Computing Curriculum Overview

Intent:

At Falmouth Primary Academy, our computing curriculum is designed to inspire and equip pupils with the knowledge, skills, and confidence to navigate an increasingly digital world. We aim to foster curiosity, creativity, and resilience, empowering children to become responsible digital citizens, critical thinkers, and innovative problem-solvers.
Our intent is to:

1. **Build Digital Literacy:** Ensure all pupils can use technology safely, effectively, and purposefully, laying a strong foundation for future learning and daily life.
2. **Develop Computational Thinking:** Cultivate logical reasoning, algorithmic thinking, and problem-solving skills that underpin programming and technological innovation.
3. **Encourage Creativity:** Provide opportunities for pupils to express themselves and create digital content, fostering a sense of achievement and ownership.
4. **Promote Online Safety:** Equip pupils with the knowledge and skills to navigate the online world responsibly and safely, recognizing potential risks and making informed decisions.
5. **Inspire Aspiration**: Empower pupils to see the potential of computing in shaping their future, fostering ambition and a belief that they can contribute to and succeed in a technology-driven world.

Through a structured, progressive curriculum, we aim to spark pupils' interest in technology and innovation, enabling them to contribute confidently to a rapidly changing digital society. By the end of their primary education, our pupils will have a secure understanding of fundamental computing principles, practical experience with a variety of technologies, and the ethical awareness to use them responsibly.

Implementation: Early Years

During their time in reception year, children are exposed to technological items through play, such as phones, laptops and cameras. They use items to recreate their lived experience of technology.

During investigations, teachers model how to use the internet to search for information such as videos and photos of the children's interest, to provoke conversation and to demonstrate that technology can be used to find out new information.

Children are introduced to simple instruction-based activities and games as well as problem solving which build the foundations for programming and algorithms.

Children have the opportunity to use ipad based phonics and maths games to practice their wider curriculum development.

Implementation:

Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	E-safety- I can explain how to behave, build positive relationships and keep myself safe online.		Technology Around Us: How can we use common technology?		How can we use the features of digital imagery?	
Year 2	E-safety- I know how to keep myself safe online. I can identify the importance of passwords.		What is an algorithm and how is it used?		How can I sort, gather and store data and information digitally?	
Year 3	E-safety- I can recognise how my information can be shared online. I can identify healthy use of technology.		How can we use computational thinking to solve problems?		How can we create and debug a game using scratch?	
Year 4	E-safety- I can explain ways in which online content can be used to target people. I can explain why some content is age-restricted.		How can I create a stop motion animation with characters?		What are the advantages of using data systems in different ways?	
Year 5	E-safety- I can explain online bullying and how to get help. I can explore online relationships and how to keep myself safe.		How can we plan, create and evaluate a webpage to design a digital portfolio?		How can we identify and utilise ways to communicate online by sharing information digitally and keep ourselves safe?	
Year 6	E-safety- I can explain what a 'digital persona' is and how to protect my own. I can explain how to ensure information is accurate or safe.		How can we use microbits to code for real world outcomes?		How can we design a product and use a range of technology to promote it?	

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Progression Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Following this unit of work, children will be able to explain how to stay safe online, ask for permission before sharing information, and identify trusted adults who can help. They will log in to devices, begin touch-typing, and use simple word processing skills to create digital writing.		Following this unit of work, children will be able to confidently create and save a digital document, add images, and share their work appropriately.		Following this unit of work, children will be able to take, edit, and combine photographs, create a digital collage, and explain who it is safe to share their photos with.	
Year 2	Following this unit of work, children will be able to explain the difference between real and made-up information, use passwords securely, and describe what private information is. They will also recognise online risks and understand age restrictions.		Following this unit of work, children will be able to explain what an algorithm is, write and follow clear instructions, identify inputs and outputs, and debug simple algorithms.		Following this unit of work, children will be able to collect, sort, and record data, represent it digitally in charts or pictograms, and save their work securely.	
Year 3	Following this unit of work, children will be able to recognise their personal identity, understand what is safe to share online, and explain how to behave respectfully towards others online.		Following this unit of work, children will be able to apply computational thinking strategies such as decomposition, abstraction, and pattern recognition to solve problems.		Following this unit of work, children will be able to design, create, and debug a simple game in Scratch using loops and variables, and explain how different code blocks work.	
Year 4	Following this unit of work, children will be able to explain how online content can be manipulated, recognise fake news, evaluate content for reliability, and understand age restrictions and online advertising.		Following this unit of work, children will be able to plan, create, and edit a stop-motion animation using characters, and evaluate their final product.		Following this unit of work, children will be able to explain how data can be transferred safely, understand how QR codes and barcodes work, and design a 'smart school' system using data analysis.	
Year 5	Following this unit of work, children will be able to identify examples of online bullying, describe how to get support, and explain how online content affects reputation and relationships.		Following this unit of work, children will be able to plan, design, and publish a digital portfolio webpage, evaluate its effectiveness, and explain how to share content safely online.		Following this unit of work, children will be able to send and edit emails with attachments, recognise scam or spam messages, and use video calling safely and respectfully.	
Year 6	Following this unit of work, children will be able to explain what a digital persona is, describe how to protect their online reputation, identify scams and phishing attempts, and evaluate the accuracy of online information.		Following this unit of work, children will be able to program Micro:bits to solve real-world problems, debug and refine their code, and explain how coding structures work.		Following this unit of work, children will be able to design and market a digital product, create and edit videos, design using CAD, and publish a website aimed at a specific audience.	

Impact:

At Falmouth Primary Academy, the impact of our computing curriculum is evident in the confidence, capability, and creativity of our pupils as they engage with technology. By the time they leave primary school, our children are equipped not only with secure knowledge of fundamental computing concepts but also with the digital literacy, resilience, and curiosity to apply their skills in a purposeful and responsible way.

- **Digital Literacy:** Pupils can use a range of devices, software, and applications with independence and adaptability. They understand how technology underpins everyday life and demonstrate the ability to use it effectively, responsibly, and with confidence across the curriculum.
- **Computational Thinking:** Children approach problems logically and systematically, applying their understanding of algorithms, programming, and debugging to real-world and creative challenges. Their resilience in problem-solving reflects an ability to think critically and persevere when faced with new or complex tasks.
- **Creativity and Expression:** Pupils create digital content that communicates ideas with clarity and imagination. They show pride in their work, take ownership of their learning, and are motivated to explore new possibilities for digital expression.
- **Online Safety and Responsibility:** Our children demonstrate a strong awareness of how to stay safe online. They recognise risks, make informed decisions, and act as responsible digital citizens who respect themselves and others in online spaces.
- **Future Readiness and Aspiration:** Pupils leave us with a positive view of computing and its potential to shape their futures. They see themselves as capable learners and innovators, with the ambition and belief that they can thrive in a technology-driven world.

Ultimately, the impact of our curriculum is seen in children who are confident, creative, and safe users of technology—prepared not just for the next stage of their education but for life in an ever-evolving digital society.