# Computing

# Long Term Whole School Overview

| Computing Overview | | | |
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| | **Autumn** | **Spring** | **Summer** |
| **Nursery 2-3 Topic** | **My Day Autumn 1**<br>**What's in the garden? Autumn 2** | **Our Pets Spring 1**<br>**Farm Animals Spring 2** | **Making Music Summer 1**<br>**Musical Stories Summer 2** |
| **Term and Focus** | Exploring cause and effect toys | To operate on/off toys or a torch | To operate a toy camera (taking photos) |
| **Prior Learning** | New Learning | Nursery 2-3 Autumn<br>To have exposure to cause-and-effect toys | Nursery 2-3 Spring<br>To be able to use an on and off switch for an effect. |
| **Future Learning** | Nursery 2-3 Spring<br>To explore "what happens when I?" | Nursery 2-3 Summer<br>To continue to investigate cause and effect toys | Nursery 3-4 Autumn<br>To further investigate how to successfully use cause and effect toys. |
| **Nursery 3-4 Topic** | **Marvellous Me Autumn 1**<br>**What's on Wood Street? Autumn 2** | **People Who Help Us Spring 1**<br>**Our Garden Spring 2** | **Little Explorers Summer 1**<br>**Let's Pretend Summer 2** |
| **Term and Focus** | Exploring how things work | Programmable toys | Programmable toys |
| **Prior Learning** | Nursery 2-3 Summer<br>Children will have an understanding that switches can take turn lights on and off and can make cameras take photos. | Nursery 3-4 Autumn<br>To have had experience in exploring how to make toys move using push/pull and cause of effect toys. | Nursery 3-4 Spring<br>Consolidating programmable toys. |
| **Future Learning** | Nursery 3-4 Spring<br>Children will be expanding their understanding of making toys move. | Nursery 3-4 Summer<br>Children will be consolidating this in Summer. | Year R Autumn<br>Children will be exploring programming toys through following explicit directional language. |
| **Year R Topic** | **We are Superheroes Autumn 1**<br>**Celebrations Autumn 2** | **Wonderful Walthamstow Spring 1**<br>**Little Investigators! Spring 2** | **Traditional Tales Summer 1**<br>**Modern Tales Summer 2** |
| **Term and Focus** | Programmable toys - direction explicit language | Enable children interact with computer systems using different inputs – e.g., by using a mouse, voice, speech or touch | Use simple software applications to make something happen |
| **Prior Learning** | Nursery 3-4 Spring/Summer<br>Children have had some experience in programming toys. | Nursery 3-4 Autumn<br>Children will have had the opportunity to explore toys that have input and outputs. | Year R Autumn<br>Children will have had experience programming toys and cause and effect toys. |
| **Future Learning** | Year R Summer<br>The children will be developing programming skills further later in the year | Year 1 Spring<br>Children will be introduced to word processing software and digital art. | Year 1 Summer<br>Children will further develop their understanding of programming and begin to look at algorithms. |
| **Year 1 Topic** | | | |

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| **Term and Focus** | Autumn 1 or 2<br>I Safe – Free e-safety lessons | Spring 1<br>I Write –Introduction to word processing IDraw – Digital Art<br>Spring 2<br>I Model – Introduction to Modelling<br>I Data – Introduction to Data Representation | Summer 1 & 2<br>I Algorithm – Introducing Instructions and Commands<br><br>I Program Unit 1 – Algorithms and Programming<br>I Program Unit 2 – Scratch Jr |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Year 2,3,4,5,6 – E-safety lessons | Year 5 – I Draw – Graphical Drawing<br>I Write – End of unit<br>Year 5, 6 – I Model<br>Year 3, 4, 6 – I Data | Year 2 – I Program Unit 2<br>Year 3 – I Program Unit 1<br>Year 4 – I Program Unit 1,3,4<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit *1* and 2 |
| **Year 2 Topic** | | | |
| **Term and Focus** | Autumn 1 and 2<br>I Safe – E-safety lessons | Spring 1<br>I Search – Searching the Web<br>I Do Mail – Introduction to Email<br>Spring 2<br>I Program – Programming with Scratch | Summer 1<br>I Animate – Introduction to stop frame animation<br>Summer 2<br>I Program Unit 2 – Scratch Jr |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Year 3,4,5& 6 – E-safety lessons | Year 3 & 6 – I Network<br>Year 5 – I Web<br>Year 4 – I Mail<br>Year 3 – I Program Unit 1<br>Year 4 – I Program Unit 1,3,4<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit 1 and 2 | Year 3 – I Simulate<br>Year 4 – I Animate<br>Year 3 – I Program Unit 1<br>Year 4 – I Program Unit 1,3,4<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit 1 and 2 |
| **Year 3 Topic** | | | |
| **Term and Focus** | Autumn 1 or 2<br>I Safe – E-safety lessons | Spring 1<br>I Connect – Internet and The world wide web<br>Spring 2<br>I Network – Computing Network<br>I Data – Introduction to databases | Summer 1<br>I Program Unit 1 – Algorithms and Programming<br>Summer 2<br>I Simulate – Computing Simulations |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Year 4,5& 6 – E-safety lessons | Year 5 – I Web<br>Year 4, 6 – I Data<br>Year 6 – I Network | Year 4 – I Program Unit 1,3,4<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit 1 and 2 |
| **Year 4 Topic** | | | |
| **Term and Focus** | Autumn 1 or 2<br>I Safe – E-safety lessons | Spring 1<br>I Mail – Email<br>Spring 2 | Summer 1<br>I Program Unit 3 – Algorithms and Programming<br>I Program Unit 4 – Algorithms and Programming |

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| | | I Program Unit 1 – Algorithms and Programming | Summer 2<br>I Data – Introduction to databases<br>I Animate - Animation |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Year 5,6 – E-safety lessons | I Mail - End of Unit<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit 1 and 2 | I Animate – End of Unit<br>Year 5 – I Program Unit 1 and 2<br>Year 6 – I Program Unit 1 and 2<br>Year 6 – I Data |
| **Year 5 Topic** | | | |
| **Term and Focus** | Autumn 1 or 2<br>I Safe – E-safety lessons | Spring 1<br>I Draw – Graphical Drawing<br>Spring 2<br>I Program Unit 1 – Algorithms and Programming | Summer 1<br>I Model – 3D Graphical Drawing<br>I Web – The world wide web<br>Summer 2<br>I Crypto – An introduction to cryptography<br>I Program Unit 2 – Microsoft Kodu |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Year 6 – E-safety lessons | Year 6 Units<br>I App<br>I Data<br>I Model<br>I Network<br>I Program<br>I Safe | Year 6 Units<br>I App<br>I Data<br>I Model<br>I Network<br>I Program<br>I Safe |
| **Year 6 Topic** | | | |
| **Term and Focus** | Autumn 1 or 2<br>I Safe – E-safety lessons | Spring 1<br>I Draw – Graphical Drawing<br>Spring 2<br>I Program Unit 1 – Algorithms and Programming | Summer 1<br>I Model – 3D Graphical Drawing<br>I Web – The world wide web<br>Summer 2<br>I Crypto – An introduction to cryptography<br>I Program Unit 2 – Microsoft Kodu |
| **Prior Learning** | New Learning | New Learning | New Learning |
| **Future Learning** | Key stage 3 | Key stage 3 | Key stage 3 |