

COMPUTING – Curriculum objective progression overview and coverage

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| Humankind | Communication | <p>□ Explain simply that digital technology can be used to connect with others locally and globally. Rio De Vida, Bright lights, big city</p> | <p>□ Use digital technology appropriately to communicate and connect with others locally and globally. Muck, mess and mixtures, Wriggle and Crawl</p> | <p>□ Explain the advantages and disadvantages of communicating electronically and strategies for preventing issues.</p> | <p>□ Explain actions to report and prevent cyberbullying.</p> | <p>□ Demonstrate appropriate online behaviour and apply a range of strategies to protect themselves and others from potential online dangers, inappropriate behaviour and bullying.</p> | <p>□ Recognise that sending intimate images and content and using offensive language online is a risk, has a permanent online trail (digital footprint) and is not appropriate behaviour.</p> |
| | Staying safe | <p>□ Recognise that some websites ask for private information and discuss how to handle these requests and where to go for help and support. Superheroes</p> | <p>□ Stay safe online by choosing websites that are appropriate to visit (based on the confidence you have in the author(s) of the website) and know where to go for help and support when they have concerns about content or contact on the internet and other online technologies.</p> | <p>□ Describe simple rules for sharing images and data safely. Urban Pioneers</p> | <p>□ Identify the positive and negative influences of technology on health and the environment and how to protect themselves. Road Trip USA</p> | <p>□ Discuss the impact that digital content can have and why it is important to discuss their use of technology with an adult. Scream Machine</p> | <p>□ Identify the benefits and risks of devices broadcasting the user's location and of giving personal information to different organisations.</p> |
| | Digital citizenship | <p>□ Recognise that work they have created belongs to them.</p> | <p>□ Recognise that information put online leaves a digital footprint.</p> | <p>□ Compose clear and appropriate messages in online communities. Urban Pioneers, Scrumdiddlyumptious</p> | <p>□ Identify appropriate behaviour when contributing to collaborative online projects for learning.</p> | <p>□ Cite all sources when researching and explain why sources should be provided.</p> | <p>□ Recognise that digital content can be edited online.</p> |
| Processes | Physical interactions | <p>□ Observe and explore outcomes when buttons are pressed in sequences on a robot and identify and debug a simple algorithm. Moon Zoom, Bright lights, big city</p> | <p>□ Plan and enter a sequence of instructions using a robot, specifying distance and angle of turn. Wriggle and Crawl, Street Detectives</p> | <p>□ Design, write and enter a sequence of instructions using a robot or other device to achieve specific outcomes, debugging if necessary. Urban Pioneer, Predator</p> | <p>□ Use sensors to 'trigger' an action, such as sound or movement.</p> | <p>□ Use a range of sensors to control a physical system.</p> | <p>□ Design, write and debug a program to control a physical system, which may include output devices, such as motors, lights and buzzers. Tomorrow's World</p> |
| Creativity | Creation | <p>□ Select appropriate software to complete given tasks using text, images, audio and video clips. Moon Zoom, Rio de Vida, Superheroes</p> | <p>□ Create and edit multimedia components for a range of tasks. Scented Garden, Wriggle and Crawl, Beachcombers, Bounce, Land Ahoy</p> | <p>□ Combine a range of text, images, animation and audio and video clips for given purposes. Tremors, Tribal Tales, Predator, Flow</p> | <p>□ Manipulate a range of text, images, sound or video clips and animation for given purposes. Playlist, Trader and raiders, Misty Mountain Sierra</p> | <p>□ Create, select and combine a range of texts, images, sound clips and videos for given purposes. Scream Machine, Time Traveller, Allotment, Alchemy Island</p> | <p>□ Select, use and combine a variety of software, including internet services, to meet a goal. Hola Mexico, ID, Tomorrow's World, Frozen Kingdom</p> |
| Investigation | Data and computational thinking | <p>□ Follow a sequence of steps to solve a problem and create instructions that others can follow (for floor robots or onscreen sprites). Moon Zoom, Bright Lights, big city, Dinosaur Planet</p> | <p>□ Create a simple solution that tests an idea, predict the outcome and test and debug the solution to ensure that it works. Wriggle and Crawl, Street Detectives, Land Ahoy</p> | <p>□ Identify and use repetitions or loops in a program sequence, predicting outcomes and noticing and correcting any mistakes. Urban pioneers, Predator</p> | <p>□ Describe and demonstrate a simple program that contains a looping element and how part of a program may need repetition.</p> | <p>□ Design, write and debug simple sequences of instructions (algorithms), including IF, THEN and OTHERWISE commands, to decide if something is true or false. Stargazers, Scream Machine, Alchemy Island</p> | <p>□ Demonstrate how programs run in an exact order by following a sequence of instructions, and test and debug programs. Tomorrow's World</p> |
| | Networks | <p>□ Show awareness that work they create and save on a computer or tablet can be shown to others using another device.</p> | <p>□ Recognise that computers can be linked to share resources and digital content can be stored, organised and retrieved. Towers, tunnels and turrets, Wriggle</p> | <p>□ Recognise that saved work can be retrieved from another device on the same network.</p> | <p>□ Recognise that the school network links computers to allow the sharing of resources. Road Trip USA</p> | <p>□ Compare the ways in which work can be shared on a school network with the ways work is shared at home or in the wider world.</p> | <p>□ Name some of the positives and negatives of communicating with others online. Blood Heart, Darwin's Delights, Tomorrow's World</p> |

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| | | | and Crawl | | | | |
| Materials | Hardware | <ul style="list-style-type: none"> Use a range of computing hardware for different purposes. Dinosaur Planet, Moon Zoom, Superheroes | <ul style="list-style-type: none"> Use computing hardware in different ways to collect data. Muck, Mess and Mixtures, The Scented Garden, Street Detectives | <ul style="list-style-type: none"> Use familiar computer hardware to successfully complete a task. Heroes and Villains, Tremors, Tribal Tales | <ul style="list-style-type: none"> Use new and unfamiliar computing hardware. Blue Abyss, Potions, Playlist, Traders and Raiders | <ul style="list-style-type: none"> Apply computing skills using unfamiliar hardware to solve a problem successfully. | <ul style="list-style-type: none"> Identify how using different hardware can increase creativity and productivity. Blood Heart, Darwin's Delights, Gallery Rebels |
| | Software | <ul style="list-style-type: none"> Begin to use a range of software for different purposes. Moon Zoom, Rio de Vida, Superheroes | <ul style="list-style-type: none"> Use different types of software and identify their purposes. Muck, mess and mixtures, Towers, tunnels and turrets, Wriggle and Crawl | <ul style="list-style-type: none"> Use a range of different software to successfully complete a project. Heroes and villains, Gods and mortals, Mighty metals | <ul style="list-style-type: none"> Apply computing skills to use new computing software. 1066, Blue Abyss | <ul style="list-style-type: none"> Apply computing skills to create content using unfamiliar programs or apps. Scream Machine, Allotment, Alchemy Island | <ul style="list-style-type: none"> Identify how a new piece of software or an app can increase creativity. Darwin's Delights, Tomorrow's World, ID |
| Nature | Real world | <ul style="list-style-type: none"> Observe how collected data can be represented electronically. covered Superheroes | <ul style="list-style-type: none"> Use data handling skills to represent data digitally. | <ul style="list-style-type: none"> Log light level, temperature or sound level using a program or app. | <ul style="list-style-type: none"> Log light level, temperature or sound level using a program or app. | <ul style="list-style-type: none"> Use sensing tools or apps for an investigation and interpret the findings. Time Traveller, Allotment | <ul style="list-style-type: none"> Plan data handling investigations and use the outcomes from data collection to show the findings. |
| Place | Digital world | <ul style="list-style-type: none"> Understand that there are online tools that can help people to create content and communicate. Moon zoom, Enchanted Woodland, Bright lights, big city | <ul style="list-style-type: none"> Recognise some uses of the internet, in simple terms and some of its benefits and drawbacks. Beachcombers, Bounce | <ul style="list-style-type: none"> Use appropriate tools (software, websites and apps) to collaborate and communicate safely online. Urban Pioneers, Flow | <ul style="list-style-type: none"> Exchange online communications with other learners, adding and responding to comments, such as in a blog. | <ul style="list-style-type: none"> Create an online collaborative project for a specific purpose, sharing documents and appropriately setting permissions for other group members. Scream Machine | <ul style="list-style-type: none"> Exchange online communications, making use of a growing range of available features and being aware of security settings. Tomorrow's World, ID, Frozen Kingdom |
| | Real world | <ul style="list-style-type: none"> Recognise the ways digital technology can be used in the classroom, home and community. Dinosaur Planet, Enchanted Woodland, Bright lights, big city | <ul style="list-style-type: none"> Recognise why digital technology is used in the classroom, home and community. Muck, mess and mixtures, Wriggle and Crawl | <ul style="list-style-type: none"> Use digital technology in different ways in the classroom, home and community. Heroes and villains, Gods and mortals, Urban pioneers | <ul style="list-style-type: none"> Use digital technology in different ways in the classroom, home and community to achieve a set goal. Blue Abyss, Playlist, Road Trip USA, I am warrior! | <ul style="list-style-type: none"> Select, use and combine appropriate technology to create a solution that will have an impact on others. Pharaohs, Stargazers, Scream machine, Time traveller | <ul style="list-style-type: none"> Combine a range of technology to achieve a particular outcome. Tomorrow's World, ID, Frozen Kingdom, Gallery Rebels |
| Comparison | Digital searching | <ul style="list-style-type: none"> Search for or retrieve digital content, including images and information, in digital folders and online, with supervision. Dinosaur Planet, Bright lights Big City | <ul style="list-style-type: none"> Recognise and demonstrate that some information can be found online and some offline. Muck, mess and mixtures, Wriggle and Crawl | <ul style="list-style-type: none"> Explain that the World Wide Web contains lots of web pages about different subjects that can be searched. Tremors, Predator, Flow | <ul style="list-style-type: none"> Explain that when searching online, some web pages may contain adverts or pop-ups that encourage people to click on them. | <ul style="list-style-type: none"> Discern where web content might originate from and recognise that this gives clues to its authenticity, reliability and security. Scream Machine, Time traveller | <ul style="list-style-type: none"> Critically evaluate search engine results and identify factors that may affect ranking, such as how long the site has existed, the number of links to the site and whether the organisation has paid to have their site promoted. Darwin's Delights, Tomorrow's World, Gallery Rebels |