

Computing

at Norton CP School

The aim of our computing curriculum is to provide our pupils with the following:

- Competence in coding for a variety of practical and inventive purposes, including the application of skills and ideas within other subjects.
- The ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity.
- An understanding of the connected nature of devices.
- The ability to communicate ideas well by using applications and devices throughout the curriculum.
- The ability to collect, store, retrieve, manipulate and present data effectively.

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Thinking Computationally

| Year One | Year Two | Year Three | Year Four | Year Five | Year Six |
|--|--|--|--|--|---|
| <p>Can decide instructions for simple tasks.</p> <p>Can program a bee-bot to move and predict where it will stop.</p> <p>Can program on-screen objects to move: 2Code Chimp.</p> | <p>Can define clear and unambiguous instructions for an everyday task.</p> <p>Can program a bee-bot to reach a destination, avoiding an obstacle.</p> <p>Program on-screen objects to move and respond to events: 2Code Chimp.</p> | <p>Program on-screen objects to move, respond to events, timers and interact with each other: 2Code Chimp/Gibbon.</p> <p>Begin to understand the purpose of a computer simulation, to recognize simulations they use and create their own.</p> | <p>Design programs and simulations by deciding which aspects of a system to simulate.</p> <p>Break aspects of a coding problem into parts.</p> <p>Program using text, on-screen objects to move when clicked: 2Code Chimp.</p> | <p>Design, code and improve programs that simulate physical systems.</p> <p>Explain how they have selected what to code and broken it down into parts.</p> <p>Use variables, loops and conditional statements in code.</p> | <p>Use a program design process to create more complex programs.</p> <p>Use advanced features of coding environments to organise work.</p> <p>Begin to use a text-based language to code.</p> |

Creating Digital Content

| Year One | Year Two | Year Three | Year Four | Year Five | Year Six |
|---|---|--|--|---|---|
| <p>Begin to create and save pictures using digital tools.</p> | <p>Create, save, retrieve and edit a variety of content, including; text, pictures, music, graphs and charts.</p> | <p>Begin to use more advanced features of apps and programs that create digital content.</p> <p>Create documents that combine more than one type of content.</p> | <p>Dive deeper into the world of digital images by beginning to understand how they are stored and manipulated by software.</p> <p>Create and manipulate graphics to present a fantasy image and/or animation.</p> | <p>With direction and support, create digital content that supports learning across the wider curriculum.</p> <p>Create 3D models.</p> <p>Create video.</p> | <p>Working more independently, select and use apps and tools to create digital content for a range of purposes.</p> <p>Combine media in published content like blogs, vlogs, presentations and quizzes.</p> |

Understanding IT and using modern networks

| Year One | Year Two | Year Three | Year Four | Year Five | Year Six |
|--|---|---|--|--|--|
| <p>Identify and learn about types of digital device.</p> <p>Understand that devices can be connected to online services.</p> <p>Log in to and begin to use our online services for learning.</p> | <p>Learn and apply our online safety rules.</p> <p>Begin to communicate in a safe space online.</p> | <p>Learn the term simulation, identify simulations and learn to create one under guidance.</p> <p>Increase knowledge, skill and understanding of online messaging by using a simulated email system.</p> | <p>Learn the types of component found in a digital device and the purpose of each.</p> <p>Compare different devices.</p> | <p>Improve knowledge of the keyboard and begin to touch-type.</p> <p>Investigate alternative input methods, e.g. voice.</p> <p>Revise and refine knowledge of device components.</p> | <p>Deepen understanding of how devices connect to the Internet. Learn the history of the World Wide Web and how it uses the Internet to operate.</p> <p>Learn about data centres and how they provide online services.</p> |

Keeping Safe

| Year One | Year Two | Year Three | Year Four | Year Five | Year Six |
|--|--|---|--|---|--|
| <p>Begin to learn how a personal ID can keep you safe.</p> <p>Know that it should not be shared with friends or strangers.</p> | <p>Learn and apply our school online safety rules.</p> | <p>Learn how and why to choose more secure passwords.</p> <p>Begin to learn to evaluate online content and build awareness of age restrictions on digital media.</p> <p>Know where to turn for help with inappropriate content or messages.</p> | <p>Understand the term digital footprint and what theirs might contain.</p> <p>Be aware of online dangers like phishing and scam websites.</p> <p>Improve searching skills.</p> <p>Know about copyright.</p> | <p>Know and explain the SMART guidelines when online.</p> <p>Know who to tell and how to report inappropriate content or messages.</p> <p>Think critically about what information about themselves and others to share online.</p> <p>Continue to improve understanding of copyright.</p> <p>Improve online searching skills.</p> | <p>Reflect on the positive and negative influences of technology on health, well-being and the environment.</p> <p>Continue to recognise and practise healthy and respectful online behaviour.</p> <p>Review and reinforce knowledge of age restrictions and rating systems.</p> |