

Computing

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| Year Group | | | |
| EYFS | Foster an understanding of our technologically diverse world. Develop listening skills, curiosity, creativity and problem solving through play-based, unplugged (no computer) activities such as taking photographs with cameras or tablets, watching video clips, listening to music, playing games on the interactive whiteboard, exploring mechanical toys, and more. | | |
| Year 1 | Computing Systems & Networks Technology Around Us Data and information Grouping Data | Programming A – Moving a Robot B – Introduction to Animation | Creating Media Digital Writing Digital Painting |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Alan Turing – Creator of the first computer | Katherine Johnson – One of four African American women who were extremely important in putting the first man on the Moon | Anne-Marie Imafidon – Youngest girl to pass A-level Computing at the age of 11. Founder of STEMettes which encourages girls to pursue careers in STEM |
| Year 2 | Computer Systems and Networks IT Around Us Data and information Pictograms | Programming A – Robot Algorithms B – Programming Quizzes | Creating Media Digital Photography Digital Music |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work Resilience – sticking with it when learning a new skill | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Mary Jackson – First black female engineer to work at NASA | Grace Hopper – First person to use the word 'bug' to describe a problem in a computer programme after a moth was found inside a computer | Katanyou Wuttichaitanakorn - Young Wildlife Photographer of the Year 2022 was won by 16-year-old of Thailand, for his image about the beauty of a whale. https://www.itv.com/news/2022-10-11/winning-images-in-the-wildlife-photographer-of-the-year-competition-revealed |

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| Year 3 | Computing systems and networks Connecting computers Data and information Branching databases | Programming A – Sequencing sounds B – Events and actions in programs | Creating media Desktop publishing Stop frame animation |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work Resilience – sticking with it when learning a new skill | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Tadashi Sasaki – Played a key role in creating the first computer microprocessor, the Intel 4004 | Ada Lovelace - wrote the first machine algorithm for an early computing machine known as the Analytical Engine. One of the first programming languages used by computer scientists was named 'Ada' after her. | Leah Boletto – Past CBBC Newsround presenter who celebrates her multicultural heritage. Now raising her own family, writing her own online articles and promoting diversity. https://rickyandleah.com/leah-boletto |
| Year 4 | Computing systems and networks The Internet Data and information Data logging | Programming A – Repetition in shapes B – Repetition in games | Creating media Photo editing Audio production |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work Resilience – sticking with it when learning a new skill | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Dorothy Vaughan - became an expert at a computer programming language called FORTRAN. FORTRAN made it easier to program maths and science problems. | Dame Stephanie Shirley – Dame Stephanie Shirley is a computing pioneer. Her nickname is 'Steve'. She started to use this male name because most of her colleagues were men and she did not always receive replies to her letters when they thought they were from a woman. Her company was responsible for programming the black box in a supersonic aeroplane known as Concorde. | Melvin Odoom- British radio DJ and tv presenter. Best known for shows on BBC Radio 1. |

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| Year 5 | Computing systems and networks Systems and searching Data and information Flat-file databases | Programming A – Selection in physical computing B – Selection in quizzes | Creating media Introduction to vector graphics Video production |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work Resilience – sticking with it when learning a new skill | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Elizabeth Feinler - helped to organise data and she created some of the domain names we still use on the Internet today, such as .com and .org. | Margaret Hamilton – computer scientist and software engineer. First person to use the phrase 'software engineering.' Without her work the Moon landing may never have happened. | Rhys Stevenson – key presenter for CBBC, hosting the likes of Blue Peter, Newsround, Dengineers and Saturday Mash-Up. |
| Year 6 | Computing systems and networks Communication and collaboration Data and information Spreadsheets | Programming A – Variables in games B – Sensing movement | Creating media Web page creation 3D modelling |
| Learning Powers and values | Curiosity – asking questions about how things work Self-belief – trying new programmes | Curiosity – asking questions about how things work Resilience – sticking with it when learning a new skill | Self-belief – trying new programmes Resilience – sticking with it when learning a new skill Kindness – providing others with constructive criticism |
| Opportunities for exploring and celebrating diversity | Shafi Goldwasser – Awarded the 2012 Turing Award for her work in cryptography. She developed the system that lets internet users answer a series of questions to get back their password if they forget it. | Carol Shaw - She studied computer science at a time when not many other women were doing this. Carol Shaw is believed to be the first female video game designer. She worked as a programmer. When later working for a company called Activision, Carol Shaw created an award winning game called River Raid. | Chieko Asakawa – Developed voice browsers for the blind and various accessibility tools to help web designers and visually impaired people access web pages. |