Computing Long Term Overview

## Statement of Intent

We believe that a high quality computing curriculum equips pupils for the modern world. Our aim is for pupils to have the creative thinking and understanding of computing to change the world. The core of computing is computer science, pupils are taught the principles of computing, how digital systems work and how to use this knowledge, through programming. Pupils will be able to create programs, systems and a range of content. We also ensure that pupils are able to express themselves and develop their ideas through information and communication technology at a level suitable for the future workplace.

## Implementation:

Our computing curriculum is broken down in to 3 strands:

Digital Literacy – Pupils will learn how to use technology safely and responsibly as well as developing an understanding of the common uses for information technology beyond school.

Information Technology – Pupils will learn how to use technology to create, organise, store, manipulate and retrieve digital content using a variety of different software. Including creating programs, collecting and presenting data, and using search technologies effectively.

Computer Science – Understanding how computers and computer systems work. Pupils will learn what algorithms are and how they work. Pupils will also design, write and debug their own programs as well as developing an understanding of computer networks including the World Wide Web.

## Impact

Each unit has a specific assessment aims to track the progress of our learners. Teachers use both formative and summative forms of assessment including verbal questions aimed at specific children and quizzes both verbal and written.

Year A

| | Aut 1 | Aut 2 | Spring 1 | Spring 2 | Sum 1 | Sum 2 |
|---|---|---|---|---|---|---|
| Nursery/Rec | Algorithms | Word processing | Programming | Data handling | Presentation | Animation |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |
| Year 1/2 | Technology around us – Algorithm<br><br>Video – Create a video clip | Digital painting (MS Paint)<br><br>Augmented reality | Animation (Chatterpix) | Data Handling (Grouping data) | Word processing (MS word) | Programming (Scratch Jr) |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |
| Year 3/4 | Networks | Animation<br>Stop frame animation (Imotion) | Sound<br><br>Sequence in music | Data Handling<br>Branching databases | Word processing<br><br>Desktop publishing | Programming<br><br>Events and actions |

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| | | | (Scratch) | Link to classification in science? | (design a booklet on the computer) (MS Publishing) | Scratch |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |
| Year 5/6 | Word processing<br><br>Presentations (PPT)<br>Design a Mayan city using pages to insert pictures and organise ideas.<br><br>Networks | Video editing (iMovie)<br>Edit | Programming<br>Micro bit | Data Handling<br>Flat-file databases (table of information, Excel) | | Animation using Scratch<br>Create a short animation linked to our summer term performance |
| Digital literacy<br><br>Online safety | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |

Year B

| | Aut 1 | Aut 2 | Spring 1 | Spring 2 | Sum 1 | Sum 2 |
|---|---|---|---|---|---|---|
| Nursery/Rec | Video | Photography | Digital art | Augmented reality | Sound | Programming |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |
| Year 1/2 | Computational thinking Algorithms | Digital photography | Programming - Robot programming (Bee bot/botley) | Data Handling (Pictograms) | Sound (Making music, Music lab chrome) | Presentation (PPT, web page) |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |
| Year 3/4 | Algorithms | Programming<br><br>Micro bit | Augmented reality<br><br>Repetition in shapes (drawing shapes)<br><br>FMSLogo | Video creation<br><br>Data logging | Photography<br><br>Photo editing<br><br>Paint.net | Programming Repetition in games<br><br>Scratch |
| Online safety<br><br>Digital literacy | Self-image and identity | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |

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| | Online relationships | | | | | |
| Year 5/6 | Algorithms<br><br>Sound | Web page creation<br><br>Google slides | Programming<br>Variables in games<br><br>Scratch | Data Handling<br>(Introduction to spreadsheets)<br><br>MS Excel | Digital art<br>3D modelling (Tinkercad) – link to DT design | Programming<br>MS make code – design a programme for the Micro bit |
| Online safety<br><br>Digital literacy | Self-image and identity<br>Online relationships | Online reputation<br>Online bullying | Managing online information | Health, wellbeing and lifestyle | Privacy and security | Copyright and ownership |

Our online safety sessions are delivered using the National Online College online safety plans for each year group.

Wherever possible our Computing curriculum is delivered via cross curricular activities.