

**Computing Curriculum**

At North Tawton Primary School, we believe in giving children the skills needed for the 21st Century – computing is a key component of this. Our curriculum is designed to give our learners the skills and knowledge needed to access computing technology.

Technology is changing the lives of everyone; many of the jobs and careers that our children will undertake have not yet been invented. Through teaching computing, we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. 

It is our intention to inspire and enable children to find, explore, analyse, exchange and present information both purposefully and with clarity. We also focus on developing the skills necessary for children to be able to be discerning consumers and creators of information in all of its forms and to do so with confidence and security.

Computational thinking is a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to develop and personalise this skill in all curriculum areas.

The computing curriculum is designed to build upon knowledge and skills with technology with a strong thread of online safety.

**Programme of study**

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| EYFS | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
|  | Children know that technology can be used for a range of purposes at home and school  Children can name a range of technology devices and uses *(e.g. ‘You use your computer to take the register and it sends it to Mrs Chapman so she can see it on her computer’)*  Children know that information can be retrieved from technology | Children can use technology to complete simple games and programs  Children can use technology to retrieve simple information *(e.g. Using voice control to find pictures of animals)*  Children can express their ideas using technology *(e.g. using drawing programs)*  Children can explain uses of technology at home and school | **Device**  **Technology**  **Computer**  **Information** |

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| Year 1 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Understanding algorithms and e-safety  Create and de-bug simple programmes and e-safety  Digital literacy and e-safety | Children know that an algorithm is a set of instructions  Children understand that devices follow algorithms precisely and unambiguously  Children know how to create a simple algorithm  Children know that a program is a set of instructions that execute a task  Children know that a program is created by a set of algorithms  Children know how to create digital content *(e.g. word processing documents)*  Children know how to save digital content  Children know how to retrieve digital content  Children know what personal information is  Children know that they should not share personal information online (including photos)  Children can recognise online threats to their safety  Children know where to seek help with online safety | Children can create a simple algorithm  Children can test a simple algorithm  Children can de-bug a simple algorithm  Children can create a simple program  Children can test a simple program  Children can de-bug a simple program  Children can create digital content  Children can save digital content  Children can retrieve digital content  Children can use online safety tools  Children use a computer programme to create art | **Algorithm**  **Program**  **Bug**  **De-bug**  **Digital**  **Digital content**  **e-safety**  **online safety** |

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| Year 2 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Logical reasoning and e-safety  Digital literacy beyond school and e-safety  Digital content and e-safety | Children know that technological devices are unambiguously and precisely logical  Children know that programs are defined by algorithms and will follow them logically  Children know how to use a range of programs at home and school  Children can create digital content beyond school *(e.g. creating posters using digital photos, publishing programs)*  Children know how to organise digital content using folders and sub folders  Children know how to manipulate digital content  Children know common methods of stealing personal information  Children know what safe online groups look like | Children can predict the behavior of a program using logical reasoning  Children can create digital content using a range of programs  Children can create digital content outside of the school environment  Children can organise digital content in folders and sub folders  Children can manipulate digital content  Children can spot unsafe content  Children can use a program to create music  Children can use a program to create and manipulate photos | **Logic**  **Logical reasoning**  **Folders** |

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| Year 3 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Connecting computers  Graphics and presentations including research and e-safety  Sequencing in music  Building databases  Desktop publishing | Children understand how devices connect to one another  Children understand the benefits and functions of connected devices  Children know how to use graphic programs  Children know how to create an animation  Children know how to design simple programs  Children know how to create simple programs  Children know how to de-bug simple programs  Children understand the use of data storing and sorting programmes  Children know how to use programs to create a document | Children can connect a device to others  Children can create graphics and animations using technology  Children can design a program to complete a given task  Children can create a program to complete a given task  Children can de-bug a simple program to complete a given task  Children can store, sort and retrieve data  Children can present information using programs | **Connections**  **Internet**  **Wireless**  **Data**  **Graphics** |

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| Year 4 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Working with Data and e-safety  Networks and communications and e-safety  Audio editing | Children know how to organise data on digital programs *(e.g. spreadsheets)*  Children use data stored digitally to create charts and graphs  Children understand computer networks such as the internet  Children know that technology can be used to communicate instantly with people around the world  Children know how to be safe when communicating via digital technology *(acceptable use)*  Children know how digital data can be manipulated to mislead readers  Children know they have a responsibility to act respectfully online.  Children know how to use digital devices to record audio  Children know how to edit audio in digital files  Children understand the use of digital devices for photos | Children can oraganise data and retrieve information from digital data sources  Children can represent data  Children can use networks to communicate with others  Children can identify unsafe uses of computer networks  Children can record and edit audio using digital devices.  Children can create and edit photos using digital devices | **Data sources**  **Communications**  **networks** |

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| Year 5 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Video editing  Databases  Selection | Children know how to use programs to enhance presentations  Children know how communication networks can be used to work collaboratively  Children know how to correct algorithms in their programs  Children know how collaborative working can be manipulated positively and negatively  Children understand the role of technology and digital devices in the creation of video  Children understand the purposes and functions of databases  Children understand binary coding and how this enables selection for a variety of purposes | Children can create presentations using programs to enhance  Children can work collaboratively on a single piece of content  Children can identify when images have been manipulated  Children can explain how algorithms work  Children can create and edit video  Children can create, sort and retrieve data from a data base  Children use selection for a variety of purposes | **Collaborative working**  **Databases**  **Coding** |

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| Year 6 | | | |
| Subject | Knowledge | Skills | Key Vocabulary |
| Communications  Websites  Spreadsheets  Variables  Modelling  Sensing | Children know how to safely communicate using technology and devices  Children know how to use the internet safely to search for content  Children understand how search results are ranked  Children recognise the features of a website and how to use these for various functions  Children understand the use of a variable in programming  Children understand the function and purpose of spreadsheets  Children understand the use of 3D modelling  Children understand the use of laser and other sensing tools in technology | Children can use the internet to safely search for content  Children can create a basic website  Children can use a variable to affect a program  Children can use spreadsheets to organise and retrieve data  Children can create 3D models using technology  Children can use lasers and other sensing tools to affect a program. | **Search ranking**  **Functions**  **Modelling**  **Sensing**  **Variables** |