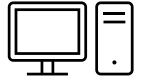


# Computing & Online Safety at Holy Trinity CE Primary

**"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change."** *Charles Darwin*

Our curriculum **intent for Computing** is that every child will:



- be inspired and enthused by the creative possibilities technology offers
- know how to use technology safely, respectfully and responsibly,
- understand and apply the fundamental principles and concepts of computer science
- gain practical experience of writing computer programs in order to solve problems.
- gain a wide range of experiences in technology in order to prepare pupils for their next phase in life

Holy Trinity is committed to ensuring all children have full access to a high-quality computing education. We have a range of excellent resources to support children in their learning across the whole curriculum as well as in their discrete computing lessons. The school makes good use of shared resources such as iPads, laptops and other technical resources which can be used within lessons or as part of group work.

## Implementation of the Computing Curriculum at Holy Trinity

The Curriculum is largely focused around 3 key areas:

- **Digital Literacy:** using IT purposefully, creatively and safely.
- **Computer Science:** developing computational thinking and programming skills.
- **Information Technology:** understanding how computers, networks and the web function.

We aim to develop meaningful links across other curriculum subjects for pupils to be able to apply and practice their computing skills.

At Holy Trinity pupils and teachers use a variety of hardware such as iPads, laptops, Beebots, micro:bits, digital microscopes etc.

Pupils use:

- [Purple Mash](#) coding and Python to create and de-bug programmes.
- Microsoft software including Word, PowerPoint and Excel to present information
- Purple Mash to create and manipulate images and documents
- Create blogs using our school blog and school email to communicate with their peers
- Create films using iMovie and Purple Mash 2Animate
- Use hardware to search the internet for research purposes linked to topics

The safe use of technology and the internet underpins our curriculum. We have a focus on online safety in each year group by delivering Purple Mash 2BeSafe content. We subscribe to [National Online Safety](#) to provide staff and parents with up-to-date information about gaming and apps available. This platform also provides a bank of age-appropriate resources to be used with the pupils. In our every-changing technological world, we aim to ensure all our pupils have the skills and knowledge to stay safe and behaviour appropriately on-line.

Pupils use Teams to upload assignments and access homework. Along with a variety of on-line platforms. Our Digital Leaders support other children with a variety of skills and share their expertise when needed.

## The Impact of the Computing Curriculum at Holy Trinity

Holy Trinity pupils have experience of a range of software and developed their computing skills during their time with us. They are prepared for using Teams for blended learning at secondary school and have developed their independence to be able to access and upload assignments set.

In teaching our pupils how to behave appropriately on-line and how to report a problem, we have given them transferrable skills to prepare them for whatever future technology awaits them.

## How does Computing fit into our School Vision?



### Computing links/actions:

- Ensure online safety is planned and delivered effectively and regularly in every year group
- Offer Online Safety advice to parents through our website, newsletter and parents' information evenings in order for them to support their child being safe online
- Use Digital Leaders in school to support their peers and instil confidence in their computing abilities
- Provide CPD for staff in computing National Curriculum using Purple Mash schemes of work
- Provide CPD for staff in personal computing skills for use in the classroom
- Ensure hardware (including internet access and staff laptops) is off a high standard to enable staff to undertake their job effectively and efficiently
- Explore ways that technology can reduce staff workload and enhance efficient working
- Ensure pupils have access to high quality hardware
- Ensure pupils have access to high quality learning platforms online
- Ensure pupils have access to a secure, safe internet that allows them to access information they need to support their learning but in a very controlled, safe environment
- Be aware of new technologies that would engage and inspire pupils
- Research apps to install to support learning
- Approach local companies to offer sponsorship/funding for the purchase of new hardware
- Link with Charters and St. George's to enquire about support from students/with resources and learning
- Forge links with other Computing subject leaders across the local cluster

## Holy Trinity CE Primary Computing & Online Safety overview

|        | Autumn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Spring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Summer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| EYFS   | <p><b>ELG (Technology):</b> There are no early learning goals that directly relate to computing objectives, though it is still expected that children will be introduced to appropriate technology and use it within provision.</p> <ul style="list-style-type: none"> <li>Learning how to log onto Purple Mash and use age-appropriate software eg 2 Paint and set 2dos related to topic work</li> <li>We will become more independent using ICT equipment in the classroom eg taking photos for Tapestry, timers</li> <li>We will use the internet to help find out facts to support classroom work</li> <li>Use some simple programs on the iPads that are cross curricular and support learning, 'Bugs and Buttons' 'Pre-Motor Dexterity'</li> </ul> <p><b>Internet Safety</b></p> <ul style="list-style-type: none"> <li>In PSHE lessons we will use the 2BeSafe - talking about ways to stay safe when using technology.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Year 1 | <p><b><u>Information Technology + Digital Literacy</u></b></p> <p>Purple Mash Unit: <b>Introduction to Purple Mash</b> (3 sessions)</p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>use technology safely and respectfully, keeping personal information private;</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>it is important to log on to a site</li> <li>it is important to keep passwords safe</li> <li>it is important to log out at the end of a session</li> <li>you can use an on-screen or physical keyboard to letters and spaces</li> </ul> <p><b>Key Vocabulary:</b><br/>Avatar, icon, password, file name, login, save, home page, logout, 2Do</p>                                                   | <p><b><u>Information Technology</u></b></p> <p>Purple Mash Unit: <b>Data Explorers</b> (6 sessions) <b>2Count</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>sorting is a way to organise items</li> <li>sorting and grouping have different meanings</li> <li>data is information that can be collected</li> <li>data can be represented digitally using pictures</li> </ul> <p><b>Key Vocabulary:</b><br/>Algorithm, criteria, data, group, pictogram, sort</p> | <p><b><u>Computer Science</u></b></p> <p>Purple Mash Unit: <b>Creating and Following Instructions</b> (3 sessions)</p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>to achieve a specific effect when building something, accurate instructions must be followed</li> <li>Computer programs need precise instructions to follow and these are called algorithms</li> <li>The order you give instructions in matters</li> <li>Correcting errors in an algorithm is called debugging</li> </ul> <p><b>Key Vocabulary:</b><br/>Algorithm, coding, computer bug, debugging, instructions, program</p> |

'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

Computing & Online Safety at Holy Trinity CE Primary School

### Information Technology

Purple Mash Unit: **Creative Computing** (4 sessions) **2Paint**

**National Curriculum Objectives:** Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

**Pupils will know that:**

- Art can be created using digital tools
- Digital tools can be used to play and make simple games
- Purple Mash allows a user to share work for others to see on a digital display board

**Key Vocabulary:**

Arrow keys, digital art, drag and drop, hotspot, touch screen gestures (tap, swipe, pinch, spread, long press, rotate)

### Digital Literacy

Purple Mash Unit: **Technology Around Us** (4 Sessions)

**National Curriculum Objectives:** Pupils should be taught to:

- recognise common uses of information technology beyond school
- use technology safely and respectfully

**Pupils will know that:**

- technology is something that uses scientific knowledge to solve problems or invent tools
- technology is used within many environments
- the word hardware is used to describe the physical parts of a technology device
- it is important to use technology safely and there are some risks associated with the use of technology

**Key Vocabulary:**

Device, digital technology, electronic, hardware, technology

### Computer Science

Purple Mash Unit: **Coding** (6 sessions) **2Code**

**National Curriculum Objectives:** Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs

**Pupils will know that:**

- computer programs work by following instructions called algorithms. These are written as computer code that the computer can interpret
- in 2Code, code is created using coloured blocks
- code view is the place in 2Code where you can see and use the blocks of code
- each single instruction such as 'Object Right' is called a command
- to make an algorithm happen, you must execute or run the code
- an event is something that makes a block of code run in response to an action such as user pressing a key or touching the screen
- debugging is the name for fixing code that isn't working how it was designed to work

**Key Vocabulary:**

Action, algorithm, code, code blocks, code view, coding, output, program, when clicked, programmer/coder, object, instruction, event, design view, debugging, command

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| Year 2 | <p><b>Information Technology &amp; Digital Literacy</b></p> <p>Purple Mash Unit: <b>The Internet</b> (4 sessions)</p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>recognise common uses of information technology beyond school</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>the internet is a global network of connected computers around the world</li> <li>an internet connection can be made using wires or wirelessly</li> <li>a browser is used to access websites and webpages of the World Wide Web</li> </ul> | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Coding</b> (6 sessions) <b>2Code</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>In computing, a set of instructions is known as an algorithm. Steps in an algorithm must be followed to achieve the intended outcome.</li> </ul> | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Spreadsheets</b> (6 sessions) <b>2Calculate</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a spreadsheet is a program that organises data in rows and columns</li> <li>2Calculate is a type of spreadsheet program</li> </ul>                                                                                                                                                         |

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- the WWW refers to documents and pages someone sees when they use a browser
- the 'front page' of a website is known as the Home Page
- websites can be found using a browser that contains a search engine

**Key Vocabulary:**

Browser, home page, smart device, webpage, internet, Wi-Fi, search engine, world wide web

**Information Technology & Digital Literacy**

Purple Mash Unit: **Introduction to Purple Mash** (3 sessions)

**National Curriculum Objectives:** Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- use technology safely and respectfully, keeping personal information private

**Pupils will know that:**

- it is important to log in/log out to a site and keep your password safe
- an avatar is a virtual representation of a person suitable for online use
- the 2Do system is used to set work for children on Purple Mash
- to access Purple Mash programs, you use the Tools area

**Key Vocabulary:**

Avatar, Icon, File name, log out, login, home page, password, save, 2Do

- The collision detection event is a way to cause an action when two objects collide with each other.
- Programs follow a sequence of instructions (commands) in order.
- Timer commands can be used to make parts of the program run after a set time.
- Different object types in 2Code have different attributes that can be changed.
- Event commands in 2Code are used to create blocks of code that are run when an event happens. There are different event command blocks in 2Code.
- Debugging is the process of testing that a program works as intended, looking for any bugs and fixing the problems when found.

**Key Vocabulary:**

Action, attribute, algorithm, bug, button object, collision detection, command, debug, event, object, output, program, program design, sequence, timer, when clicked, when key event, when swiped event

**Information Technology**

Purple Mash Unit: **Questioning** (4 sessions) **2Graph 2Count**

**National Curriculum Objectives:** Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

**Pupils will know that:**

- data is information that can be collected, recorded and presented in different ways
- a tally chart is a method of counting and recording data
- pictograms and bar charts are ways of presenting data visually
- a branching database uses yes/no questions to organise and identify information

- Each box in a spreadsheet is called a cell and every cell has a unique name
- Rows run horizontally
- Columns run vertically
- Spreadsheets can be used to carry out mathematical calculations automatically

**Key Vocabulary:**

Axis/axes, cell, column, row, spreadsheet, value

**Computer Science**

Purple Mash Unit: **Route Explorers** (4 sessions) **2Go**

**National Curriculum Objectives:** Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs

**Pupils will know that:**

- the combination of a direction and a distance is known as a command in 2Go
- commands can be input into 2Go to control the movement of a screen turtle in four directions
- routes can be programmed to perform more than one command in a sequence
- a list of commands for a route is the algorithm

**Key Vocabulary:**

Algorithm, coding, computer bug, command, debugging, direction

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|        | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Creating Pictures</b> (5 sessions) <b>2Paint A Picture</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>digital art tools usually have a choice of painting effects</li> <li>painting effects can be combined to help a user make pictures of varying styles</li> <li>the size of an onscreen painting tool brush stroke can be manipulated</li> <li>you can change the intensity of the colours used digitally by 'diluting' them</li> </ul> <p><b>Key Vocabulary:</b><br/>Palette, outline, 2PaintAPicture, undo, redo,</p> | <p><b>Key Vocabulary:</b><br/>Branching database, closed question, data, open question, pictogram, sorting, tally chart, yes or no question,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Making Music</b> (3 sessions) <b>2Sequence</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>digital music is created by a computer</li> <li>music can be made digitally using 2Sequence</li> <li>notes that are the same colour on 2Sequence represent the same note tone</li> <li>the tempo of the music can be altered by changing the BPM (beats per minute)</li> <li>looping a track means that it continues to play on repeat</li> </ul> <p><b>Key Vocabulary:</b><br/>Background music, digital music, sound effects (SFX), BPM, looping, tune, compose, volume</p> |
| Year 3 | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>micro:bits</b> (4 sessions) <b>Free Code micro:bit</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>                                                                                                                                                                  | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Coding</b> (6 sessions) <b>2Code</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Presentations</b> ( 5 sessions) <b>Microsoft PowerPoint</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul>                                                                                                                                                                                                                                                                                                                                                         |

'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

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| <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a micro:bit is a tiny computer which needs instructions in code to make it work</li> <li>a micro:bit can produce outputs</li> <li>a micro:bit can receive inputs</li> <li>code from the coding environment can be transferred onto a micro:bit</li> <li>the order (sequence) of instructions is important when coding</li> </ul> <p><b>Key Vocabulary:</b><br/>Accelerometer, algorithm, animation, gestures, hardware, image, infinite loop, LED (light emitting diode), output, repeat, sequence, software, sound output, speaker</p> <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Branching Databases</b> (4 sessions) <b>2Question</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a database is a collection of data organised in a way that it can be searched and information found easily.</li> </ul> | <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>Flowcharts are a type of diagram that use specifically shaped labelled boxes and arrows to represent an algorithm as a diagram.</li> <li>Timers can control when a block of commands run.</li> <li>Timer commands can be run after a timed delay or at regular intervals.</li> <li>In 2Code there are two timer options, timer every or timer after. These can be altered by changing the number of seconds/quarter seconds.</li> <li>Repeat is a control block allowing blocks of commands to repeat a specified number of times.</li> <li>Testing and debugging are an important part of the process of making computer programs.</li> <li>Understanding what nesting is and the effect it has on a program can help when trying to debug a program.</li> </ul> <p><b>Key Vocabulary:</b><br/>Action, alert, algorithm, attribute, button object, collision detection, debug/debugging, design, event, flowchart, interval, nesting, object, repeat, sequence, timer, turtle object.</p> <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Touch Typing</b> (4 sessions) <b>2Type</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>typing is the action or skill of writing something by means of a keyboard (physical or virtual)</li> </ul> | <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>you can use PowerPoint software to create and display information to an audience that is clear and engaging</li> <li>simple presentations can be used quickly by using features such as textboxes, word art and images</li> <li>designs of slides can be changed</li> <li>animations can be applied to images and text to make presentations more eye-catching</li> <li>transitions can be used to change the way a slide moves onto the next</li> <li>slide notes can be added to provide the presenter with prompts of what to say when presenting a slide</li> <li>when presenting to an audience it is important to speak loudly and clearly, make good eye contact and take your time</li> </ul> <p><b>Key Vocabulary:</b><br/>Animation, font, format, handles, media, PowerPoint, slide, slide notes, slideshow, text box, transition.</p> <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Spreadsheets</b> ( 6 sessions) <b>2Calculate</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a spreadsheet is a digital tool used to organise and analyse data</li> <li>a sheet is one page within a spreadsheet file and several sheets can exist in one file</li> </ul> |
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'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

- A binary question is one that can be answered 'yes' or 'no'
- Branching databases are structured using binary choices
- A good binary question splits a group roughly in half with one half answering 'yes' and the other half answering 'no'
- When using a binary database, the questions eliminate data until just one record is left, the item can then be identified

**Key Vocabulary:**

Binary choice, binary tree, branching database, data, database, debug/debugging, record

**Digital Literacy & Computer Science**

Purple Mash Unit: **Email** (6 sessions) **2Email**

**National Curriculum Objectives:** Pupils should be taught to:

- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration

**Pupils will know that:**

- there are different methods of digital communication
- emails are a form of digital communication
- emails can be sent and received almost instantly to anyone with an email address
- pictures, documents and other types of files can be attached to an email

- a keyboard is a device with a set of keys (buttons) that you press to type numbers, letters, punctuation and symbols into a computer
- the left hand and right hand should work independently of each other when typing on a keyboard
- the shift key is used alongside another key to type a capital letter and different punctuation marks and symbols
- the space bar is pressed with the thumb and types a space between words and letters

**Key Vocabulary:**

Bottom keys, home keys, keyboard, number row, shift key, space bar, top keys, typing.

- cells are the individual boxes where data is entered, arranged in rows and columns
- Advanced Mode provides more tools and features than Simple Mode
- Copy and total tools allow data to be copied and totalled automatically across rows, columns and diagonals
- A formula is a set of instructions that tells a spreadsheet what to calculate, starting with an equals sign (=)
- The Formula Wizard helps build formulae without typing them manually
- A function is a built-in formula (e.g SUM, AVERAGE, MIN, MAX) that performs specific calculations automatically
- A range is a group of selected cells used together in a formula or function

**Key Vocabulary:**

Advanced mode, copy tools, data, formula, formula bar, formula wizard, function, merge, operations, range, sheet, total tools

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|        | <p><b>Key Vocabulary:</b><br/>Address book, attachment, communication, compose, email, inbox, password, personal information, recipient, trusted contact.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Year 4 | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Unpacking Hardware and Software</b> (4 sessions) <b>2Quiz</b> <b>2Publish</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>the word 'technology' describes using scientific knowledge to design and make tools, systems or machines that help solve problems or make tasks easier</li> <li>electrical, digital and smart technology are sub-sets of technology</li> <li>hardware describes the physical parts of a computer</li> <li>software describes the programs that instruct a computer to complete tasks</li> <li>software and hardware operate together to follow processes that assist in completing tasks</li> </ul> <p><b>Key Vocabulary:</b><br/>Application (app), component, computer system, hardware, input, output, peripheral, process, program, software, storage, technology.</p> | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Coding</b> (6 sessions) <b>2Code</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>There are object types in 2Code; these have different attributes (properties) that can be changed in code and design view.</li> <li>Selection in a program means that it has a decision command that will run different procedures dependent on whether a condition is met or not.</li> <li>Co-ordinates are used in computer programming to determine the position of a point, shape or object and that these change according to where they are positioned on the screen.</li> <li>'If' statements and 'if/else' statements are used to create selection in 2Code.</li> <li>Programs use different commands including repeat, repeat until and timers to make code loop in a program.</li> <li>Variables are a place in computer memory that remains for the length of the program.</li> <li>Variables have a name and a value.</li> </ul> | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Animation</b> (6 sessions) <b>2Animate</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>some animations are created by hand and others with the help of technology</li> <li>animation software has specific functions that support the animation of still images such as static backgrounds, onion skinning and copying frames</li> <li>choices of sound effects, their timing and frames per second settings can enhance an animation</li> <li>storyboarding is a process that supports planning an animation</li> </ul> <p><b>Key Vocabulary:</b><br/>Animation, animation software, background, copy frame, frame, frame per second, onion skinning, sharing controls, sound effect, stop motion, storyboard.</p> |

### Computer Science & Information Technology & Digital Literacy

Purple Mash Unit: **Effective Searching** (4 sessions) **2Publish**

**National Curriculum Objectives:** Pupils should be taught to:

- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

**Pupils will know that:**

- the internet is a global network of computers that share information from one device to another, anywhere in the world
- we search for information on the internet using a tool called a search engine
- a search engine works by collecting and organising vast amounts of data from webpages across the internet
- typing in keywords rather than a whole question can be quicker and a more effective way of finding the correct information
- search engines send out programs called spiders or web crawlers to explore the web for information. They make a copy of it and store it on their database called an index
- when you type a query into a search engine, it searches its index for relevant information and ranks it according to how useful it thinks it is. This is the order in which the information is displayed
- a search engine bases its ranking on the relevance of the material, the popularity of the website and whether the business has paid for the information to

- The values can be changed in the code.
- Variables are used in programming to keep track of things.

**Key Vocabulary:**

Action, alert, attribute, co-ordinates, debug/debugging, design, event, flowchart, 'if' statements, 'if/else' statements, initialize, input, loop.

### Information Technology

Purple Mash Unit: **Sound Stories** (4 sessions) **2Cast**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

**Pupils will know that:**

- an audiobook is a story or book read aloud and recorded for people to listen to
- as well as being an enjoyable way to access a story, audiobooks make texts more accessible for a range of people
- audiobooks can be made more interesting by different voices, expression, sound effects and background music
- an audiobook script may contain notes to the speaker, the text spoken and how the sound effects are created and used
- exciting audiobook narration will contain clear pronunciation, a range of tone and pitch to show emotion and pauses for dramatic effect

### Information Technology

Purple Mash Unit: **Composing Beats** (4 sessions) **Busy Beats**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

**Pupils will know that:**

- music is built of different elements which create the mood and feel including: pulse, rhythm, tempo, pitch, melody, texture and dynamics
- in digital music, rhythm is made up of sample sounds
- a sample is a short recording of a sound such as a drumbeat
- on Busy Beats, the tempo is changed by altering the BPM (Beats per minute)
- in digital music, a melody is made up of synths. These are electronic music instruments sounds
- in Bust Beats, the higher the number on the synth, the higher the pitch of the note is
- a piece of music on Busy Beats is created with a range of samples and synths

**Key Vocabulary:**

BPM, dynamic, electronic music, melody, patch, pitch, pulse, rippler, rhythm, sample, synths, tempo, texture

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| <p>rank higher. This means the higher ranked results are not always the best</p> <ul style="list-style-type: none"> <li>• There are a range of techniques you can use to refine a search such as using quotes, using the minus sign and using filters</li> <li>• information can be put online by anyone so we should not take everything we read as fact</li> <li>• fake news is information that might look real but isn't. Sometimes people make fake news for fun, to make money or try to change the way people think.</li> <li>• It is important to evaluate the reliability of the information we find online.</li> </ul> <p><b>Key Vocabulary:</b><br/>Crawl, exact match, fake news, filter, index, internet, keywords, rank, refine, relevance, reliable source, search bar, search engine, snippet, virtual assistant device (e.g. Alexa or Siri), website</p> <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Logo</b> (4 sessions) <b>Logo</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>• use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>• use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>• Logo is a text-based coding language in which commands are written to control the movement of a screen turtle</li> </ul> | <ul style="list-style-type: none"> <li>• editing is the process of polishing and improving an audiobook to ensure it is the best it can be</li> <li>• reviewing and evaluating is an important step when creating any digital content including audiobooks</li> </ul> <p><b>Key Vocabulary:</b><br/>Audiobook, background music, edit, editor, final mix, playback, recordings, sound effects, sound effect manager, sound technician, timeline, track.</p> | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Introduction to AI</b> (2 sessions)</p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>• Artificial Intelligence is a type of technology that can make predictions, take actions, and create content, by learning from data</li> <li>• In order to communicate effectively with AI, it is important to write clear and precise prompts</li> <li>• There are specific behaviours that a user of AI should practise and use to become a good AI citizen</li> <li>• AI will continue to evolve</li> </ul> <p><b>Key Vocabulary:</b><br/>Artificial Intelligence (AI), automation, data, digital citizenship, future technology, generative AI, human oversight, innovation, prediction, privacy, prompt, refine, responsible behaviour, trustworthy/reliable.</p> |
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|        | <ul style="list-style-type: none"> <li>Commands in Logo consist of directional or rotational commands that include a direction and a distance in spaces or degrees and operational commands that alter how the computer looks or how the code runs</li> <li>Spacing of commands in Logo is important</li> <li>Visual effects can be achieved by using the PU, PD, SETPC and SETPS commands</li> <li>Logo commands can be repeated a set number of times using the repeat command</li> <li>A procedure is a named set of Logo commands that will be run in the program when referred to by name</li> <li>Errors (bugs) occur because commands have been input incorrectly</li> <li>Fixing the errors is called de-bugging</li> </ul> <p><b>Key Vocabulary:</b><br/>Logo, Logo commands, multi-line mode, pen down, pen up, procedure, repeat, set PC, set PS</p>                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Year 5 | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Databases</b> (5 sessions) <b>2Investigate</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a database contains a set of data that can be searched and sorted to retrieve information</li> <li>a table-based database contains records and fields</li> <li>database tools support interpreting the data using functionality including sorting, filtering, grouping and searching</li> </ul> | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Quizzing</b> (5 sessions) <b>2Quiz</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>Within 2Quiz, there are different types of quiz questions, suitable for different purposes</li> <li>Settings including quiz style, time limits, feedback settings and feedback sounds change the look and feel of a quiz</li> </ul> <p><b>Key Vocabulary:</b></p> | <p><b>Information Technology</b></p> <p>Purple Mash Unit: <b>Word Processing</b> (6 sessions) <b>Microsoft Word</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>A word processing tool can be used to create a range of documents.</li> <li>The layout of a document can be altered.</li> </ul> |

'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

- collaborative databases allow multiple people to work on one set of data at the same time
- a well-designed database has built-in validation to ensure correct data formatting
- queries can be built using the database tools to answer specific questions about the data
- some table based databases have multiple tables of related data. These can be linked on common fields to build complex queries across multiple tables
- databases support the production of automated reports using fields within the data

#### Key Vocabulary:

Condition, data, database, edit, field, filter, group, linked tables, operator, query, record, sort, validation.

#### Information Technology

Purple Mash Unit: **Spreadsheets** (6 sessions) **2Calculate and Microsoft Excel**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

#### Pupils will know that:

- a spreadsheet is a digital tool for storing, organising and analysing data
- cells, rows, columns and cell references provide a structure for organising information
- formulas allow spreadsheets to perform calculations automatically including addition, subtraction, multiplication and division

Quiz, simple, interactive, advanced, features, debug.

#### Computer Science

Purple Mash Unit: **Coding** (6 sessions) **2Code**

**National Curriculum Objectives:** Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

#### Pupils will know that:

- The way that code is written and structured can improve the ability to debug it, simplify the code and run it more efficiently.
- A simulation is a model that represents a real or imaginary situation.
- Abstraction is a way to think about a situation without unnecessary details, enabling a focus on the function of a program.
- Decomposition is a method of breaking down a task into manageable components. This makes coding easier as the components can then be coded separately and then brought back together in the program. Each part is known as a sub-routine.
- A function is a named group of commands that a program can run when called by name; reducing the need to rewrite code repeatedly.

- Images can be inserted and edited in a word processor.
- The look and placement of text within a document can be modified.
- Tables can be used to present information within a document.

#### Key Vocabulary:

Bullet points, copy, cut, document, editing, font, formatting, handles, page margins, paste, text alignment, text wrapping.

#### Computer Science

Purple Mash Unit: **Game Creator** (5 sessions) **2DIY3D**

**National Curriculum Objectives:** Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

#### Pupils will know that:

- there are criteria which determine the playability of a video game
- 3D games can be made using the 2DIY 3D tool
- To maximise playability, it is important to plan and design a game before making it
- The visual and audio properties of a game should fit with the theme and add a feeling of immersion to the experience

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|        | <ul style="list-style-type: none"> <li>line graphs are used to represent continuous data and show trends over time</li> <li>budgets are used to plan money, compare costs and make financial decisions</li> <li>spreadsheets help solve real-life problems by presenting information clearly and accurately</li> </ul> <p><b>Key Vocabulary:</b><br/>Axis/axes, budget, continuous data, conversion, forecast, formula, income, function, line graph, meteorologist, plat/plotting, trend.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>A datatype defines the type of data, for example, a number or text, and what operations can be performed with it.</li> <li>It is important to initialize variable values to avoid unanticipated bugs in the program.</li> <li>Concatenation is the name given to the action of linking things together in a series. For example, in programs we might want to link words together to form random phrases that are seen by a user of a program.</li> </ul> <p><b>Key Vocabulary:</b><br/>Abstraction, action, algorithm, coordinates, concatenation, datatype, decomposition, event, flowchart, function, 'if' statement, 'if/else' statement, initialize, nesting</p>                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>The design of baddie sprites and collectable quest items is a key aspect of game creation</li> <li>It is important to give the player good instruction to enable them to enjoy playing a game</li> <li>Evaluation is important so a game can be improved</li> </ul> <p><b>Key Vocabulary:</b><br/>2D game, 3D game, game design, game environment, game feedback, game genre, playability, sprite, sprite animation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Year 6 | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Networks</b> (4 sessions)</p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>a network describes a group of connected computers that can share information and hardware resources</li> <li>LAN and WAN are different kinds of networks</li> <li>Certain hardware is required to create a network</li> <li>Networks can be wired or wireless or a combination of both</li> </ul> | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Coding</b> (6 sessions) <b>2Code</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>Cloning is a process where additional objects can be created while the program is running.</li> <li>Objects can be draggable in 2Code to provide another way for the user to interact with them.</li> <li>Hotspots can be created in 2Code. These are a type of object that can be used to make a specific area</li> </ul> | <p><b>Computer Science</b></p> <p>Purple Mash Unit: <b>Introduction to Python</b> (4 sessions) <b>Python in Pieces</b></p> <p><b>National Curriculum Objectives:</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul> <p><b>Pupils will know that:</b></p> <ul style="list-style-type: none"> <li>Python is a text-based coding language</li> <li>Python has in-built functions that can be used</li> <li>A library of functions can be imported into a program to use</li> <li>A sleep function can be used to control how a program is executed</li> </ul> |

'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

- There is a difference between the World Wide Web and the Internet
- Web browsers are used to access the WWW
- Internet filtering and censorship are both used to make parts of the internet less accessible for different reasons

**Key Vocabulary:**

Email, internet, internet chat, LAN (Local Area Network), network, router, video call, WAN (Wide Area Network), web browser, website, Wi-Fi, World Wide Web (WWW)

**Information Technology**

Purple Mash Unit: **Graphing** (4 sessions) **2Graph**  
**2Calculate**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

**Pupils will know that:**

- graphing helps to make sense of datasets and draw conclusions related to the collected data
- there are different types of graphs
- Comparative bar charts can be used to visually compare several datasets
- Graphs can be exported from a graphing tool such as 2Graph and imported into other documents
- Pie charts represent data as parts of a whole
- Line graphs are used to represent the relationship between two variables as they change over time

**Key Vocabulary:**

- of the screen react to actions such as objects entering or leaving the area.
- Using a combination of coding structures and objects allows the design of interactive and creative programs.
- Variables can have different designated datatypes. The datatype will impact how the value of the variable can be used.
- There are a variety of ways of receiving input from users and then using this input.
- A flowchart is a diagram that uses specifically shaped, labelled boxes and arrows to represent an algorithm as a diagram.
- Using functions helps with making programs more efficient. Instead of writing the same sequence of code repeatedly.
- Design documentation is vital when producing more complex programs. The process of designing supports abstraction and decomposition of the task at hand.
- Text-based adventures are computer games that have been created using text instead of graphics. Players use text commands to control characters and influence the environment.

**Key Vocabulary:**

Abstraction, action, Algorithm, attribute, clone, concatenation, decomposition, event, flowchart, function, hotspot, initialise, object, prompt

**Information Technology**

Purple Mash Unit: **Data Detectives** (4 sessions) **Data**  
**Detectives**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

- There are two main types of loop in Python and that these can be used to improve coding efficiency
- Range is a function that lets a coder in Python get a series of numbers or specifies how many times a loop is to run
- Python can be used to perform mathematical calculations
- Sprites can be programmed to move positions on the screen

**Key Vocabulary:**

Command, co-ordinate, floating point number, floor division, function, library, loop, modulo operator, print, sleep, sprite, string, range, variable.

**Information Technology**

Purple Mash Unit: **3D Modelling** (4 sessions) **2Design and**  
**Make**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

**Pupils will know that:**

- designers use CAD (Computer Aided Design) to create accurate drawings or 3D models on a screen
- CAD allows designers to create accurate and flexible designs, allowing them to test out ideas and spot problems before something is built in real life
- 2Design and Make is the CAD software on Purple Mash which allows users to develop a range of 3D models
- There are three viewpoints on 2Design and Make: Points view, Net view and 3D view

Chart, comparative bar chart, data, dataset, pie chart, dual bar chart, line graph

### **Information Technology**

Purple Mash Unit: **Blogging** (4 sessions) **2Blog**

**National Curriculum Objectives:** Pupils should be taught to:

- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

**Pupils will know that:**

- a blog is a regularly updated webpage written about a particular topic
- blogs consist of several blog posts
- a well-written blog post has certain features that make the blog clear and easy to understand and increase the readers engagement
- the 'hook' draws the reader into the blog
- the look and feel of a blog post makes it clear for the readers to access the information
- the conclusion of a blog post ties the information in the post together
- the process of writing a blog requires planning, drafting, revising and editing before publication
- engaging with readers is crucial to the success of a blog
- moderation exists to make the blogging environment a safe place for its readership and authors

**Key Vocabulary:**

Approval, blog, blog post, commenting, draft, edit, hyperlink, moderation, netiquette, plan, publish, revise, vlog

**Pupils will know that:**

- a database contains data organised in such a way that it can be queried to find useful information
- query tools exist to help users of a database find information from data stored within it
- chart tools can be used to make graphs from data contained within a database
- some databases will need multiple tables of data
- queries can be created that query data from multiple tables
- bespoke multiple conditions can be made that help a user find the exact information being asked

**Key Vocabulary:**

Bar chart, calculate, condition, data, database, filter, field, group, line graph, linked tables, query, record, sort.

- The pattern fill tool allows you to design a repeated pattern to add to your model
- Moving, adding and removing points on a model allows the designer to manipulate the shape to meet the desired design
- A prototype is a first version of a design which is designed and made to test out ideas
- CAD can be used to create a prototype for packaging a product
- A design brief is a set of instructions or a challenge that explains what needs to be designed
- A 3D printer can print a physical object from a 3D digital model, typically by laying down many thin layers of material in succession. It requires a STL file

**Key Vocabulary:**

3D printing, Computer Aided Design (CAD), design brief, model, net, points, prototype, three dimensional (3D), two-dimensional (2D)

### **Computer Science**

Purple Mash Unit: **micro:bits** (4 sessions) **micro:bits**

**National Curriculum Objectives:** Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

**Pupils will know that:**

- A micro:bit has pins that can be used to detect inputs.

- Free Code micro:bit can be used in conjunction with the micro:bit's pins to create a range of outputs when a circuit is detected.
- A micro:bit has a range of sensors that can be used to collect environmental data.
- 2Graph can be used to program a micro:bit to collect data.
- Data collected by a micro:bit can be transferred into 2Graph and presented in a table and chart.

**Key Vocabulary:**

Accelerometer, chart, data, data logging,, electrical circuit, input, LED, Output, pins, sensor, simulation, sleep, variable

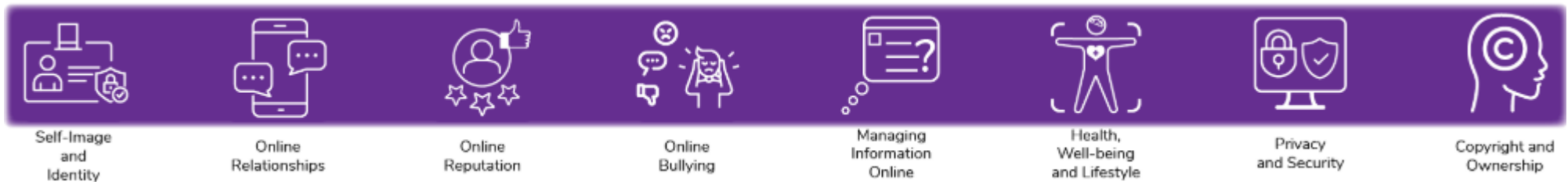
## 2BeSafe – Being Safe in a Digital World

### Online Safety Curriculum at Holy Trinity

With online safety and its relevant themes acting as a 'golden thread' throughout the curriculum, we believe that 2BeSafe sessions should not be limited to being taught solely within a class's computing lessons. Online safety forms a fundamental part of Holy Trinity's child protection and safeguarding measures and we include other appropriate times during the school day where these sessions could be delivered.

2BeSafe is an online safety scheme of work, published by 2Simple, to meet the guidance set out within the Department for Education's - [Education for a Connected World](#). The Education for a Connected World framework outlines eight key areas which seek to equip children and young people for digital life and the digital world. 2Simple's 2BeSafe offers a comprehensive coverage of these requirements starting from Reception up to Year 6.

Each objective has a 15-to-20-minute session containing activities to promote discussion, greater thinking and deeper reflection in order to raise the profile of the importance of staying safe online.



### Content Summary

| Self-Image and Identity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Online Reputation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Managing Information Online                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Privacy and Security                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p>One of the areas children explore is Self-Image and Identity — how their sense of who they are can be shaped by both the offline and online world. They learn that people often present themselves differently online, for example by sharing only highlights or using filters, and how media can promote stereotypes about how boys and girls “should” look or behave. Children are encouraged to think critically about what they see, recognise when content is unrealistic or unhelpful, and develop strategies for maintaining a positive self-image. They also learn the importance of kindness and respect online, and where to get help if they feel pressured or upset. By the end of primary school, children are building confidence, resilience, and a healthy understanding of identity in the digital world</p> | <p>When children go online, they leave behind a “digital footprint.” This strand teaches them that anything shared — a name, picture, or post — can be copied, shared, or seen for a long time. As they progress, children learn to manage their online presence, from asking permission before posting to understanding that others may make unfair judgements based on online information. By the end of primary school, they are developing strategies to protect a positive online reputation through privacy settings, safe sharing, and thoughtful choices.</p>                                                                                      | <p>The internet is a powerful tool, but not everything online is true, accurate, or safe. This strand teaches children how to search effectively, think critically about what they see, and make safe, informed choices. From the early years, they learn the basics of finding information and spotting what is real or made up. As they progress, they develop skills to judge reliability, recognise advertising and fake news, and understand how online content can influence behaviour. By Year 6, children can evaluate sources, identify misinformation, and use strategies like checking multiple sites and flagging inappropriate content to stay safe and informed.</p> | <p>When children go online, they often share personal information without realising how it might be used. This strand teaches them what personal data is, how it can be shared, and why it needs protecting. From the early years, children learn what information is safe to share and who with, before moving on to topics such as passwords, privacy settings, app permissions, and connected devices. By Year 6, they are developing strategies to manage data responsibly — creating strong passwords, spotting scams, keeping software updated, and understanding what privacy terms and conditions means.</p> |
| Online Relationships                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Online Bullying                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Health, Well-being and Lifestyle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Copyright and Ownership                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Children use technology to connect in many ways — from messaging and video calls to gaming and sharing pictures. This strand teaches them how online relationships can be positive but also bring risks. They learn about kindness, respect, consent, and safe communication with both friends and strangers. As they move through school, children build skills to manage online friendships, think critically about communities, and understand the consequences of sharing content. By Year 6, they are learning how to set boundaries, protect their digital reputation, and support others in staying safe online.</p>                                                                                                                                                                                                   | <p>Bullying is a serious issue, and technology can make it easier for harmful behaviour to happen. This strand teaches children what online bullying looks like, how it affects people, and why it is never the victim's fault. They learn how to recognise unkind behaviour, respond safely, and seek help from trusted adults or reporting services. As they progress, children explore issues such as “banter” that goes too far, the differences between online and offline bullying, and how to report or capture evidence. By the end of primary school, they are equipped with practical tools to deal with online bullying and support others.</p> | <p>Technology is a big part of children's lives, offering great opportunities for learning and fun but also affecting health and wellbeing. This strand helps children explore how technology influences mood, sleep, health, and relationships, while recognising both positives (like fitness or mindfulness apps) and negatives (such as too much screen time or age-inappropriate content). They also learn about online spending, persuasive design, and the importance of balance. By the end of primary school, children develop strategies to use technology positively — taking breaks, setting limits, and balancing screen time with healthy habits.</p>                | <p>When children create something — a picture, story, video, or piece of music — it belongs to them. This strand teaches children about ownership of digital content: how to protect their own work, respect the rights of others, and give credit when using material online. As they progress through school, they learn that not everything online can be copied or reused, how to find content that is safe to share, and the consequences of using work unfairly. By the time they leave primary school, children understand copyright, ownership, and responsible online behaviour.</p>                        |

‘I know that there is nothing better for people than to be happy and to do good while they live.’ Ecclesiastes 3:12

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| EYFS   | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That online or offline, anyone can say 'no', 'please stop', 'I'll tell', or 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed, or upset.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That the internet can be used in different ways to communicate.</li> <li>That they might use technology to communicate with people they know.</li> </ul>                                                                                                                                                    | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That they can put information on the internet in different ways.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That some people can be unkind online.</li> <li>That unkind behaviour online can make others feel upset, sad, or worried.</li> </ul>                                                      | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That the internet can be used as a way of finding information online.</li> <li>Devices they could use to access information on the internet.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That there are rules to help keep us safe and healthy when using technology in and beyond the home and know simple examples of rules that help keep them safe.</li> </ul>                                                                 | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That some simple examples of personal information include name, address, birthday, age, and location.</li> <li>Who would be trustworthy to share this information with and can explain why those people are trusted.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That work they create belongs to them.</li> <li>That naming their work shows others it belongs to them.</li> </ul>                                                                             |
| Year 1 | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That there may be people online who could make someone feel sad, embarrassed, or upset.</li> <li>That if something happens that makes them feel sad, worried, uncomfortable, or frightened, they can give examples of when and how to speak to a trusted adult and how that adult can help</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That they should ask permission before doing something online and why this is important.</li> <li>That they can use the internet with adult support to communicate with</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That information can stay online and could be copied.</li> <li>That they should not put information online without asking a trusted adult first.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That they should behave online in ways that do not upset others and can give examples of this.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Simple examples of how to find information using digital technologies, such as search engines or voice-activated searching.</li> <li>That they can encounter a range of things online including things they like and don't like, as well as things that are real, make-believe, or a joke.</li> <li>How to get help from a trusted adult if they see content that makes them feel sad, uncomfortable, worried, or frightened.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That passwords are used to protect information, accounts, and devices.</li> <li>More detailed examples of personal information, such as where someone lives or goes to school, and family names.</li> <li>That it is important to always ask a trusted adult before sharing personal information online, whether it belongs to themselves or others.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That work created using technology belongs to them.</li> </ul> |

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|        | <p>people they know (e.g. Video call apps or services).</p> <ul style="list-style-type: none"> <li>That it is important to be considerate and kind to people online and to respect their choices.</li> <li>That things one person finds funny or sad online may not always be seen in the same way by others.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>That there are rules to keep themselves safe when using technology both in and beyond the home.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Why their work belongs to them (e.g. "I designed it" or "I filmed it").</li> <li>That saving work under a suitable title or name shows others it belongs to them.</li> <li>That work created by others does not belong to them, even if they save a copy.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Year 2 | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That other people may look and act differently online and offline.</li> <li>That there are issues online that might make someone feel sad, worried, uncomfortable, or frightened, and they can give examples of how to get help.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That using technology to communicate with people they don't also know offline can be risky (e.g. Email, online gaming, or a pen-pal in another school/country).</li> <li>Who they should ask before sharing things about themselves or others online.</li> <li>Different ways to ask for, give, or deny permission online and who can help if they are unsure.</li> <li>That they have a right to say 'no' or 'I will have to ask someone', and who can help if they feel pressured to agree to something.</li> <li>Who can help if something happens online without their consent.</li> <li>How it may make others feel if they do not ask permission or ignore</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That information put online about someone can last for a long time.</li> <li>That anyone's online information could be seen by others.</li> <li>Who to talk to if something has been put online without consent or if it is incorrect.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>What bullying is, how people may bully others, and how bullying can make someone feel.</li> <li>That anyone who experiences bullying is not to blame.</li> <li>How someone experiencing bullying can get help.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to use simple keywords in search engines.</li> <li>How to navigate a simple webpage to get to information I need (e.g. Home, forward, back buttons; links, tabs and sections).</li> <li>What voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).</li> <li>The difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.</li> <li>That not everything online is real or true.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Simple guidance for using technology in different environments and settings, such as public places and at home and know how rules and guides can help anyone accessing online technologies.</li> </ul> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That passwords can be used to protect information, accounts, and devices.</li> <li>What is meant by "private" and "keeping things private" and can give examples.</li> <li>Rules for keeping personal information private, such as creating and protecting passwords.</li> <li>That some people may have internet-connected devices in their homes, such as lights, fridges, toys, or televisions.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That content on the internet may belong to other people.</li> <li>Why other people's work belongs to them.</li> </ul> |

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|               | <p>answers before sharing something about them online.</p> <ul style="list-style-type: none"> <li>That they should always ask a trusted adult before clicking 'yes', 'agree', or 'accept' online.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Year 3</b> | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>What is meant by the term 'identity'</li> <li>That people can represent themselves in different ways online.</li> <li>That someone might change their identity depending on what they are doing online (e.g. gaming, using an avatar, social media) and why.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That people with similar likes and interests can connect online.</li> <li>What it means to 'know someone' online and why this is different from knowing someone offline.</li> <li>What it means to 'trust someone online', why this is different from 'liking someone online', and why they should be careful about who to trust and with what information.</li> <li>That someone may change their mind about trusting another person if they feel nervous, uncomfortable, or worried.</li> <li>That feelings can be hurt by what is said or written online.</li> <li>The importance of giving and gaining permission before sharing things online, and that the same principles apply offline (e.g. Sharing images or videos).</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to search for information about others online.</li> <li>That people may or may not want to share information about themselves online, and they should be careful before sharing personal details.</li> <li>Who to ask if they are unsure about putting something online.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Appropriate ways to behave towards others online and why this is important.</li> <li>Examples of how bullying behaviour could appear online and how someone can get support.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to use key phrases in search engines to gather accurate information online.</li> <li>What autocomplete is and how to choose the best suggestion.</li> <li>That the internet can be used to buy and sell things.</li> <li>The difference between a belief, an opinion, and a fact, and can give examples of how these are shared online (e.g. Videos, memes, posts, news stories).</li> <li>That not all opinions shared online will be accepted as true or fair by others.</li> <li>How to describe and demonstrate how they can get help from a trusted adult if we they content that makes them feel sad, uncomfortable worried or frightened.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Spending too much time using technology can negatively affect mood, sleep, body, or relationships, and they know examples of both positive and negative activities that can take up lots of time.</li> <li>That some online activities have age restrictions, why it is important to follow them, and who to talk to if they</li> </ul> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Simple strategies for creating and keeping passwords private.</li> <li>That information should only be shared with people they choose and can trust, and that if they are unsure or feel pressured, they should tell a trusted adult.</li> <li>That connected devices can collect and share people's information with others.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That copying someone else's work from the internet without permission isn't fair and can cause problems.</li> </ul> |

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| Year 4 | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That their online identity can be different to their offline identity.</li> <li>Positive ways to interact with others online and understand how this will positively affect how others perceive them.</li> <li>That others online can pretend to be someone else, including their friends, and they can suggest reasons why this might happen.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Strategies for safe and fun experiences in different online environments (e.g. Livestreaming, gaming platforms).</li> <li>How to be respectful to others online and how to recognise healthy and unhealthy behaviours.</li> <li>That content shared online may feel unimportant to one person but may matter greatly to another's thoughts, feelings, or beliefs.</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to find out information about others by searching online.</li> <li>That some online information could have been created, copied, or shared by others.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to recognise when someone is upset, hurt, or angry online.</li> <li>That bullying can take place through different media such as images, videos, text, or chat.</li> <li>That people need to think carefully about how content they post might affect others' feelings and their reputation.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to analyse information to make a judgement about probable accuracy and why it is important to make their own decisions about content.</li> <li>How to search for information within a wide range of technologies (e.g. Social media, image sites, video sites) and judge its probable accuracy.</li> <li>Methods used to encourage people to buy things online (e.g. Advertising offers, in-app purchases, pop-ups) and can recognise these when they appear.</li> <li>That many people sharing the same opinions or beliefs online does not make them true.</li> <li>That technology can be designed to act like or impersonate living things (e.g. Bots) and can describe the benefits and risks.</li> <li>What fake news is and that some people create stories or alter photographs to pretend something is true when it isn't.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That technology can be a distraction from other things in both positive and negative ways.</li> <li>Situations when it may be necessary to limit technology use and strategies that can help manage this.</li> </ul> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Strategies for keeping personal information private depending on the context.</li> <li>That internet use is never fully private and is monitored, such as through adult supervision.</li> <li>That some online services may seek consent to store information and how to respond appropriately, including asking for help if unsure.</li> <li>What the digital age of consent is and the impact this has on online services requesting consent.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That when searching for content online, they must consider who owns it and whether they have the right to reuse it.</li> <li>Examples of content that must not be used without permission, such as videos, music, and images.</li> </ul> |

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| <p>Year 5</p> | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• That identity online can be copied, modified, or altered.</li> <li>• How to make responsible choices about having an online identity, depending on the context.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• Examples of technology-specific communication such as emojis, memes, and gifs.</li> <li>• That some people they communicate with online may want to do them or their friends harm, and that this is not their fault.</li> <li>• How people can take part in online communities, collaborate constructively, and make positive contributions (e.g. Gaming groups, social media).</li> <li>• How to get help if they are having problems and when to tell a trusted adult.</li> <li>• How to support others online, including those having difficulties.</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• How to search for information about an individual online and summarise what they find.</li> <li>• That information about anyone online can be used by others to make judgments, and that these judgments may be incorrect.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• That online bullying can be different from bullying in the physical world and can describe some of those differences.</li> <li>• That what one person perceives as playful joking or banter might be experienced by others as bullying.</li> <li>• How anyone can get help if they are being bullied online and when to tell a trusted adult.</li> <li>• A range of ways to report concerns and access support both in school and at home about online bullying.</li> <li>• How to block abusive users.</li> <li>• About helpline services that support people experiencing bullying, such as Childline or The Mix, and how to access them.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• The benefits and limitations of different search technologies, such as voice-activated searching.</li> <li>• What it means to be sceptical and when and why this is important.</li> <li>• How to evaluate digital content and make choices about what is trustworthy, such as differentiating between adverts and search results.</li> <li>• Key concepts including information, reviews, fact, opinion, belief, validity, reliability, and evidence.</li> <li>• Ways the internet can draw people to information for different agendas, such as notifications, pop-ups, or targeted ads.</li> <li>• How to identify when online content has been commercially sponsored or boosted, for example by companies, vloggers, or influencers.</li> <li>• What stereotypes are, how they are amplified and reinforced online, and why accepting stereotypes may influence how people think about others.</li> <li>• That fake news can affect someone's emotions and behaviour and why this may be harmful.</li> <li>• What a hoax is and why people need to think carefully before sharing.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• Ways technology can affect health and well-being both positively, such as through mindfulness apps, and negatively.</li> </ul> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• What a strong password is and how to create one.</li> <li>• That many free apps or services may read and share private information such as contacts, likes, images, videos, messages, or location.</li> <li>• What app permissions are and can give examples.</li> </ul> <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• How to assess and justify when it is acceptable to use the work of others.</li> <li>• Examples of content that can be reused and how to find this online.</li> </ul> |
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| Year 6 | <p><b>Self-Image and Identity</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to identify and critically evaluate online content relating to gender, race, religion, disability, culture, and other groups, and they know why it is important to challenge and reject inappropriate representations online.</li> <li>That there are issues online that could make anyone feel sad, worried, uncomfortable, or frightened, and they can give examples of how to get help both on and offline.</li> <li>The importance of asking for help until they get the support they need.</li> </ul> <p><b>Online Relationships</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>That sharing something online may have either a positive or negative impact.</li> <li>How to be kind and respectful to others online, including respecting boundaries about what is shared, and how to support others if those boundaries are not respected.</li> </ul> | <p><b>Online Reputation</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Ways in which anyone can develop a positive online reputation.</li> <li>Strategies to protect their digital personality and online reputation, including using different levels of anonymity.</li> </ul> <p><b>Online Bullying</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How to capture bullying content as evidence (e.g. Screenshot, URL, profile) to share with others who can help.</li> <li>How to report online bullying in different contexts.</li> </ul> | <p><b>Managing Information Online</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>How search engines work and how results are selected and ranked.</li> <li>How to use search technologies effectively.</li> <li>That some online information is opinion and can give examples.</li> <li>That some people present opinions as facts, and that popularity or personality does not make an opinion true, fair, or legal.</li> <li>The meaning of influence, manipulation, and persuasion, and how these can be encountered online (e.g. Advertising, fake news).</li> <li>What persuasive design is and how it is used to influence choices.</li> <li>How to analyse and evaluate the validity of facts and information and why this is important.</li> <li>That companies and news providers target people with stories they are more likely to engage with and how to recognise this.</li> <li>The difference between misinformation and disinformation.</li> <li>That information appearing on many sites may still be inaccurate or untrue,</li> </ul> | <p><b>Privacy and Security</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>Effective ways to manage passwords, such as storing them securely or saving them in a browser.</li> <li>What to do if a password is shared, lost, or stolen.</li> <li>How and why people should keep their software and apps up to date, including auto-updates.</li> <li>Simple ways to increase privacy on apps and services that offer privacy settings.</li> <li>That some online content targets people to gain money or information illegally and can describe strategies to identify this, such as spotting scams or phishing.</li> <li>That online services have terms and conditions that govern their use.</li> </ul> |

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| <ul style="list-style-type: none"> <li>• That things shared privately online can still have unintended consequences (e.g. Screen-grabs).</li> <li>• That taking or sharing inappropriate images, even with permission, may still have an impact for themselves and others, and who can help if they are worried.</li> </ul> |  | <p>and how this happens through the spread of misinformation or disinformation.</p> <ul style="list-style-type: none"> <li>• How to identify, flag, and report inappropriate content.</li> </ul> <p><b>Health, Well-being and Lifestyle</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• Common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and their purpose.</li> <li>• The pressures that technology can create and how and when to manage these.</li> <li>• Features of persuasive design and how these are used to keep users engaged.</li> <li>• Strategies to reduce the impact of technology on health, such as night - shift mode, regular breaks, correct posture, sleep, diet, and exercise.</li> </ul> | <p><b>Copyright and Ownership</b><br/>Children will know:</p> <ul style="list-style-type: none"> <li>• How to use search tools to find and access online content that can be reused by others.</li> <li>• How to make references to and acknowledge sources they have used from the internet.</li> </ul> |
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# National Curriculum: Computing

## Purpose of study

A high-quality computing education equips pupils to use **computational thinking** and **creativity** to **understand and change the world**. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the **principles of information and computation, how digital systems work** and how to **put this knowledge to use** through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to **create programs, systems and a range of content**. Computing also ensures that pupils become **digitally literate** – able to use, and **express themselves** and **develop their ideas** through, information and communication technology – at a level suitable for the **future workplace** and as **active participants in a digital world**.

## Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

## Subject Content

### Key Stage 1

Pupils should be taught to:

#### (Computer Science)

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs

#### (Information Technology)

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

#### (Digital Literacy)

- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

'I know that there is nothing better for people than to be happy and to do good while they live.' Ecclesiastes 3:12

Computing & Online Safety at Holy Trinity CE Primary School

## Key Stage 2

Pupils should be taught to:

### **(Computer Science)**

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration

### **(Information Technology)**

- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

### **(Digital Literacy)**

- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact