story



Plan out your story



Choose a background