



Computing Policy

Why is Computing important?

In today's rapidly evolving digital society, computing plays a crucial role in our daily lives. Technology continues to transform our lives, making the world a much smaller place and enabling us to communicate in ways we never thought possible. The importance of understanding and using technology safely and responsibly cannot be overstated, and the teaching of computing plays a vital role in preparing students for the challenges of a technology-driven world.

Computing helps students develop a range of essential skills, including problem-solving, critical thinking, creativity, and logical reasoning. These skills are not only valuable in their own right, but they are also transferrable to other areas of life, helping pupils to succeed both personally and professionally in the future.

In addition, computing opens a world of exciting possibilities, which can inspire students to learn more about how technology is shaping our world and the possibilities for the future. By fostering a love and curiosity for computing, we can help cultivate the next generation of computer scientists and technology leaders.

When is Computing taught?

Computing is taught through the thematic units. The 'Digital Citizenship' strand is further built on through the teaching of the 'Safe Zone' units. The Satellite View maps out which thematic units feature computing and clearly shows the objectives that are taught.



Computing



Subject Overview

	Autumn			Spring		Summer			
Learning Pathway	Culture	Conflict	Christmas Theme Week	Communication	Children's Mental Health Week	NC Essentials	Competency	Competency	Conservation
Pathfinders 1 (Year 1)	Zero to Hero Research/ Multimedia	Unity in the Community Computer Science		Happy Ever After Multimedia/ Computer Science		Never Eat Shredded Wheat	Jurassic Hunter	Royal Patrons	Light Up the World Data Handling
Pathfinders 2 (Year 2)	Come Fly with me Arctic Circle Multimedia	Land Ahoy Computer Science		Inter-Nation Media Station Multimedia		Paddington's Passport	The Visionary	Record Breaker	Going Wild Multimedia
Adventurers 1 (Year 3)	Come Fly with me Africa Multimedia	Athens V Sparta E-Safety		'That's all Folks' Animation		Window Man	Out and About	Rocky the Dinosaur	Picture our Planet Email
Adventurers 2 (Year 4)	A World of Difference Multimedia	Law and Order Computer Science		Lightning Speed Networks		Viking Warrior	Window on the World	May the Force be with You	Under the Canopy Computer Science
Navigators 1 (Year 5)	Come Fly with me America Multimedia/ Data Handling	You're not Invited Computer-Aided Technology		Mission Control Multimedia		Go with the Flow	Pharaoh Queen	Been around the world	The Rescuers Global Warning Multimedia
Navigators 2 (Year 6)	'I have a dream...' Multimedia	Wars of the World Multimedia		A World of Bright Ideas Computer Science		True Crime	Fighting Footballer	In your Element	Time Team Full of Beans Multimedia
Safe Zone (half termly)	Self-image and Identity, Online Relationships, Online Reputation, Online Bullying, Managing Online Information, Health, Well-being and Lifestyle, Privacy and Security, Copywrite and Ownership								



How is Computing taught?

Computing is taught through a combination of hands-on, interactive, and engaging activities that allow students to apply their knowledge and skills in real-world contexts. Whether through unplugged activities, that encourage creative problem-solving, or hands-on projects that allow students to experiment with technology, pupils will develop their skills and knowledge through meaningful and engaging learning experiences. The curriculum is designed to encompass the different strands of computing. There are a range of touch screen and non touch screen Chrome book along with iPads for the children to use. Computing is taught from EYFS to the end of KS2 and lessons are built within the thematic units. There are also stand along lesson to cover elements that cannot be made cross-curricular.

What do we learn about in Computing?

Within the 'Learning Means the World' Curriculum we learn about:-

- **Digital Citizenship**
This is the ability to access digital technology safely and responsibly, as well as being an active, respectful, discerning member of society both online and offline.
- **Computer Science**
This encompasses the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
- **Data**
This teaches pupils how to sort and present data in a variety of ways, using databases and spreadsheets, and how this is utilized in society.
- **Information Technology**
This helps pupils understand the practical applications of computing in the wider world e.g. computer networks and the World Wide Web.
- **Multimedia**
This involves the use and combination of video, audio, graphics and text to interact and communicate with an audience through a variety of different software/apps.

How do we assess and monitor Computing?

Children are assessed at the end of each thematic unit based on their knowledge and understanding of the individual curriculum strands. Teachers use professional judgement and class work to make accurate assessments. These are stored on a central Excel spreadsheet including all the subjects from the unit.

Supporting Children with SEND

Teachers will plan lessons so pupils with SEN and/or disabilities can study Computing wherever possible and ensure that there are no barriers to every pupil achieving. This personalized approach ensures that additional support is readily available when needed, enabling each child to thrive in their Computing education.



How Does Our Learning Grow?



National Curriculum Coverage Computing Key Stage 1

Computing National Curriculum Objectives (KS1)	Where are they taught?
Pupils should be taught to...	
understand what algorithms are; how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions	Happily Ever After Land Ahoy! Unity in the Community
create and debug simple programs	Land Ahoy! Unity in the Community
use logical reasoning to predict the behaviour of simple programs	Land Ahoy! Unity in the Community
use technology purposefully to create, organise, store, manipulate and retrieve digital content	Come Fly with Me! Arctic Circle Going Wild Light Up the World Inter-Nation Media Station Zero to Hero
recognise common uses of information technology beyond school	Come Fly with Me! Arctic Circle Light Up the World Inter-Nation Media Station Zero to Hero
use technology safely and respect, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies	Going Wild Zero to Hero Safe Zone Lessons

How Does Our Learning Grow?



National Curriculum Coverage Computing Key Stage 2

Computing National Curriculum Objectives (KS2)	Where are they taught (LKS2)?	Where are they taught (UKS2)?
Pupils should be taught to...		
design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Law and Order	A World of Bright Ideas "I Have A Dream..."
Use sequence, selection, and repetition in programmes; work with variables and various forms of input and output	Athens v Sparta	A World of Bright Ideas
use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Law and Order	A World of Bright Ideas
understand computer networks including the Internet; how they can provide multiple services, such as the worldwide web; and the opportunities they offer for communication and collaboration	Picture Our Planet Lightning Speed	
use search technologies effectively, appreciate how results are selected unranked, and be discerning in evaluating digital content	A World of Difference Cry Freedom Safe Zone Lessons	Safe Zone Lessons
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 accomplished given goals, including collecting, analysing, evaluating and presenting data and information	Come Fly with Me! Africa Picture Our Planet 'That's All, Folks!' A World of Difference Cry Freedom Under the Canopy	Mission Control Full of Beans Global Warning You're Not Invited Come Fly with Me! America Wars of the World "I Have A Dream..."
use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Come Fly with Me! Africa Picture Our Planet Athens v Sparta Safe Zone Lessons	You're Not Invited Safe Zone Lessons

How Does Our Learning Grow?



Progression within Computing

Computing Knowledge Building

Understand how to use search engines, how results are selected and ranked, and know about satellite technologies

Know how networks and the internet work, the history of the WWW and the opportunities for communication online

Understand the historical and modern-day uses of technology as a means of communication

Know some of the ways technology is used in and beyond school

Information Technology

Know and understand the terms 'block', 'command', 'simulation', 'script' and 'variables'

Know and understand the terms 'network', 'input', 'output', 'World Wide Web', 'PageRank' and 'Sprite'

Know and understand the terms 'algorithm', 'search', 'program' and 'debug'

Know and understand the terms 'information', 'Internet' and 'communication'

Technical Vocabulary

Know how to identify hardware / software needed to fulfil a specific task & create new content using existing media

Know how to use a range of tools to combine, edit and enhance a range of media for a particular purpose or effect

Know how to use media to convey information or intent by employing tools to create simple digital content

Know which technology to select and use for particular purposes

Multimedia

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Computing Knowledge Building

Know how to be a discerning digital citizen, questioning the validity of content and challenging improper representations

Know that not everything online is true and take care when communicating and sharing information

Know that everything online is public and know what to do if they see something they don't like

Understand that we can communicate online and know that the internet contains information

Digital Citizenship

Know how to recognise, create and combine variables

Know how to use repetition, loops and selection and how to decompose problems to create solutions

Understand the terms algorithm and program, and that they need to be clear and unambiguous

Know how to follow and input simple instructions to control and operate devices

Computer Science

Know what a spreadsheet is, what it is used for and how to create one

Know how to use technology, such as data loggers, to collect information and draw conclusions

Know how to use specific software to create simple charts, pictograms and branching databases

Know how to collect, sort and present simple data e.g. images

Data

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Created: April 2024

Review Date: April 2024

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