



Computing Subject Overview

| | Autumn | | Spring | | Summer | |
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| Reception | | | | | Look at what I can do! Pupils will learn that information can be used and created using technology. | |
| | By the end of the Reception Year the children will be able to: Personal, Social and Emotional Development Managing Self ELG: Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. ELG: Explain the reasons for rules, know right from wrong and try to behave accordingly. Expressive Arts and Design Creating with Materials ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. | | | | | |
| Year 1 | Basic Computing Skills Pupils will learn how to log in and shut down a computer accurately and begin to understand the importance of a password. | Using text-based programs to process and format text and Images Pupils will learn how to use a word processing program to write and format text. They will add in digital images and consider the audience for their work. | Unplugged algorithms Pupils will learn what an unplugged algorithm is and create and apply them to an on-screen program. | Programming, coding & Robotics Pupils explore how to control both physical and virtual robots with a sequence of commands. Enrichment: Bluebots Indis | Digital Painting Pupils will explore how to use the different tools and features in a computer based paint program to create a variety of effects | Presenting information Pupils will consider a variety of ways to present cross curricular information digitally, and compare the advantages and disadvantages with paper based content. |



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| Year 2 | What is a computer? Pupils will be able to describe different computers and their peripherals. They will also learn about the different roles computers play in society. | Unplugged algorithms Pupils will continue to explore what algorithms are and what strategies they can use to find bugs when their algorithm is not working. | Scratch junior Pupils will use the Scratch Junior app to write their own block code in a number of different cross curricula projects. | Modifying text and images Pupils will build on previously learnt keyboard skills and learn how to format text in a number of different ways. Pupils will also learn how to edit images. | Storing and presenting data Pupils will look at what data is and compare different methods of data storage. Pupils will also learn about graphs and charts. | Presenting Information Pupils will create a presentation of their class topic using the app Shadow Puppet EDU. Pupils will learn how to edit fonts and photos to make an engaging presentation. Enrichment: Apple Pencils |
| Year 3 | Composing emails Pupils will explore the different advanced features of Microsoft Word. They will also use these skills to compose an email. | Introduction to Scratch Pupils will learn to program sprites using a range of blocks to add animation, sound and other effects. | Prediction and Debugging Pupils will predict and debug algorithms. Enrichment: Makey Makey | Altering digital media Pupils will investigate ways to alter digital images in different ways. Enrichment: Apple Pencils | Inside a computer Pupils will look at the history of computing and the components inside a computer. | Publishing online content Pupils will learn about graphic design, publishing and promoting their own content. |
| Year 4 | Branching databases Pupils will learn about the concept of branching databases and create their own using presentation software. | Repetition and forever loops Pupils learn to use repetition and loops when coding. Enrichment: Makey Makey and Spheros | Designing a game Pupils use their knowledge of Scratch to create a Formula One style game. Enrichment: Microbits | Making a Special Effects movie Pupils create their own videos and apply special effects to them. Enrichment: Green Screen | Smarter Searching and Online Safety Pupils to gain awareness of the best ways to use a search engine and to continue to develop | Pixel Art Pupils create a piece of pixel artwork using a grid format |



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| | | | | | awareness of online dangers. | |
| Year 5 | Create and search a database Pupils will use Excel to create and search a database. | Using variables Pupils identify different types of variables. what conditionals are and understand how variables are used in computer programming. | Coding Using Micro:Bits Pupils to program Micro:Bit to make a variety of practical and usable devices. Enrichment: Microbits. | Stop motion animation Pupils will learn about all the aspects of stop motion animation. They will create their own storyboard their own story before creating their own stop frame animation. | World Wide Web and Internet Pupils will learn about the difference between the World Wide Web and the Internet. They will also understand what is meant by IP address. | 3D modelling Pupils will learn how to draw 3D shapes and structures using CAD software such as Trimble Sketchup. Enrichment: 3D Print Designs |
| Year 6 | Creating formula in Excel Pupils will learn how to organise data and make calculations using the application Microsoft Excel. | Edublocks- Introduction to Python Pupils will learn how block-based programming compares to written code. Pupils will be introduced to Python as a text-based method of programming. | Programming a Game Using the application Scratch, pupils will create an interactive, playable game using conditionals, variables, and operators. Enrichment: Co Spaces Microbits | Creating a Podcasting Pupils will produce a podcast based on a piece of writing from another curriculum area or aspect of school life. Enrichment: Green Screen | HTML Pupils will learn how to design a multi-page informational website, considering the layout, user experience and key features including home page, links and images. | Social Media & Being Safe Online Pupils will learn about the purpose of social media and different aspects of social media and how to use it safely. Enrichment: Canva |