

Computing for Year 1

Year 1 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
Recognise warning signs while online and know how to get help Accessing the internet in an age-appropriate way Know what information should be kept private Know how to behave appropriately online Know the rules for keeping safe online	Logging in Typing Keyboard skills Simple data handling – Math links Explore the creation of a simple music track – music links
Spring Term – Computer Science Focus: Algorithm - a set of instructions in everyday language	
Spring 1 - Consolidation Development of directional language Debugging BeeBot activities when things go wrong Problem solving Following instructions Discuss and plan simple algorithm	Spring 2 – new learning Plan a simple algorithm Create a simple algorithm Predict the outcome of a simple algorithm Debug a simple algorithm. Instructional (algorithm) writing
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
Logging in Typing skills The introduction of the microchip and how it has changed our lives- research Jack Kilby & Robert Noyce Search using digital tech and key words Know why we use passwords. Understand that people own work online	<i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content (NC 2014)</i> Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year Project ideas: Personal presentation – All About me Profile of Information Technology Pioneer Animated Stories - Purplemash Unit1.6

Computing for Year Two

Year 2 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
Understand that people might behave and communicate differently online. Know that it is OK to say “no” Think carefully before adding information about myself online. Can recognise bullying behaviour. Explain how we can stay safe online in different situations and get help if we need it	Logging in Typing Keyboard skills Introduction to word processing Introduction to creative multimedia – sound, pictures and film Simple graphs and charts Branching databases
Spring Term - Computer Science Focus: Program - a set of precise instructions in for a computer	
Spring 1 – Consolidation of algorithms Development of directional language Debugging BeeBot activities when things go wrong. Problem solving Following instructions Discuss and plan simple algorithms	Spring 2 – introduction to programs and events Plan a simple program. Create a simple program. Predict the outcome of a simple program. Debug a simple program. Recording algorithms (instructions)
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
Logging in Typing Keyboard skills Searching on/using the WWW and understanding if information is real or imaginary. Research Tim Berners Lee: how did he develop technology. Understand how computers communicate with each other using the internet and local networks.	<i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content (NC 2014)</i> Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year. Project ideas: Literacy – create a story using PurpleMash. 2Publish/2Create a story to combine sound, image and video. Science – create a branching database linked to your topic e.g. living things and their habitats using. Purple Mash 2Question

Computing for Year 3

Year 3 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
<p>Talk about digital footprint and what it means. Recognise that online identities can be different to real world identities. Understand the concepts of trust, likes and feelings while online. Know that people can overshare information that should be kept private. Recognise the impact of people being unkind online. Develop a healthy balance between online and real-life activity</p>	<p>Logging in Typing Keyboard skills Develop word processing skills. Introduction to creative multimedia – sound, pictures and film Simple graphs and charts Branching databases</p>
Spring Term – Computer Science CS Experience Unit – Weather Watchers	
<p>Spring 1 – In this unit, students will be introduced to programming and data in Scratch. They will explore how programs are a set of instructions that computers follow to complete a task. Later in the unit, students will compare different types of weather data and modify a program to include variables.</p>	<p>Spring 2 – Children will learn what a micro:bit is and understand its features. They will program the micro:bit to measure temperature, light and sound levels and record the data. Transfer skills between different software</p>
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
<p>Logging in Typing skills Research Ada Lovelace & Charles Babbage; how did they develop technology. How do search engines help us find information Importance of strong passwords and how to share information safely. Know how to save work to a specific location.</p>	<p><i>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 (NC 2014)</i></p> <p>Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year.</p> <p>Project ideas: Literacy - create a multimedia presentation/eBook, with a title page, incorporating images, sounds and text. - create an animated story using 2Create a story to combine sound, image and video. Science - create a branching database linked to your topic e.g. plants.</p>

Computing for Year 4

Year 4 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
<p>Discuss Digital footprint and online vs real life identity.</p> <p>Respect others while online and be aware of how online behaviour and content can impact on others.</p> <p>Know that anyone can search online profiles for information.</p> <p>Focus on Online bullying and how it may affect others.</p> <p>Discuss positives and negatives to using technology</p>	<p>Typing</p> <p>Continue to develop word processing skills.</p> <p>Introduction to spreadsheets and graphing</p> <p>Representing data</p> <p>Animation</p>
Spring Term – Computer Science CS Experience Unit – The Me Project	
<p>Spring 1 – In this unit, students will explore the basics of Scratch, personalise sprites and develop programs to create an animation that tells a story all about themselves! They will explore the basics of animation by creating storyboards that focus on sequencing and dialogue and give and receive peer feedback throughout to help shape the development of their Scratch project.</p>	<p>Spring 2 – Children will learn what a micro:bit is and understand its features.</p> <p>This project creates a random phrase that children and use in a poem, as a password or to create a story.</p> <p>Transfer skills between different software.</p>
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
<p>Logging in</p> <p>Typing skills</p> <p>Research Hedy Lemarr & Radia Perlman; how did they develop technology.</p> <p>Search engines, safe searching and copyright</p> <p>Find, save and import images and information from the internet.</p> <p>How searching works and how to evaluate a website – 5 W's</p>	<p><i>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 (NC 2014)</i></p> <p>Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year.</p> <p>Project ideas:</p> <p>Literacy</p> <ul style="list-style-type: none"> - animation linked to pioneer. <p>Science</p> <ul style="list-style-type: none"> - animation linked to living things and habitats. <p>History</p> <ul style="list-style-type: none"> - animation linked to Tudors

Computing for Year 5

Year 5 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
<p>Make responsible choices when sharing online and understand how this could be used by others.</p> <p>Know when and how to get help.</p> <p>Differentiate between types of bullying.</p> <p>Promote health and well-being with regards to using technology</p>	<p>Continue to develop word processing skills.</p> <p>Introduction to databases and graphing</p> <p>Representing data</p> <p>Review, edit and discuss why changes have been made to work.</p> <p>Creating work appropriate to audience</p> <p>Computer Aided Design (CAD)</p> <p>Website evaluation</p>
Spring Term – Computer Science CS Experience – Taking a Tour	
<p>Spring 1 – In this unit, students will use research they have already completed about a geographic location to design and code an interactive quiz game in Scratch. They will plan how to share their facts with users through visuals, narration, and interactive elements like clickable sprites. Then, they will build a game that challenges players to answer questions using conditionals and events, with an optional scoring feature using variables. Throughout the unit, students will apply coding concepts such as sequencing, conditionals and user input to bring their ideas to life. The final product will be a clickable quiz game that teaches and tests knowledge about their chosen location.</p>	<p>Spring 2 – Using the micro:bits children will create a game of Rock, Paper, Scissors. Children will be able to discuss what they think a program will do.</p> <p>They will build on their knowledge of selection and will create variables within their game.</p> <p>They will then extend this learning to use the radio function to alter the game that communicates to other micro:bits whether you have won or lost the game.</p> <p>Transfer skills between different software.</p>
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
<p>Research Grace Hopper, Bill Gates & Steve Wozniak; how did they develop technology.</p> <p>Search engines, safe searching and copyright</p> <p>Find, save and import images and information from the internet.</p> <p>How searching works and how to evaluate a website – 5 W's.</p> <p>Reinforce the basics of using technology in our everyday lives.</p> <p>What the internal parts of a computer are and how they work</p>	<p><i>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 (NC 2014)</i></p> <p>Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year.</p> <p>Project ideas:</p> <p>DT</p> <ul style="list-style-type: none"> - create a new vehicle using CAD design. <p>Science</p> <ul style="list-style-type: none"> - create an eco-house using CAD design. <p>Literacy/History</p> <ul style="list-style-type: none"> - Create a diorama scene with 3D figures using CAD

Computing for Year 6

Year 6 - Long Term Overview

Autumn Term – Digital Citizenship & Digital Literacy	
<p>Make responsible choices when sharing online. Know when and how to get help. Critically evaluate and reject inappropriate representations online. Be kind and respect others online. Protect digital personality. Know how to capture evidence of online bullying. Common systems that regulate age-related content Promote health and well-being with regards to using technology</p>	<p>Be independent when choosing appropriate software to create content. Creating work appropriate to audience Use video editing software</p>
Spring Term – Computer Science CS Experience – Smart Communities	
<p>Spring 1 – In this unit, students explore how people can use computing and technology to make their surroundings more responsive to the needs of their community. They begin by exploring computing concepts such as loops, variables, sensing and conditional statements to program simulations of responsive systems. They then apply those concepts in a user-centred design cycle to consider, plan and prototype improvements to their school community.</p>	<p>Spring 2 – Using the micro:bits children will create a ‘Traffic Survey Data Logger’ to survey the modes of transport they see in a given time. At the press of a button the data will be stored ready to analyze later.</p> <p>Transfer skills between different software – opportunities to use excel spreadsheets to visualise the data collected.</p>
Summer 1 - Information Technology	Summer 2 - Consolidation project showcasing learning
<p>Research: Alan Turing: how did he developed technology. Elon Musk - how he is developing technology. How to evaluate a website – 5 W’s Understand copyright and how to cite references. Maintaining privacy and updating app permissions What will technology look like in the future?</p>	<p><i>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 (NC 2014)</i> Produce a finished piece of work demonstrating the application of digital literacy skills taught throughout the year. Project ideas: Literacy - create a short film about end of Primary school. Science - Time elapse video about decomposition Computer Science</p>

	- Game creation including writing instructions and marketing materials
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