

# Stow Heath Primary School



## Computing Curriculum - EYFS

### Early Years Curriculum:

The 'Technology' strand has been removed, though it is still expected that children will be introduced to appropriate technology and use it within school.

#### Nursery Coverage

**In Nursery pupils will follow these themes.**

**However, themes may change as a result of following the children's interests.**

**Autumn Term – Once upon a rhyme**

**Spring Term – Growth**

**Summer Term – Community and culture**

#### Reception Coverage

**Reception pupils will follow these themes.**

**However, these may change as a result of following the children's interests.**

**Autumn Term 1 – I wonder what makes a story?**

**Autumn Term 2 – Festivals and celebrations**

**Spring Term 1 – I wonder who is a hero?**

**Spring Term 2 – I wonder what makes a hero?**

**Summer Term 1 & 2 – I wonder what's out there?**

#### Nursery End points

I can explore how things work e.g. TV remote, Ipad, remote control toys, Interactive display boards

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#### Reception End points

I can use technology within my learning. e.g. camera, ipad, interactive whiteboard, age appropriate programs .....

## Computing Curriculum - Key Stage 1

### National Curriculum:

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

Year 1 Coverage	Year 2 Coverage
<p>Unit 1.1 – Digital Literacy -Online safety &amp; Exploring Purple Mash – (4weeks)</p> <p>Unit 1.2 – Computer Science - Grouping and sorting – (2 weeks)</p> <p>Unit 1.3 – Information Technology - Pictograms – (3 weeks)</p> <p>Unit 1.4 – Computer Science - Lego builders – (3 weeks)</p> <p>Unit 1.5 – Computer Science - Maze Explorers – (3 weeks)</p> <p>Unit 1.6 – Information Technology - Animated Story books – (5weeks)</p> <p>Unit 1.7 – Computer Science - Coding – (6 weeks)</p> <p>Unit 1.8 – Information Technology - Spreadsheets – (3 weeks)</p> <p>Unit 1.9 – Digital Literacy -Technology outside school – (2 weeks)</p>	<p><b>Unit 2.1 – Computer Science - Coding – (6 weeks)</b></p> <p><b>Unit 2.2 – Digital Literacy - Online safety – (3 weeks)</b></p> <p><b>Unit 2.3 – Information Technology - Spreadsheets – (4 weeks)</b></p> <p><b>Unit 2.4 – Information Technology - Questioning – (5 weeks)</b></p> <p><b>Unit 2.5 – Digital Literacy – Effective searching– (3 weeks)</b></p> <p><b>Unit 2.6 – Information Technology – Creating pictures – (5 weeks)</b></p> <p><b>Unit 2.7 – Information Technology – Making music – (3 weeks)</b></p> <p><b>Unit 2.8 – Information Technology - Presenting ideas – (4 weeks)</b></p>
Y1 Outcomes by strand	Y2 Outcomes by strand
<p><b><u>Y1 Computer Science Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program.</li> <li>• Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.</li> <li>• When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.</li> </ul> <p><b><u>Y1 Information Technology Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.</li> </ul> <p><b><u>Y1 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.</li> <li>• Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.</li> </ul>	<p><b><u>Y2 Computer Science Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children can explain that an algorithm is a set of instructions to complete a task. When <b>designing simple programs</b>, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.</li> <li>• Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. <b>Debug Challenges: Chimp</b>. Children’s program designs display a growing awareness of the need for logical, programmable steps.</li> <li>• Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a Program.</li> </ul> <p><b><u>Y2 Information Technology Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.</li> </ul> <p><b><u>Y2 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.</li> </ul>

	<ul style="list-style-type: none"> <li>Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.</li> </ul>
<p><b>Year 1 End points</b></p>	<p><b>Year 2 End points</b></p>
<p>1.1 Online Safety and Exploring Purple Mash</p> <ul style="list-style-type: none"> <li>I can log in and out safely.</li> <li>I can add pictures and text to work.</li> <li>I can learn how to open, retrieve, save and print work.</li> </ul> <p>1.2 Grouping and Sorting</p> <ul style="list-style-type: none"> <li>I can sort items using a range of criteria.</li> </ul> <p>1.3 Pictograms</p> <ul style="list-style-type: none"> <li>I can contribute, create and interpret a pictogram.</li> </ul> <p>1.4 Lego Builders</p> <ul style="list-style-type: none"> <li>I can follow and create simple instructions on the computer</li> <li>I can consider how the order of instructions affects the result.</li> </ul> <p>1.5 Maze Explorers</p> <ul style="list-style-type: none"> <li>I can understand and use the direction keys.</li> <li>I can create, extend and debug a set of instructions (algorithm).</li> </ul> <p>1.6 Animated Story Books</p> <ul style="list-style-type: none"> <li>I can add animation to a story.</li> <li>I can add sound to a story, including voice recording and music that I have composed.</li> <li>I can add backgrounds and copy and paste pages.</li> </ul> <p>1.7 Coding</p> <ul style="list-style-type: none"> <li>I understand what coding means.</li> <li>I can use design mode to set up a scene.</li> <li>I can add characters and make it move.</li> <li>I can use collision detection.</li> <li>I can save and share work.</li> <li>I can save, print, open and create a new icon.</li> </ul> <p>1.8 Spreadsheets</p> <ul style="list-style-type: none"> <li>I know how to enter data into spreadsheet cells.</li> <li>I can add clipart to cells.</li> <li>I can use tools: lock, move cell, speak and count</li> </ul> <p>1.9 Technology Outside School</p> <ul style="list-style-type: none"> <li>I can identify where technology is used</li> </ul>	<p>2.1 Coding</p> <ul style="list-style-type: none"> <li>I can design algorithms and then code them.</li> <li>I can compare different object types.</li> <li>I can use the repeat and timer command.</li> <li>I can debug programs.</li> </ul> <p>2.2 Online Safety</p> <ul style="list-style-type: none"> <li>I can search safely and accurately</li> <li>I can share work safely online in school and globally.</li> <li>I can open and send emails with appropriate content</li> <li>I understand that information put online leaves a digital footprint or trail.</li> <li>I can identify the steps that can be taken to keep personal data and hardware secure</li> </ul> <p>2.3 Spreadsheets</p> <ul style="list-style-type: none"> <li>I can use the tools - image, lock, move, cell, speak, totalling, equals and count</li> <li>I can copy and paste</li> <li>I can create money calculations on a spreadsheet</li> <li>I can collect data and produce a graph.</li> </ul> <p>2.4 Questioning</p> <ul style="list-style-type: none"> <li>I can use yes/no questions to separate information.</li> <li>I can construct a binary tree to identify items.</li> <li>I can answer questions using a binary tree database</li> <li>I can use the Search tool to find information.</li> </ul> <p>2.5 Effective Searching</p> <ul style="list-style-type: none"> <li>I can do an effective safe search on the internet.</li> </ul> <p>2.6 Creating Pictures</p> <ul style="list-style-type: none"> <li>I know the functions of the 2Paint a Picture tools.</li> <li>I can recreate different styles of art using 2 Paint Picture (Impressionist, Pointillist, lines template patterns template)</li> </ul> <p>2.7 Making Music</p> <ul style="list-style-type: none"> <li>I can make music digitally.</li> <li>I can explore, edit and combine sounds.</li> <li>I can edit and refine composed music.</li> <li>I can record and upload environmental sounds and use these sounds to create tunes.</li> </ul> <p>2.8 Presenting Ideas</p> <ul style="list-style-type: none"> <li>I know how a story can be presented in different ways.</li> <li>I can make a quiz and present it about a story or class topic.</li> </ul>

- I can make and present a fact file on a non-fiction topic.

## Computing Curriculum –Key Stage 2

### National Curriculum:

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

### Year 3 Coverage

- Unit 3.1 – Computer Science - Coding – (6 weeks)**
- Unit 3.2 – Digital Literacy - Online safety – (3 weeks)**
- Unit 3.3 – Information Technology - Spreadsheets – (3 weeks)**
- Unit 3.4 – Information Technology – Touch Typing – (4 weeks)**
- Unit 3.5 – Digital Literacy – Email– (6 weeks)**
- Unit 3.6 – Information Technology – Branching Databases – (4 weeks)**
- Unit 3.7 – Information Technology – Simulations – (3 weeks)**
- Unit 3.8 – Information Technology – Graphing - (2 weeks)**
- Unit 3.9 – Information Technology – Presenting – (5/6 weeks)**

### Year 3 Outcomes by strand

#### Y3 Computer Science Outcomes

- Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.
- Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children understand how variables can be used to store information while a program is executing.
- Children’s designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, ‘if’ statements, repetition and variables. They make good attempts to ‘step through’ more complex code in order to identify errors in algorithms and can correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can ‘read’ programs with several steps and predict the outcome accurately.
- Children can list a range of ways that the internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails using 2Email. They can describe appropriate email conventions when communicating in this way.

### Year 4 Coverage

- Unit 4.1 – Computer Science - Coding – (6 weeks)**
- Unit 4.2 – Digital Literacy - Online safety – (4 weeks)**
- Unit 4.3 – Information Technology - Spreadsheets – (6 weeks)**
- Unit 4.4 – Information Technology – Writing for Different Audiences – (5 weeks)**
- Unit 4.5 – Computer Science – Logo – (4 weeks)**
- Unit 4.6 – Information Technology – Animation – (3 weeks)**
- Unit 4.7 – Information Technology – Effective Search – (3 weeks)**
- Unit 4.8 – Computer Science – Hardware Investigators - (2 weeks)**
- Unit 4.9 – Information Technology - Making Music – (4 weeks)**

### Year 4 Outcomes by strand

#### Y4 Computer Science Outcomes

- When turning a real life situation into an algorithm, the children’s design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.
- Children’s use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand ‘if statements’ for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and outputs such as ‘print to screen’. e.g. 2Code.
- Children’s designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, ‘if’ statements, repetition and variables. They can trace code and use step-through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can ‘read’ programs with several steps and predict the outcome accurately.
- Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.

#### Y4 Information Technology Outcomes

<p><b><u>Y3 Information Technology Outcomes</u></b></p> <ul style="list-style-type: none"> <li>Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.</li> <li>Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond.</li> </ul> <p><b><u>Y3 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools such as 2Email in Purple Mash. They know more than one way to report unacceptable content and contact.</li> </ul>	<ul style="list-style-type: none"> <li>Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level. .</li> <li>Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software such as 2Connect and 2Publish+. Children share digital content within their community, i.e. using Virtual Display Boards.</li> </ul> <p><b><u>Y4 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>Children can explore key concepts relating to online safety using concept mapping such as 2Connect. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.</li> </ul>
<p><b>Year 3 End points</b></p>	<p><b>Year 4 End points</b></p>
<p>3.1 Coding</p> <ul style="list-style-type: none"> <li>I can design algorithms using flowcharts.</li> <li>I can design an algorithm that represents a physical system and code this representation.</li> <li>I can use the 'if', variables timers and repeat commands.</li> </ul> <p>3.2 Online Safety</p> <ul style="list-style-type: none"> <li>I can make a safe password and how to keep it safe.</li> <li>I know how the Internet can be used in effective communication. Including blogs.</li> <li>I can make an informed decision as to the truthfulness of the content of websites.</li> <li>To learn about the meaning of age restrictions symbols on digital media and devices</li> </ul> <p>3.3 Spreadsheets</p> <ul style="list-style-type: none"> <li>I can use the symbols more than, less than and equal to, to compare values.</li> <li>I can use 2Calculate to collect data and produce a variety of graphs.</li> <li>I can use the advanced mode of 2Calculate to learn about cell references.</li> </ul> <p>3.4 Touch Typing</p> <ul style="list-style-type: none"> <li>To understand the correct way to sit at the keyboard.</li> <li>I can use the home, top and bottom row keys.</li> <li>I can type with the left and right hand.</li> </ul> <p>3.5 Email</p> <ul style="list-style-type: none"> <li>I can open and respond to an email appropriately using an address book.</li> <li>To add an appropriate attachment to an email.</li> </ul> <p>3.6 Branching Databases</p> <ul style="list-style-type: none"> <li>I can sort objects using just 'yes' or 'no' questions.</li> <li>I can complete a branching database using 2Question.</li> <li>I can create my own branching database</li> </ul> <p>3.7 Simulations</p>	<p>4.1 Coding</p> <ul style="list-style-type: none"> <li>I can use selection in coding with the 'if/else' command.</li> <li>I understand and use variables in 2Code.</li> <li>I can use flowcharts for design of algorithms including selection.</li> <li>I can use the 'repeat until' with variables to determine the repeat .</li> </ul> <p>4.2 Online Safety</p> <ul style="list-style-type: none"> <li>I know how to protect myself from online identity theft.</li> <li>I understand that information put online leaves a digital footprint and that this can aid identity theft.</li> <li>I know the risks and benefits of installing software including apps.</li> <li>I know what plagiarism is and the consequences of it.</li> <li>I can identify the positive and negative influences of technology on health and the environment.</li> </ul> <p>4.3 Spreadsheets</p> <ul style="list-style-type: none"> <li>I can format cells as currency, percentage, decimal to different decimal places or fraction.</li> <li>I can use the formula wizard to calculate averages.</li> <li>I can create a spreadsheet to model a real-life situation.</li> <li>I can add a formula to a cell to automatically make a calculation in that cell.</li> </ul> <p>4.4 Writing for Different Audiences</p> <ul style="list-style-type: none"> <li>I know how font size and style can affect the impact of a text.</li> <li>I can use a simulated scenario for different writing purposes</li> </ul> <p>4.5 Logo</p> <ul style="list-style-type: none"> <li>I can input simple instructions in Logo.</li> <li>I can use 2Logo to create letter shapes.</li> <li>I can use the Repeat function in Logo to create shapes.</li> </ul> <p>4.6 Animation</p>

- I know what simulations are.
- I can explore, analyse and evaluate a simulation.

### 3.8 Graphing

- I can enter data into a graph and answer questions.
- I can solve an investigation and present the results in graphic form.

### 3.9 Presenting

- I can add text, pictures and shapes to a slide
- I can format text, pictures and shapes including shadows and borders
- I can insert slides into a presentation
- I can use transition effects and timings in a presentation

- I can talk about how animations are made and what makes a good animated film or cartoon.
- I can talk about onion skinning in animation.
- I can add backgrounds and sounds to animations.
- I can create a simple 'stop motion' animation.
- I can share animations on the class display board and by blogging.

### 4.7 Effective Search

- I can locate information on the search results page.
- I can search effectively to find out information.
- I know how to assess whether an information source is true and reliable

### 4.8 Hardware Investigators

- I understand and recall the different parts that make up a computer.

### 4.9 Music Making

- I can distinguish between rhythm and tempo, they are able to create a simple rhythm
- I can utilise the tools and create a melodic phrase experimenting with pitch
- I can compose a piece of electronic music where they have considered pitch, rhythm and melody

<b>Year 5 Coverage</b>	<b>Year 6 Coverage</b>
<p><b>Unit 5.1 – Computer Science - Coding – (6 weeks)</b>  <b>Unit 5.2 – Digital Literacy - Online safety – (3 weeks)</b>  <b>Unit 5.3 – Information Technology - Spreadsheets – (6 weeks)</b>  <b>Unit 5.4 – Information technology – Databases – (4 weeks)</b>  <b>Unit 5.5 – Computer Science – Game Creator – (5 weeks)</b>  <b>Unit 5.6 – Information technology – 3D Modelling – (4 weeks)</b>  <b>Unit 5.7 – Information technology – Concept Maps – (4 weeks)</b>  <b>Unit 5.8 - Information technology – Word Processing – (8 weeks)</b>  <b>Unit 5.9 – Computer Science – External Devices – (6 weeks)</b></p>	<p><b>Unit 6.1 – Computer Science - Coding – (6 weeks)</b>  <b>Unit 6.2 – Digital Literacy - Online safety – (2 weeks)</b>  <b>Unit 6.3 – Information technology - Spreadsheets – (5 weeks)</b>  <b>Unit 6.4 – Information technology – Blogging – (5 weeks)</b>  <b>Unit 6.5 – Computer Science – Text Adventures – (5 weeks)</b>  <b>Unit 6.6 – Computer Science – Networks – (3 weeks)</b>  <b>Unit 6.7 – Information technology – Quizzing – (3 weeks)</b>  <b>Unit 6.8 – Computer Science – Understanding Binary - (4 weeks)</b>  <b>Unit 6.9 - Information technology – Spreadsheets – (8 weeks)</b></p>
<b>Year 5 Outcomes by strand</b>	<b>Year 6 Outcomes by strand</b>
<p><b><u>Y5 Computer Science Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Children are able to test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code.</li> <li>• Children can translate algorithms that include sequence, selection and repetition into code with increasing ease and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. They are combining sequence, selection and repetition with other coding structures to achieve their algorithm design.</li> <li>• When children code, they are beginning to think about their code structure in terms of the ability to debug and interpret the code later, e.g. the use of tabs to organise code and the naming of variables.</li> <li>• Children understand the value of computer networks but are also aware of the main dangers. They recognise what personal information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content, e.g. 2Blog, 2Email, Display Boards.</li> </ul> <p><b><u>Y5 Information Technology Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children search with greater complexity for digital content when using a search engine. They are able to explain in some detail how credible a webpage is and the information it contains.</li> </ul>	<p><b><u>Y6 Computer Science Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children are able to turn a more complex programming task into an algorithm by identifying the important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem.</li> <li>• Children translate algorithms that include sequence, selection and repetition into code and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures, including nesting structures within each other. Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions.</li> <li>• Children are able to interpret a program in parts and can make logical attempts to put the separate parts of a complex algorithm together to explain the program as a whole.</li> <li>• Children understand and can explain in some depth the difference between the internet and the World Wide Web. Children know what a WAN and LAN are and can describe how they access the internet in school</li> </ul> <p><b><u>Y6 Information Technology Outcomes</u></b></p> <ul style="list-style-type: none"> <li>• Children readily apply filters when searching for digital content. They are able to explain in detail how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication.</li> </ul>



<ul style="list-style-type: none"> <li>Children are able to make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution. e.g. creating their own program to meet a design brief using 2Code. They objectively review solutions from others. Children are able to collaboratively create content and solutions using digital features within software such as collaborative mode. They are able to use several ways of sharing digital content, i.e. 2Blog, Display Boards and 2Email.</li> </ul> <p><b><u>Y5 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>Children have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few different technologies and online services. Children implicitly relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.</li> </ul>	<ul style="list-style-type: none"> <li>Children make clear connections to the audience when designing and creating digital content. The children design and create their own blogs to become a content creator on the internet, e.g. 2Blog. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.</li> </ul> <p><b><u>Y6 Digital Literacy Outcomes</u></b></p> <ul style="list-style-type: none"> <li>Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety.</li> </ul>
<p><b>Year 5 End points</b></p>	<p><b>Year 6 End points</b></p>
<p><b>5.1 Coding</b></p> <ul style="list-style-type: none"> <li>I can create a program that simulates a physical system using decomposition.</li> <li>I can explore string and text variable types so that the most appropriate can be used in programs.</li> <li>I can use the Launch command in 2Code Gorilla</li> <li>I can program a playable game with timers and score pad.</li> </ul> <p><b>5.2 Online Safety</b></p> <ul style="list-style-type: none"> <li>I can take responsibility for my online behaviour.</li> <li>I know how to maintain secure passwords.</li> <li>I understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this.</li> <li>I am aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.</li> <li>I can reference sources in my work</li> <li>I can search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information</li> </ul> <p><b>5.3 Spreadsheets</b></p> <ul style="list-style-type: none"> <li>I can use the formula wizard to add a formula to a cell to automatically make a calculation in that cell.</li> <li>I can copy and paste within 2Calculate.</li> <li>I can use 2Calculate tools to test a hypothesis.</li> <li>I can add a formula to a cell to automatically make a calculation in that cell.</li> <li>I can use a spreadsheet to model a real-life situation and answer questions.</li> </ul> <p><b>5.4 Databases</b></p> <ul style="list-style-type: none"> <li>I can search for information in a database.</li> <li>I can contribute to a class database.</li> <li>I can create a database around a chosen topic.</li> </ul> <p><b>5.5 Game Creator</b></p> <ul style="list-style-type: none"> <li>I can set the scene.</li> <li>I can create the game environment.</li> <li>I can create the game quest.</li> </ul>	<p><b>6.1 Coding</b></p> <ul style="list-style-type: none"> <li>I can use the program design process, including flowcharts, to develop algorithms for more complex programs</li> <li>I can code, test and debug from these designs.</li> <li>I can use functions and tabs in 2Code to improve the quality of the code.</li> <li>I can code user interactivity using input functions</li> </ul> <p><b>6.2 Online Safety</b></p> <ul style="list-style-type: none"> <li>I know the benefits and risks of mobile devices broadcasting the location of the user/device.</li> <li>I can identify secure sites by looking for privacy seals of approval.</li> <li>I know the benefits and risks of giving personal information and creating a digital footprint.</li> <li>I can demonstrate appropriate online behaviour.</li> <li>I can identify the positive and negative influences of technology on health and the environment.</li> </ul> <p><b>6.3 Spreadsheets</b></p> <ul style="list-style-type: none"> <li>I can use a spreadsheet to investigate probability</li> <li>I can use the formula wizard to add a formula to a cell to automatically make a calculation in that cell.</li> <li>I can create graphs showing data collected.</li> <li>I can type in a formula for a cell to automatically make a calculation in that cell.</li> <li>I can use a spreadsheet to create computational models and answer questions.</li> </ul> <p><b>6.4 Blogging</b></p> <ul style="list-style-type: none"> <li>I can plan the theme and content for a blog and write the content.</li> <li>I understand the effect upon the audience of changing the visual properties of the blog.</li> <li>I can regularly updating the content of a blog.</li> <li>I can contribute to an existing blog.</li> </ul> <p><b>6.5 Text Adventures</b></p> <ul style="list-style-type: none"> <li>I can plan a story adventure.</li> <li>I can make a story-based adventure.</li> <li>I can introduce map-based text adventures.</li> <li>I can code a map-based text adventure.</li> </ul> <p><b>6.6 Networks</b></p> <ul style="list-style-type: none"> <li>I know what the Internet consists of.</li> </ul>

- I can finish and share the game.
- I can evaluate games

#### 5.6 3D Modelling

- I can explore the effect of moving points when designing.
- I can design for a purpose.
- I understand printing and making.

#### 5.7 Concept Maps

- I can use the correct vocabulary when creating a concept map.
- I can create a concept map.
- I understand how a concept map can be used to retell stories and present information.
- I can create a collaborative concept map and present this to an audience.

#### 5.8 Word Processing

- I can create a word processing document and alter the look of the text to suit the audience
- I can format a document.
- I can include bullet points/numbering
- I can use paragraph formatting, page breaks and headers and footers.
- I can add images, text boxes and shapes and format the shape and position using the wrapping options
- I can consider copyright when using other peoples images

#### 5.9 External Devices

- I understand the purpose of some external devices and name some of them
- I can write and code simple algorithms involving an external device
- I can create a program that makes use of the functionality of the external device used.
- I can problem solve and reason to work out why something may not work.

- I know what a LAN and a WAN are.
- I know how the Internet is accessed in school.

#### 6.7 Quizzing

- I can create a picture-based quiz for young children.
- I can make a quiz that requires the player to search a database

#### 6.8 Binary

- I know what the terms binary and denary mean and how they relate to the number system, the digital system and the terms base-10 and base-2
- I can relate binary to the on and off states of electrical switches.
- I can convert numbers from decimal to binary.
- I can convert numbers from binary to decimal.
- I can represent states of an object using binary.

#### 6.9 Spreadsheets

- I know the purpose of using a spreadsheet
- I understand new vocabulary reading to spreadsheets – cells, columns, rows, cell names, sheets, workbook
- I can locate functions and tools.
- I can use a spreadsheet to carry out basic calculations (add, subtract, multiply, divide) using formulae
- I can use with direction, flash fill, convert text to tables, splitting cells and sorting for organising and presenting data in a spreadsheet.
- I can use formulae for percentages, averages, max and min
- I can evaluate data, answer questions and make conclusions
- I can use the graphic function to make data clearer