

Computing Curriculum Overview, including Online Safety: PSHE, Relationships and Health Education (including Relationships and Sex Education)

**Computing Rationale:**

All pupils at Timothy Hackworth Primary School have the right to have rich, deep learning experiences that balance all the aspects of computing. With technology playing such a significant role in society today, we believe ‘Computational Thinking’ is a skill children must be taught if they are to be able to participate effectively and safely in this digital world.

Pupils will:

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

Our Computing curriculum is taught in two ways: Firstly, as a discrete subject with weekly taught computing lessons, and secondly, where children have opportunities to develop their computing skills and knowledge from using computers in all other areas of the curriculum.

The topics studied in Computing are planned to build upon prior learning. We offer opportunities for children of all abilities to develop their skills and knowledge in each unit, progression is built into the scheme of work, so that the children are increasingly challenged as they move up through the school.

Our Computing curriculum is centred on children knowing how to access technology around them, but fundamentally, how to keep safe at all times, both online and offline. Children have the right to be both physically and mentally healthy.

**Technology**

**In the Early Years children will access a range of technologies, both digital and non-digital. They will explore different technologies to support their growing technological skills, which the children will go on to refine and develop in their lifetime in order to thrive within a technological society. Through technology, children will be afforded additional opportunities to learn across all areas in both formal and informal ways. The use of technology will support the children across other areas of learning, providing them with new ways to communicate and share their ideas.**

In the EYFS there are **three characteristics of effective teaching and learning:**

- **playing and exploring** - children investigate and experience things, and ‘have a go’;
- **active learning** - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements;
- **creating and thinking critically** - children have and develop their own ideas, make links between ideas, and develop strategies for doing things.

**Children in Nursery will:**

- Know how to operate simple equipment, e.g. turn on a CD player, use a remote control, and navigate touch-capable technology with support;
- Show an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets;
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images;
- Know that information can be retrieved from technological devices and the internet.

**Children in Reception will:**

- Complete a simple program on a computer;
- Use ICT hardware to interact with age appropriate computer software;
- Create content such as a video recording, stories, and/or draw a picture on screen;
- Develop digital literacy skills by being able to access, understand and interact with a range of technologies;
- Use the internet with adult supervision to find and retrieve information of interest to them.

EYFS

**Key vocabulary:** computer, mouse, keyboard, screen, keys, letters, click, pointer, program, name, address, adult, safe, Internet

**Online Safety: PSHE, Relationships and Health Education (including Relationships and Sex Education)**

Relationships Education  
Physical Health & Mental Wellbeing  
Living in the Wider World

Yr 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	<p><b>Keyboard and Mouse skills.</b> <b>(Information Technology)</b></p> <p><b>Focus:</b> Children begin to use the mouse and the keyboard and understand how to move around the screen and use various letters on the keyboard.</p> <p><b>NC Ref:</b> <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"><li>➤ Log on /off with name.</li><li>➤ Click on a mouse and navigate around the screen with a mouse.</li><li>➤ Begin to use two fingers to enter text.</li><li>➤ Use the space bar correctly to separate words.</li><li>➤ Use the backspace key to delete letters.</li><li>➤ Use the enter button correctly.</li><li>➤ Know how to make a full stop and a capital letter.</li><li>➤ Save via an app or when the saving location has been set by an adult.</li></ul> <p><b>Software:</b> <a href="http://www.abcya.com">www.abcya.com</a> (mouse skills) <a href="http://www.bigbrownbear.co.uk/learntotype/index.html">http://www.bigbrownbear.co.uk/learntotype/index.html</a> (keyboard skills)</p> <p><b>Key vocabulary:</b> type, text, backspace key, navigate, log on/off, double click, cursor, arrow, pointed hand, space bar, highlight, delete, full stop, capital letter, mouse, keyboard.</p> <p><b>Multi-Media.</b> <b>(Information Technology)</b></p> <p><b>Focus:</b> Children begin use a media package to input text and pictures.</p> <p><b>NC Ref:</b> <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of information technology beyond school;</i></p> <ul style="list-style-type: none"><li>➤ Change the colour of the text.</li><li>➤ Change the size of text</li><li>➤ To change the style of fonts.</li><li>➤ To insert a picture/stamp</li><li>➤ Paint with different brushes</li><li>➤ Draw shapes</li></ul> <p><b>Software/Hardware/Links:</b> Tux Paint <a href="https://www.twinkl.co.uk/resource/tp-i-0068-planit-computing-year-1-painting-unit-pack">https://www.twinkl.co.uk/resource/tp-i-0068-planit-computing-year-1-painting-unit-pack</a></p> <p><b>Key vocabulary:</b> write, font, style, insert, format, stamp.</p>	<p><b>Understand Algorithms</b> <b>(Computer Science)</b></p> <p><b>Focus:</b> Children begin to understand what an algorithm is by following a sequence of instructions.</p> <p><b>NC Ref:</b> <i>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;</i></p> <ul style="list-style-type: none"><li>➤ Make a simple sequence of instructions / algorithm.</li><li>➤ Understand an Algorithm as a sequence of instructions in everyday contexts .</li><li>➤ Produce a set of instructions that others can follow.</li><li>➤ Know that the order of instructions is important.</li><li>➤ To be able to create a simple series of instructions - left and right .</li></ul> <p><b>Software/Hardware/Links:</b></p> <p><b>Key vocabulary:</b> algorithm, debug, sequence, instruction, situations, order, left, right</p>	<p><b>Using Technology</b> <b>(Information Technology)</b></p> <p><b>Focus:</b> Children begin to take photos and video.</p> <p><b>NC Ref:</b> <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of information technology beyond school;</i></p> <ul style="list-style-type: none"><li>➤ To capture images with a camera/tablet.</li><li>➤ Capture video.</li><li>➤ Discuss which videos/photos to keep and which to delete.</li><li>➤ To know how to delete a photograph from a tablet.</li><li>➤ Independently find an app on an ipad.</li></ul> <p><b>Software/Hardware/Links:</b> ipads</p> <p><b>Key vocabulary:</b> ipad, camera, tablet, photograph, video, capture, save, delete, record, flash, buttons, search engine.</p>	<p><b>Physical Algorithms</b> <b>(Computer Science)</b></p> <p><b>Focus:</b> Children begin to understand what an algorithm is and practise these physically with Bee-Bots.</p> <p><b>NC Ref:</b> <i>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.</i></p> <ul style="list-style-type: none"><li>➤ Program a floor turtle using a sequence of instructions.</li><li>➤ Know which button on a device represents which action e.g. Bee Bot.</li><li>➤ To put two instructions together to control a programmable toy.</li><li>➤ To be able to record their routes.</li><li>➤ To begin to plan and test a Bee-bot journey.</li><li>➤ Evaluate and improve sequences.</li></ul> <p><b>Software/Hardware/Links:</b> Bee-bots <a href="http://code-it.co.uk/bee-bot">http://code-it.co.uk/bee-bot</a> Year 1 lessons</p> <p><b>Key vocabulary:</b> Bee-Bot, arrows, buttons, change, programming, debug, forwards, backwards, command, go, turn, predict, route predictions, program, route, floor turtle, programmable toy, improve.</p>	<p><b>Investigating Data</b> <b>(Information Technology)</b></p> <p><b>Focus:</b> Children begin to make charts using computer programs.</p> <p><b>NC Ref:</b> <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"><li>➤ Understand what a chart is and why they are used.</li><li>➤ To enter information into a template to make a chart.</li><li>➤ To talk about the results shown on a graph.</li><li>➤ Enter information to make a more than one column in a graph or chart.</li><li>➤ To display charts in different ways e.g bar chart etc.</li></ul> <p><b>Software/Hardware/Links:</b> <a href="https://www.i2e.com/jit5#chart">https://www.i2e.com/jit5#chart</a></p> <p><b>Key vocabulary:</b> chart, data, graph, information, template, results, bar chart, column.</p>	<p><b>Web Navigation Skills.</b> <b>(Information Technology)</b></p> <p><b>Focus:</b> Children begin to understand how we can use a search engine to find images</p> <p><b>NC Ref:</b> <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"><li>➤ Begin to understand the function of a search engine.</li><li>➤ Begin to search the Internet with simple/one words.</li><li>➤ Understand that information can be found using the Internet.</li><li>➤ Search for pictures with adult support.</li><li>➤ Navigate a simple webpage to get to information.</li><li>➤ Understand mouse changes from arrow to hand.</li></ul> <p><b>Software/Hardware/Links:</b> <a href="http://www.swiggle.org.uk">www.swiggle.org.uk</a> <a href="https://www.twinkl.co.uk/resource/tp-i-148-year-2-using-the-internet-unit-pack">https://www.twinkl.co.uk/resource/tp-i-148-year-2-using-the-internet-unit-pack</a> Lesson 1</p> <p><b>Key vocabulary:</b> search engine, webpage, search, image, link, technology, internet, navigate.</p> <p><b>Understand Algorithms</b> <b>(Computer Science)</b></p> <p><b>Focus:</b> Children begin to use an online program to create their own very simple algorithms.</p> <p><b>NC Ref:</b> <i>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.</i></p> <ul style="list-style-type: none"><li>➤ Make choices to produce different outcomes</li><li>➤ Know that instructions can be organised into a sequence.</li><li>➤ To write a simple program and test it</li><li>➤ To be able to change (debug) the program to improve the route.</li></ul> <p><b>Software/Hardware/Links:</b> Kodable <a href="https://game.kodable.com/hour-of-code#maze-maker">https://game.kodable.com/hour-of-code#maze-maker</a></p> <p><b>Key vocabulary:</b> screen, app, device, predictions.</p>

Yr 1	Year 1 Digital Literacy- On-line Safety					
<p><b>(Self-Image)</b></p> <p><b>Focus:</b> Children begin to understand that if something happens that makes them feel sad, worried, uncomfortable or frightened they know that they can speak to an adult they can trust.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ To recognise that there may be people online who could make me feel sad, embarrassed or upset.</li> <li>➤ To know when I should ask an adult for help with things online that upset me.</li> <li>➤ To give examples of different adults I can ask for help.</li> <li>➤ I know whom to tell if they see something <b>online</b> that makes them feel unhappy, worried, or scared.</li> <li>➤ Basic rules for keeping safe online.</li> </ul> <p>Software/Hardware/link: <a href="https://projectevolve.co.uk/toolkit/content/self-image-and-identity/early-years-7/if-something-happens-that-makes-me-feel-sad-worried-uncomfortable-or-frightened-i-can-give-examples-of-when-and-how-to-speak-to-an-adult-i-can-trust/?from=years">https://projectevolve.co.uk/toolkit/content/self-image-and-identity/early-years-7/if-something-happens-that-makes-me-feel-sad-worried-uncomfortable-or-frightened-i-can-give-examples-of-when-and-how-to-speak-to-an-adult-i-can-trust/?from=years</a></p> <p><b>Key vocabulary:</b> grown up, uncomfortable, worried, frightened, trust, embarrassed, online.</p>	<p><b>(Online Relationships)</b></p> <p><b>Focus:</b> Children know how to use the internet with adult support to communicate with people I know.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ To name the people I know and how I know them, describing what they are like.</li> <li>➤ To understand and can describe why I might need some help from an adult when doing this.</li> <li>➤ To describe how I might use the internet to communicate with family or close friends.</li> <li>➤ To know how and why people use the internet.</li> <li>➤ To know the benefits of using the internet and digital devices.</li> <li>➤ To know how people find things out and communicate safely with others online.</li> </ul> <p>Software/Hardware/link <a href="https://projectevolve.co.uk/toolkit/content/online-relationships/early-years-7/i-can-use-the-internet-with-adult-support-to-communicate-with-people-i-know/?from=years">https://projectevolve.co.uk/toolkit/content/online-relationships/early-years-7/i-can-use-the-internet-with-adult-support-to-communicate-with-people-i-know/?from=years</a></p> <p><b>Key vocabulary:</b> communicate, video icon, keyboard, space message, camera icon, contacts list, safety.</p>	<p><b>(Online Bullying)</b></p> <p><b>Focus:</b> Children begin to understand that they need to be kind online just like face to face.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ To recognise when someone has been unkind online.</li> <li>➤ To suggest ways which I can be kind online with my own family and friends.</li> <li>➤ To recognise that being kind online is just as important as being kind in the real world.</li> </ul> <p>Software/Hardware/links <a href="http://azoomee.com/index.php/searchitup_lessonplans_jackattackvsrobotron/">http://azoomee.com/index.php/searchitup_lessonplans_jackattackvsrobotron/</a></p> <p><b>Key vocabulary:</b> mean, kind, bullying, respectful, family, real world.</p>	<p><b>(Health and Well Being)</b></p> <p><b>Focus:</b> Children learn how to say goodbye to technology when they don't want to.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ Learn why it's important to be aware and respectful of people while using devices.</li> <li>➤ Learn the Pause, Breathe, Finish Up routine as a self-regulation strategy for transitioning from technology to face-to-face interactions.</li> </ul> <p>Software/Hardware/links <a href="https://www.common sense.org/education/digital-citizenship/lesson/pause-for-people">https://www.common sense.org/education/digital-citizenship/lesson/pause-for-people</a></p> <p><b>Key vocabulary:</b> balance, device, tablet, laptop, computer, pause, technology, respectful, pause, breathe, finish up, face-to-face interactions.</p>	<p><b>(Privacy and Security)</b></p> <p><b>Focus:</b> Children recognise more detailed examples of information that is personal to them.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ Demonstrate the types of data that may be personal to you.</li> <li>➤ Able to articulate under what conditions a child would ask an adult for help.</li> </ul> <p>Software/Hardware/links <a href="https://projectevolve.co.uk/toolkit/content/privacy-and-security/early-years-7/i-can-recognise-more-detailed-examples-of-information-that-is-personal-to-me-e-g-where-i-live-my-family-s-names-where-i-go-to-school-i-can-explain-why-i-should-always-ask-a-trusted-adult-before-i-share-any-information-about-myself-online/?from=years">https://projectevolve.co.uk/toolkit/content/privacy-and-security/early-years-7/i-can-recognise-more-detailed-examples-of-information-that-is-personal-to-me-e-g-where-i-live-my-family-s-names-where-i-go-to-school-i-can-explain-why-i-should-always-ask-a-trusted-adult-before-i-share-any-information-about-myself-online/?from=years</a></p> <p><b>Key vocabulary:</b> personal, information, health, well being.</p>	<p><b>(Managing Information Online)</b></p> <p><b>Focus:</b> Children can explain rules to keep safe when they are using technology both in and beyond the home.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ Tell you the rules around their own use of technology in and beyond the home.</li> <li>➤ Explain why these rules help keep them safe.</li> <li>➤ Identify rules that apply to safety and rules that apply to health/well-being.</li> <li>➤ Emerging awareness of how rules may change with simple changes in context (where they are, what they are doing and who they might be with).</li> <li>➤ To know basic rules for keeping safe online.</li> <li>➤ To know that information online might not always be true.</li> </ul> <p>Software/Hardware/links <a href="https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/early-years-7/explain-rules/?from=years">https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/early-years-7/explain-rules/?from=years</a></p> <p><b>Key vocabulary:</b> rules, health, wellbeing, debug, information, true, false, untrue.</p>	

Yr 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><b>Keyboard and Mouse skills. (Information Technology)</b>  <b>Focus:</b> Children begin to use the mouse and the keyboard and understand how to move around the screen and use various letters on the keyboard.</p> <p><b>NC Ref:</b>  <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content;</i>  <i>Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"> <li>➤ Use two fingers to enter text.</li> <li>➤ Turn on/off laptop.</li> <li>➤ Log in with initial and surname.</li> <li>➤ Be able to double click a mouse to select and icon.</li> <li>➤ Understand that a hand on the mouse is a link to somewhere else.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://www.bigbrownbear.co.uk/learntotype/index.html">https://www.bigbrownbear.co.uk/learntotype/index.html</a></p> <p><b>Key vocabulary:</b> <i>keys, shift, key, save, open, symbol, undo, link, backspace, delete, icon.</i></p> <p><b>Multi-Media. (Information Technology)</b>  <b>Focus:</b> Children begin use paint package to input text and pictures.</p> <ul style="list-style-type: none"> <li>➤ Find and open Paint.</li> <li>➤ Use the shape tools to draw.</li> <li>➤ Use solid and effects to fill.</li> <li>➤ Resize an image.</li> <li>➤ Add text to a picture.</li> <li>➤ Edit a picture/photograph that has been inserted.</li> </ul> <p><b>Software/Hardware/Links:</b>  Microsoft Paint.  <a href="https://www.twinkl.co.uk/resource/tp-i-0125-planit-computing-year-2-computer-art-unit-pack">https://www.twinkl.co.uk/resource/tp-i-0125-planit-computing-year-2-computer-art-unit-pack</a></p> <p><b>Key vocabulary:</b>  Microsoft, tools, fill, effects, icons, edit, resize, solid.</p>	<p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children begin to understand what an algorithm is and practise these physically using a Blue-Bot.</p> <p><b>NC Ref:</b>  <i>To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions;</i>  <i>Create and debug simple programs;</i>  <i>Use logical reasoning to predict the behaviour of simple programs.</i></p> <ul style="list-style-type: none"> <li>➤ To explain what algorithms are.</li> <li>➤ Know that a list of instructions given to a computer is called a program.</li> <li>➤ Produce a sequence of instructions that result in planned outcomes for others to follow.</li> <li>➤ Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting).</li> <li>➤ Be able to debug simple problems e.g. a route on a Blue Bot maze.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="http://code-it.co.uk/beebot">http://code-it.co.uk/beebot</a>  Year 2 lessons</p> <p><b>Key vocabulary:</b>  <i>Go button, route, investigate, precise instructions, clockwise, anticlockwise, robot, maze.</i></p>	<p><b>Web Navigation skills. (Information Technology)</b>  <b>Focus:</b> Children begin to understand how we can use a more common search engine to find images.</p> <p><b>NC Ref:</b>  <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content;</i>  <i>Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"> <li>➤ To explain the function of a search engine.</li> <li>➤ To use the forward and back button and understand what this means.</li> <li>➤ To add the word 'kids' to my search query</li> <li>➤ To navigate a simple webpage to get to information.</li> <li>➤ To independently use simple key words in search engines.</li> <li>➤ To use the internet to find things out.</li> <li>➤ To explain why the mouse changes from arrow to hand.</li> <li>➤ To begin to realise that all websites might not be helpful.</li> <li>➤ To understand that no one controls the Internet.</li> <li>➤ To know there are different search engines.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://www.twinkl.co.uk/resource/tp-i-148-year-2-using-the-internet-unit-pack">https://www.twinkl.co.uk/resource/tp-i-148-year-2-using-the-internet-unit-pack</a>  Lessons 2 &amp; 3</p> <p><b>Key vocabulary:</b> <i>Google.co.uk back button, homepage</i></p> <p><b>Understand Networks (Computer Science)</b>  <b>Focus:</b> Children to examine inputs and outputs on a computer.</p> <p><a href="https://teachcomputing.org/resources">https://teachcomputing.org/resources</a>  Year 3 Lesson 2</p> <ul style="list-style-type: none"> <li>➤ Classify input and output devices.</li> <li>➤ Describe a simple process.</li> <li>➤ Design a digital device.</li> </ul> <p><b>Key vocabulary:</b> <i>Digital device, input, output, process.</i></p> <p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children begin to understand what an algorithm is and practise these using a program online to debug errors.</p> <p><b>NC Ref:</b>  <i>To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</i></p>	<p><b>Investigating Data (Information Technology)</b>  <b>Focus:</b> Children begin to make branching database and pictograms using computer programs.</p> <p><b>NC Ref:</b>  <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content;</i>  <i>Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"> <li>➤ Use simple charting software to produce basic pictograms.</li> <li>➤ To add labels and titles as appropriate.</li> <li>➤ To use a branching database.</li> <li>➤ Asking and answering simple questions about the pictogram.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="http://www.i2e.com/jit5#chart">www.i2e.com/jit5#chart</a></p> <p><b>Key vocabulary:</b> <i>pictogram, branching database, axis, title.</i></p>	<p><b>Media (Information Technology)</b>  <b>Focus:</b> Children begin use a word processing package to input and format text.</p> <p><b>NC Ref:</b>  <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content;</i>  <i>Recognise common uses of information technology beyond school.</i></p> <ul style="list-style-type: none"> <li>➤ Save and retrieve work into/from a folder.</li> <li>➤ Know the difference between the backspace and the delete key.</li> <li>➤ Know how to type the symbols using the shift key.</li> <li>➤ Know how to print work.</li> <li>➤ Understand when to use the Caps Lock</li> <li>➤ Use the arrow keys</li> <li>➤ Highlight text.</li> <li>➤ Change the format of text (B.U.I.)</li> <li>➤ Change the size of text.</li> <li>➤ To change the style of fonts.</li> <li>➤ Know how to use the undo tool.</li> </ul> <p><b>Software/Hardware/Links:</b>  Microsoft word.</p> <p><b>Key vocabulary:</b> <i>highlight, underline, bold, italic, style, word-wrap, format, text, fonts, symbols. shift key, print, caps lock, undo.</i></p>	<p><b>Physical Algorithms (Computer Science)</b>  <b>Focus:</b> Children begin to use an online program to write and debug simple algorithms to achieve a particular goal.</p> <p><b>NC Ref:</b>  <i>To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions;</i>  <i>Create and debug simple programs;</i>  <i>Use logical reasoning to predict the behaviour of simple programs.</i></p> <ul style="list-style-type: none"> <li>➤ Begin to use block programming.</li> <li>➤ Change backgrounds and add sprites.</li> <li>➤ Create a program to move and turn a sprite.</li> <li>➤ Add literal constants ('say' commands).</li> </ul> <p><b>Software/Hardware/Links:</b>  Scratch Jnr  (Scratch Junior Projects – Drive across the City:  <a href="https://www.scratchjr.org/teach/activities/drive-across-the-city">https://www.scratchjr.org/teach/activities/drive-across-the-city</a></p> <p>Run a Race:  <a href="https://www.scratchjr.org/teach/activities/run-arace">https://www.scratchjr.org/teach/activities/run-arace</a></p> <p>Dance Party:  <a href="https://www.scratchjr.org/teach/activities/danceparty">https://www.scratchjr.org/teach/activities/danceparty</a></p> <p>Meet and Greet:  <a href="https://www.scratchjr.org/teach/activities/meet-and-greet">https://www.scratchjr.org/teach/activities/meet-and-greet</a></p> <p><b>Key vocabulary:</b>  <i>Block programming, background, sprite, literal constants, code.</i></p>

- Give an explanation of what a program might do.
- Close down an app independently.
- Use logical reasoning to predict the behaviour of simple programs.
- Use blocks to program a character on screen.
- Program a character to grow and shrink.
- To be able to test and amend a set of instructions.

Software/Hardware/Links:  
[Daisy](#) Dinosaur App.

**Key vocabulary:**  
 Grow, shrink, amend, test, logical reasoning, block, character.

Yr 2

**Year 2 Digital Literacy- On-line Safety**

**(Self image)**

**Focus:** Children begin to understand how to get help if they have issues online.

**NC Ref:**  
*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.*

- To recognise issues online that might make someone feel sad, worried, uncomfortable or frightened.
- To know who to go to for help.
- To know how to ask for help.
- To know that information online might not always be true.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/self-image-and-identity/early-years-7/i-can-give-examples-of-issues-online-that-might-make-me-feel-sad-worried-uncomfortable-or-frightened-i-can-give-examples-of-how-i-might-get-help/?from=years>

**Key vocabulary:** issues, uncomfortable, frightened.

**(Online Relationships)**

**Focus:** Children give examples of how they might use technology to communicate with others they don't know well.

**NC Ref:**  
*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.*

- To be able to describe how the tone of a message would be different when sent to someone not known well, compared to the tone of a message when someone is known as well as a friend.
- To list ways which technology might be used to talk to:
  - a pen pal in another school.
  - someone in a game (suitable for my age).
  - an agreed adult (e.g. getting help with a game or interest) with adult help/supervision.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/online-relationships/early-years-7/i-can-give-examples-of-how-i-might-use-technology-to-communicate-with-others-i-don-t-know-well/?from=years>

**Key vocabulary:** communicate, skype, facetime, penpal, tone, respectfully, game, suitable age, an agreed adult, supervision.

**(Online Bullying)**

**Focus:** Children understand what online bullying looks like.

**NC Ref:**  
*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.*

- To talk about how the children being bullied would have felt.
- To identify the features of bullying.
- To identify the difference between online bullying and real-world bullying.
- To know about bullying online, and the similarities and differences to face-to-face bullying.

Software/Hardware/links  
[http://azoomee.com/index.php/searchitup\\_1essonplans\\_senteapoo/](http://azoomee.com/index.php/searchitup_1essonplans_senteapoo/)

**Key vocabulary:** cyberbullying, bullying, bullied, online bullying real world bullying, similarities, differences.

**(Health and Well Being)**

**Focus:** Children begin to use simple guidance for using technology in different environments and settings.

**NC Ref:**  
*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.*

- Recount either rules, guidance or conversations around their own use of technology that they think are important.
- Identify a range of simple health/ well-being issues on which technology can impact.
- Explain how they can reduce the impact of these issues when using technology.
- Explain ways in which they can self-manage their use of technology or with support from their parent/carer/mentor.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/early-years-7/simple-guidance/?from=years>

**Key vocabulary:** rules, lifestyle, wellbeing, mental wellbeing, environments, guidance, health, impact, self-manage.

**(Privacy and Security)**

**Focus:** Children explain how many devices in their home could be connected to the internet and can list some of those devices.

**NC Ref:**  
*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.*

- Recognise the wide range of internet connected devices at home.
- Name some of the features of a connected device.
- To know the ways in which people can access the internet e.g. phones, tablets, computers.
- To recognise the purpose and value of the internet in everyday life.
- To recognise that some content on the internet is factual and some is for entertainment e.g. news, games, videos.

Software/Hardware/Links  
<https://projectevolve.co.uk/toolkit/content/privacy-and-security/early-years-7/i-can-explain-how-many-devices-in-my-home-could-be-connected-to-the-internet-and-can-list-some-of-those-devices/?from=years>

**Key vocabulary:** device, connected device, public, smartphone, smart TV, offline, wifi, app., features, internet, tablets, purpose, value, factual, entertainment.

**(Managing information online)**

**Focus:** Children begin to learn how to be safe, responsible and respectful online.

**NC Ref:**  
*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.*

- Understand the importance of being safe, responsible, and respectful online.
- Learn the "Pause & Think Online" song to remember basic digital citizenship concepts.

Software/Hardware/links  
<https://www.commonsense.org/education/digital-citizenship/lesson/pause-think-online>

**Key vocabulary:** online, pause, digital citizenship.

Yr 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><b>Keyboard and mouse skills. (Information Technology)</b></p> <p><b>Focus:</b> Children begin to use the mouse and the keyboard and understand how to move around the screen and use various letters on the keyboard.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Find and open software independently.</li> <li>➤ Log in with initial and surname and a class password.</li> <li>➤ Understand the left and right mouse click.</li> <li>➤ Use keyboard with increased fluency</li> <li>➤ Know how to open work from a shared drive.</li> <li>➤ Understand the difference between the caps lock and shift.</li> <li>➤ Save and retrieve files on the school network.</li> <li>➤ Know how to organise work into folders.</li> <li>➤ Know how to use page up/down.</li> <li>➤ Use Input devices fluently, such as keyboards, mice and/or touch-screen.</li> <li>➤ Use print-screen to copy an image.</li> </ul> <p><b>Software/Hardware/Links:</b> <a href="http://www.bigbrownbear.co.uk/learntotype/index.html">http://www.bigbrownbear.co.uk/learntotype/index.html</a> (keyboard skills)</p> <p><b>Key vocabulary:</b> <i>Print-screen, input devices, shared drive, keyboard, mouse skills, left mouse click, right mouse click, retrieve, folders, page up, page down, touch screen, print screen.</i></p> <p><b>Multi-Media. (Information Technology)</b></p> <p><b>Focus:</b> Children begin a multi-media package to create a slideshow.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Add pages into my presentation.</li> <li>➤ Use some slide transition and animation in my presentation.</li> <li>➤ Insert a picture and text into my presentation.</li> </ul> <p><b>Software/Hardware/Links:</b> Microsoft Power-point <a href="https://www.twinkl.co.uk/resource/tp2-i-179-planit-computing-year-3-presentation-skills-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-179-planit-computing-year-3-presentation-skills-unit-pack</a></p> <p><b>Key vocabulary:</b> <i>Slide, transition, animation,</i></p>	<p><b>Understand Algorithms (Computer Science)</b></p> <p><b>Focus:</b> Children begin to understand what an algorithm is and practise these physically using a pro-bot.</p> <p><b>NC Ref:</b> <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Draw and explain a simple algorithm using accurate symbols.</li> <li>➤ Independently be able to debug basic mistakes in algorithms.</li> <li>➤ Program and test a simple program.</li> <li>➤ To be able to use repeat (loop) instructions to draw regular shapes on screen, using commands.</li> <li>➤ Use logical reasoning to explain how some simple algorithms work.</li> </ul> <p><b>Software/Hardware/Links:</b> Probot <a href="http://movemyrobot.blogspot.com/p/lesson-plan-hour-1-introduce-pro-bot.html">http://movemyrobot.blogspot.com/p/lesson-plan-hour-1-introduce-pro-bot.html</a> <i>Use Grade 2 lessons and ideas</i></p> <p><b>Key vocabulary:</b> <i>Program, loop, repeat, sequential programming, probot, simulating, decomposing, logical reasoning.</i></p>	<p><b>Web navigation skills. (Information Technology)</b></p> <p><b>Focus:</b> Children to use search engines to find images and evaluate what is true/false/relevant.</p> <p><b>NC Ref:</b> <i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</i></p> <ul style="list-style-type: none"> <li>➤ Begin to recognise types of URL such as BBC.co.uk.</li> <li>➤ Identify various parts of a webpage. Hyperlinks, toolbars, adverts etc.</li> <li>➤ Understand that no one controls the Internet.</li> <li>➤ Begin to realise that all websites might not be helpful.</li> <li>➤ <b>To make safe, reliable choices from search results.</b></li> <li>➤ <b>To know that search results are ordered based on the popularity of the website and that this can affect what information people access.</b></li> </ul> <p><b>Software/Hardware/Links:</b> Lessons 1 and 2 <a href="https://www.twinkl.co.uk/resource/tp2-i-107-planit-computing-year-3-internet-research-and-communication-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-107-planit-computing-year-3-internet-research-and-communication-unit-pack</a> Lessons 1 and 2</p> <p><b>Key vocabulary:</b> <i>URL, toolbars, adverts, reliable, popularity.</i></p> <p><b>Understand Networks (Computer Science)</b></p> <p><b>Focus:</b> Children to explore how digital devices can be connected</p> <p><b>NC Ref:</b> <i>Understand computer networks, including the internet; how they can provide multiple services such as the worldwide web; and the opportunities they offer for communication and collaboration.</i></p> <ul style="list-style-type: none"> <li>➤ Recognise that a computer network is made up of a number of devices.</li> <li>➤ Demonstrate how information can be passed between devices.</li> <li>➤ Explain the role of a switch, server, and wireless access point in a network.</li> </ul> <p><a href="https://teachcomputing.org/resources">https://teachcomputing.org/resources</a> Year 3 Lesson 5</p> <p><b>Key vocabulary:</b> <i>Network switch, wi-fi, server, devices.</i></p> <p><b>Understand Algorithms (Computer Science)</b></p> <p><b>Focus:</b> Children use an online app to independently debug basic mistakes.</p> <p><b>NC Ref:</b> <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems;</i></p>	<p><b>Data. (Information Technology)</b></p> <p><b>Focus:</b> Children begin to use a 'database' to search for basic information.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information;</i></p> <ul style="list-style-type: none"> <li>➤ To understand what a database is.</li> <li>➤ To use the terms 'fields', 'rows' and 'columns'.</li> <li>➤ I know different types of data: text, number.</li> <li>➤ To be able to input data into a prepared database.</li> <li>➤ To use filters or can perform single criteria searches for information.</li> </ul> <p><b>Software/Hardware/Links:</b> <a href="http://gictow.lgfl.org.uk/#3C">http://gictow.lgfl.org.uk/#3C</a> Microsoft Excel</p> <p><b>Key vocabulary:</b> <i>Spreadsheet, database, fields, columns, cells, search, category, rows, filters, single criteria searches.</i></p>	<p><b>Multi - Media. (Information Technology)</b></p> <p><b>Focus:</b> Children begin use a publishing package to input text and pictures.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information;</i></p> <ul style="list-style-type: none"> <li>➤ Insert new page when required.</li> <li>➤ Create a text box and position it using the formatting tools</li> <li>➤ Search clipart including online</li> <li>➤ Resize and cut graphics to suit the purpose of the document.</li> <li>➤ Change the colour of the background</li> <li>➤ Use cut, copy and paste and shortcuts.</li> </ul> <p><b>Software/Hardware/Links:</b> <a href="https://www.twinkl.co.uk/resource/tp2-i-085-planit-computing-year-3-word-processing-skills-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-085-planit-computing-year-3-word-processing-skills-unit-pack</a> Microsoft Publisher <a href="https://www.twinkl.co.uk/resource/tp2-i-207-planit-computing-year-3-drawing-and-desktop-publishing-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-207-planit-computing-year-3-drawing-and-desktop-publishing-unit-pack</a></p> <p><b>Key vocabulary:</b> <i>highlight, underline, bold, italic, style, word-wrap, graphic, resize, text box, publishing, formatting tools, clip art, background, copy and paste, shortcuts.</i></p>	<p><b>Understand Algorithms (Computer Science)</b></p> <p><b>Focus:</b> Children to begin to use blocks for programming online using loops and conditionals.</p> <p><b>NC Ref:</b> <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Create an algorithm for a simple animation.</li> <li>➤ Design and write a program for an animation.</li> <li>➤ Create a backdrop and sprites.</li> <li>➤ Program sprites to move and speak</li> <li>➤ Use repeated loops in algorithms.</li> <li>➤ Begin to use conditionals 'if' if click here then this happens.</li> </ul> <p><b>Software/Hardware/Links:</b> Scratch <a href="https://projects.raspberrypi.org/en/codeclub">https://projects.raspberrypi.org/en/codeclub</a> Module 1</p> <p><b>Key vocabulary:</b> <i>sprite, backdrop, conditionals, programming language. Loop, basic procedures.</i></p>

<p>hyperlink.</p>		<p>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.</p> <ul style="list-style-type: none"> <li>➤ Use logical reasoning to detect errors in programs</li> <li>➤ Independently use logical reasoning to correct basic errors in programs.</li> <li>➤ To be able to give an on-screen robot directional instructions.</li> <li>➤ Inputs sets of instructions according to programming language</li> </ul> <p><u>Software/Hardware/Links:</u> ALEX – Robot</p> <p><b>Key vocabulary:</b> logical reasoning, errors</p>			
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**Yr 3** **Year 3 Digital Literacy- On-line Safety**

<p style="text-align: center;"><b>(Self -Image)</b></p> <p><b>Focus:</b> Children begin to understand how others change their identity on-line.</p> <p><b>NC Ref:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <ul style="list-style-type: none"> <li>➤ To explain what is meant by the term 'identity'.</li> <li>➤ To explain how children can represent themselves in different ways online.</li> <li>➤ To explain ways in which and why children might change their identities depending on what they are doing online (e.g. gaming; using an <b>avatar</b>; social media).</li> <li>➤ To recognise that images and information online can be altered or adapted and the reasons for why this happens.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://projectevolve.co.uk/toolkit/content/self-image-and-identity/7-11/i-can-explain-ways-in-which-and-why-i-might-change-my-identity-depending-on-what-i-am-doing-online-e-g-gaming-using-an-avatar-social-media/?from=years">https://projectevolve.co.uk/toolkit/content/self-image-and-identity/7-11/i-can-explain-ways-in-which-and-why-i-might-change-my-identity-depending-on-what-i-am-doing-online-e-g-gaming-using-an-avatar-social-media/?from=years</a></p> <p><b>Key vocabulary:</b> avatar, profile, screen name, multi-media, analysing, evaluating, presenting, slideshow, software, identity, gaming, represent, social media, altered, adapted, images.</p>	<p style="text-align: center;"><b>(Online Relationships)</b></p> <p><b>Focus:</b> Children begin to understand who they can trust online.</p> <p><b>NC Ref:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <ul style="list-style-type: none"> <li>➤ To understand and can explain what trust means and why it is so important, including online.</li> <li>➤ To understand that children should be careful when sharing some information about themselves and about other people online.</li> <li>➤ To understand that trust has to be earned and can give examples of how trust in someone might be lost because of something that happens online.</li> <li>➤ To know what is appropriate to share with friends, classmates, family and wider social groups including online.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-explain-why-i-should-be-careful-who-i-trust-online-and-what-information-i-can-trust-them-with/?from=years">https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-explain-why-i-should-be-careful-who-i-trust-online-and-what-information-i-can-trust-them-with/?from=years</a></p> <p><b>Key vocabulary:</b> trust, request, earned, appropriate, inappropriate.</p>	<p style="text-align: center;"><b>(Online Bullying)</b></p> <p><b>Focus:</b> Children begin to understand what meanness is online and what to do about it.</p> <p><b>NC Ref:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <ul style="list-style-type: none"> <li>➤ Understand what online meanness can look like and how it can make people feel.</li> <li>➤ Identify ways to respond to mean words online, using S-T-O-P.</li> <li>➤ To know how to recognise hurtful behaviour, including online.</li> <li>➤ To know what to do and whom to tell if they see or experience hurtful behaviour, including online.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://www.commonsense.org/education/digital-citizenship/lesson/putting-a-stop-to-online-meanness">https://www.commonsense.org/education/digital-citizenship/lesson/putting-a-stop-to-online-meanness</a></p> <p><b>Key vocabulary:</b> advice, mean, meanness, hurtful experience, cyberbullying,</p>	<p style="text-align: center;"><b>(Health and Well Being)</b></p> <p><b>Focus:</b> Children understand why spending too much time using technology can sometimes have a negative impact.</p> <p><b>NC Ref:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <ul style="list-style-type: none"> <li>➤ Give examples of and explain the positive impact of using technology and the internet.</li> <li>➤ Give examples of tech/online activities that they (could) engage with for extended periods of time.</li> <li>➤ Give examples of and explain the negative impact of excessive technology use on health and bodies.</li> <li>➤ Give examples of and explain the negative impact of excessive technology use on thoughts and feelings.</li> <li>➤ Give examples of and explain the negative impact of excessive technology use on relationships and work (e.g. homework/chores/etc.)</li> <li>➤ Explain simple rules/strategies they use to reduce the impact of these issues.</li> <li>➤ To know how the internet can be used positively for leisure, for school and for work.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/time-management/?from=years">https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/time-management/?from=years</a></p> <p><b>Key vocabulary:</b> technology, socialising, balanced lifestyle, negative, extended periods of time, negative impact, excessive, physical health, mental wellbeing, chores, leisure.</p>	<p style="text-align: center;"><b>(Privacy and Security)</b></p> <p><b>Focus:</b> Children know that they should only share information with people they trust.</p> <p><b>NC Ref:</b> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <ul style="list-style-type: none"> <li>➤ Demonstrate an awareness of the people that children can trust.</li> <li>➤ Make decisions about what information they share and with whom.</li> <li>➤ To know about what privacy and personal boundaries are, including online.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-give-reasons-why-i-should-only-share-information-with-people-i-choose-to-and-can-trust-i-can-explain-that-if-i-am-not-sure-or-i-feel-pressured-i-should-ask-a-trusted-adult/?from=years">https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-give-reasons-why-i-should-only-share-information-with-people-i-choose-to-and-can-trust-i-can-explain-that-if-i-am-not-sure-or-i-feel-pressured-i-should-ask-a-trusted-adult/?from=years</a></p> <p><b>Key vocabulary:</b> trust, trustworthy, company, privacy, personal boundaries.</p>	<p style="text-align: center;"><b>(Managing information online)</b></p> <p><b>Focus:</b> Children begin to understand what information is okay to leave in a digital footprint.</p> <p><b>NC Ref:</b> 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.</p> <ul style="list-style-type: none"> <li>➤ Learn that the information they share online leaves a digital footprint or "trail"</li> <li>➤ Explore what information is OK to be shared online.</li> <li>➤ To know basic strategies to help keep themselves safe online e.g. passwords, using trusted sites and adult supervision.</li> </ul> <p><u>Software/Hardware/links</u> <a href="https://www.commonsense.org/education/digital-citizenship/lesson/digital-trails">https://www.commonsense.org/education/digital-citizenship/lesson/digital-trails</a></p> <p><b>Key vocabulary:</b> digital, footprint, permanent, private information, trail, trusted sites, adult supervision.</p>
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Yr 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><b>Multi - Media. (Information Technology)</b>  <b>Focus:</b> Children begin use an Office package to input text and pictures.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Log in with initial and surname. and their own password.</li> <li>➤ Use CTRL C to copy, CTRL X to cut and CTRL V to paste.</li> <li>➤ To insert, rotate and resize images on my page.</li> <li>➤ Understand why words are underlined in red and know how to correct this.</li> <li>➤ Change the page layout and margins to suit the purpose of the document</li> <li>➤ Use borders.</li> <li>➤ Use tables.</li> <li>➤ Use the most effective text wrapping formats with graphics.</li> <li>➤ Add hyperlinks.</li> </ul> <p><u>Software/Hardware/Links:</u>  <b>Microsoft Office</b>  <a href="https://www.twinkl.co.uk/resource/t2-i-146-computing-word-processing-year-4-unit-pack">https://www.twinkl.co.uk/resource/t2-i-146-computing-word-processing-year-4-unit-pack</a>  <a href="https://www.bigbrownbear.co.uk/learntotype/index.html">https://www.bigbrownbear.co.uk/learntotype/index.html</a></p> <p><b>Key vocabulary:</b> <i>Format, Microsoft Word, poster, align, select, edit, document,, toolbar, copyright, Office, CTRL C, CTRL X, CTRL V, rotate, resize, margins, borders, tables, text wrapping.</i></p>	<p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children to use a different sort of coding and make a game.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ To design, write, using selection and debug my program for a given task</li> <li>➤ To know how to break sets of instructions into short steps to achieve goal.</li> <li>➤ Be able to explain how their program works</li> <li>➤ Use WHEN DO conditions to control events or objects and use a variety of inputs and outputs</li> </ul> <p><u>Software/Hardware/Links:</u>  Kodu  (<a href="https://www.twinkl.co.uk/resource/tp2-i-139-new-planit-computing-year-6-kodu-programming-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-139-new-planit-computing-year-6-kodu-programming-unit-pack</a>)</p> <p><b>Key vocabulary:</b> <i>Kodu, world, object, palette, environment, smooth, flatten, raise. track,, start, finish, obstacle, path, node, bump, settings, acceleration, turning. conditional sentences, named constant, coding, WHEN DO conditions, inputs, outputs.</i></p>	<p><b>Understanding Networks (Computer Science)</b>  <b>Focus:</b> Children begin to understand what the Internet is made from and how websites can be shared and that some content on the WWW is unreliable.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Describe the different networked devices and how they connect.</li> <li>➤ Explain how the internet allows us to view the World Wide Web.</li> <li>➤ Recognise that the World Wide Web is the part of the internet that contains websites and web pages.</li> <li>➤ Explain the types of media that can be shared on the World Wide Web (WWW)</li> <li>➤ Describe where websites are stored when uploaded to the WWW.</li> <li>➤ Describe how to access websites on the WWW.</li> <li>➤ Explain that not everything on the World Wide Web is true.</li> <li>➤ Explain why some information that is found online may not be honest, accurate, or legal.</li> <li>➤ Explain why it is important that content is carefully thought about being shared or re-shared.</li> </ul> <p><u>Software/Hardware/Links:</u>  <a href="https://teachcomputing.org/resources">https://teachcomputing.org/resources</a>  Year 4 lesson 2, 3 &amp; 6.</p> <p><b>Key vocabulary:</b> <i>Wireless Access Point (WAP) router, route tracing, routing, accurate, unreliable, worldwide web, honest, dishonest, legal, illegal.</i></p> <p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children to begin to use blocks for programming online using loops and conditionals.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Develop a simulation of a simple physical system.</li> <li>➤ Use logical reasoning to detect and correct errors in algorithms and programs.</li> <li>➤ Predict the outcome of a given algorithm or program.</li> </ul>	<p><b>Data. (Information Technology)</b>  <b>Focus:</b> Children use a 'database' to make complex searches for information.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ To explain what a database is and why they are used.</li> <li>➤ To create databases planning the fields, rows and columns.</li> <li>➤ Enter data into a database using the correct fields.</li> <li>➤ I can interrogate a database using more complex searches.</li> </ul> <p><u>Software/Hardware/Links:</u>  Excel  <a href="https://www.stem.org.uk/elibrary/resource/36020">https://www.stem.org.uk/elibrary/resource/36020</a>; <a href="http://gictsow.lgfl.org.uk/#3C">http://gictsow.lgfl.org.uk/#3C</a></p> <p><b>Key vocabulary:</b> <i>human branching database, data, information, query, interrogate.</i></p>	<p><b>Multi - Media. (Information Technology)</b>  <b>Focus:</b> Children begin to look at different ways of using animation.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ To know we can use animation without a computer.</li> <li>➤ Create a short animation using a stick figure.</li> <li>➤ Create a recorded animation involving a number of moving characters on a background.</li> <li>➤ Structure specific timing of animations using a time slider.</li> <li>➤ Use technology to create a short stop-motion animation film.</li> </ul> <p><u>Software/Hardware/Links:</u>  <a href="https://www.twinkl.co.uk/resource/tp2-i-129-new-planit-computing-year-4-animation-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-129-new-planit-computing-year-4-animation-unit-pack</a></p> <p><b>Key vocabulary:</b> <i>Animate, still image, thaumatrope, zoetrope, zoopraxiscope, stereoscope, flip book, Frame, onion skinning, loop, frame rate. Analyse, evaluate, positive, negative, effectiveness, stick figure, time slider, stop motion animation.</i></p>	<p><b>Understand Physical Systems (Computer Science)</b>  <b>Focus:</b> Children to write algorithms using physical systems.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Controlling physical systems.</li> <li>➤ Solve problems by decomposing them into smaller parts.</li> <li>➤ Use logical reasoning to explain how some simple algorithms work.</li> <li>➤ Use sequence and nested loops in Programs.</li> <li>➤ Use and change variables within my program.</li> <li>➤ Use IF THEN conditions to control events or objects and use a variety of inputs and outputs.</li> </ul> <p><u>Software/Hardware/Links:</u>  Microbit –beginner programs include Magic 8-ball with conditionals.  <a href="https://microbit.org/projects/make-it-code-it/">https://microbit.org/projects/make-it-code-it/</a></p> <p><b>Key vocabulary:</b> <i>microbit, makecode, hex file, modify, nested loops, IF/THEN conditions.</i></p>



- Know that it is important to check for bugs step by step.
- Use logical reasoning to explain how some simple algorithms work.

Software/Hardware/Links:  
Lego Mindstorms Fix the Factory app.

**Key vocabulary:** simulation, physical system, predict, step-by-step.

Yr 4

**Year 4 Digital Literacy- On-line Safety**

**(Self -Image)**

**Focus:** Children can explain how my online identity can be different to the identity I present in 'real life'.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- To explain how my online identity can be different to the identity I present in 'real life'.
- To explain the reasons for and against changing your identity online and explain how someone might do so.
- To describe the right decisions about how I interact with others online and how this will impact on how others perceive me.
- To know strategies to recognise whether something they see online is true or accurate.
- To know how knowing someone online differs from knowing someone face to face and that there are risks in communicating with someone they don't I know

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/self-image-and-identity/7-11/i-can-explain-how-my-online-identity-can-be-different-to-the-identity-i-present-in-real-life/?from=years>

**Key vocabulary:** Online profiles, real-life, decisions, perception, perceive.

**(Online Relationships)**

**Focus:** Children understand the importance of being respectful online.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- To understand and can explain what is meant by respect.
- To give examples of how online behaviour is either respectful or disrespectful.
- To describe how it is possible to be respectful online.
- To know how to communicate respectfully with friends when using digital devices

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-give-examples-of-how-to-be-respectful-to-others-online/?from=years>

**Key vocabulary:** definition, strategies.

**(Online Bullying)**

**Focus:** Children know what to do when someone uses mean and hurtful language on the Internet.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Understand that it's important to think about the words we use, because everyone interprets things differently.
- Identify ways to respond to mean words online, using S-T-O-P.
- Decide what kinds of statements are OK to say online and which are not.
- To know how to report something seen or experienced online that concerns them e.g. images or content that worry them, unkind or inappropriate communication.
- To know what to do or whom to tell if they are worried about any contact online
- To know how to differentiate between playful teasing, hurtful behaviour and bullying, including online
- To know how to respond if they witness or experience hurtful behaviour or bullying, including online
- To know how to recognise risks online such as harmful content or contact

Software/Hardware/links  
<https://www.commonsense.org/education/digital-citizenship/lesson/the-power-of-words>

**Key vocabulary:** empathy, interpret, teasing, hurtful, witness, experience, harmful content, harmful contact.

**(Health and Well Being)**

**Focus:** Children can identify times or situations when they might need to limit the amount of time they use technology.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Give examples of tech/online activities that they engage with for extended periods of time.
- Demonstrate an awareness of the effects of over engagement on physical health, wellbeing, relationships and work.
- Give examples of what happens when they have been online for too long.
- Identify times when someone might need to limit the amount of time they use technology.
- To evaluate whether a game is suitable to play or a website is appropriate for their age-group

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/limit-time/?from=years>

**Key vocabulary:** irritable, gaming, engage, over-engagement, Limit, sleep issues, sleep deprivation, evaluate, anti-social.

**(Privacy and Security)**

**Focus:** Children describe strategies for keeping their personal information private.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Identify the risks posed by over-sharing information online.
- Suggest appropriate strategies for keeping personal information private in different contexts.
- To know how people may behave differently online including pretending to be someone they are not
- To know how to report concerns and seek help if worried or uncomfortable about someone's behaviour, including online.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-describe-strategies-for-keeping-my-personal-information-private-depending-on-context/?from=years>

**Key vocabulary:** strong passwords, cracked, images, profile, substitution, omission, risk, over-sharing, comfortable, uncomfortable, concerned, worried, report.

**(Managing information online)**

**Focus:** Children are beginning to understand what they post online affects their identity.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Consider how posting selfies or other images will lead others to make assumptions about them.
- Reflect on the most important parts of their unique identity.
- Identify ways they can post online to best reflect who they are.

Software/Hardware/links  
<https://www.commonsense.org/education/digital-citizenship/lesson/this-is-me>

**Key vocabulary:** assumption, identity, selfie, best reflect, unique, portray.

Yr 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><b>Data.</b> <b>(Information Technology)</b> <b>Focus:</b> Children to simple formula to calculate in a spreadsheet.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ To be able to recognise what a spreadsheet is.</li> <li>➤ Enter formulae for the four operations (+- x/) into a spreadsheet.</li> <li>➤ Use 'SUM' to calculate the total of a set of numbers in a range of cells.</li> <li>➤ Label spreadsheets appropriately with headings, labels and titles.</li> <li>➤ Resize columns and rows etc.</li> <li>➤ Use formula in several columns to calculate.</li> </ul> <p><u>Software/Hardware/Links:</u> Excel</p> <p><b>Key vocabulary:</b> SUM, headings, labels, cell names, formula, formulas/formulae, calculate, average, percent, spreadsheet, range of cells.</p>	<p><b>Understand Algorithms</b> <b>(Computer Science)</b> <b>Focus:</b> Children to design and write their own algorithms to draw shapes physically using hardware.</p> <p><b>NC Ref:</b> <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts;</i> <i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output;</i> <i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p> <ul style="list-style-type: none"> <li>➤ To design, write and debug my own flowchart program for a given task.</li> <li>➤ Use logical reasoning to detect and correct errors in algorithms.</li> <li>➤ Uses nested loops to achieve goals (shapes, letters).</li> <li>➤ To use 90 degree and 45 degree turns.</li> <li>➤ Know how to break sets of instructions into short steps to achieve goal. For instance, drawing repeated squares to make a pattern.</li> </ul> <p><u>Software/Hardware/Links:</u> Probot <a href="http://movemyrobot.blogspot.com/p/lesson-plan-hour-1-introduce-pro-bot.html">http://movemyrobot.blogspot.com/p/lesson-plan-hour-1-introduce-pro-bot.html</a> lessons from Grade 4</p> <p><b>Key vocabulary:</b> Sequential programming, Repeat loops, Nested Loops, Procedures, Flowchart program, 90 degree, 45 degree.</p>	<p><b>Understanding Networks</b> <b>(Computer Science)</b> <b>Focus:</b> Children recognise the role of computer systems in our lives and understand how we communicate and how information is transferred over the Internet.</p> <p><b>NC Ref:</b> <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Identify tasks that are managed by computer systems.</li> <li>➤ Identify the human elements of a computer system.</li> <li>➤ Explain the benefits of a given computer system.</li> <li>➤ Recognise that data is transferred using agreed methods.</li> <li>➤ Explain that networked digital devices have unique addresses.</li> <li>➤ Explain that data is transferred over networks in packets.</li> <li>➤ Explain the different ways in which people communicate.</li> <li>➤ Identify that there are a variety of ways of communicating over the internet.</li> <li>➤ Choose methods of communication to suit particular purposes.</li> </ul> <p><u>Software/Hardware/Links:</u> <a href="https://teachcomputing.org/resources">https://teachcomputing.org/resources</a> Year 5 lesson 2, 3 &amp; Year 6 lesson 5.</p> <p><b>Key vocabulary:</b> system, digital, protocol, packet, unique addresses.</p> <p><b>Understand Algorithms</b> <b>(Computer Science)</b> <b>Focus:</b> Children to use an online simulation of a robot to solve problems with algorithms to improve children's critical and computational thinking.</p> <p><b>NC Ref:</b> <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts;</i> <i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output;</i> <i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p> <ul style="list-style-type: none"> <li>➤ To be able to test, refine and predict the outcome of a set of commands.</li> <li>➤ Use logical reasoning to explain how some algorithms work.</li> <li>➤ Program a number of algorithms that achieve a specific outcome.</li> <li>➤ To give an onscreen robot specific directional instructions that takes them from x to y.</li> </ul> <p><u>Software/Hardware/Links:</u> Lightbot</p> <p><b>Key vocabulary:</b> conditionals, critical thinking, computational thinking.</p>	<p><b>Data.</b> <b>(Information Technology)</b> <b>Focus:</b> Children to use software to make a radio jingle.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Know what a podcast is.</li> <li>➤ Use recording skills to create an advert or jingle.</li> <li>➤ Evaluate what makes a good quality audio.</li> <li>➤ Delete and rerecord sounds.</li> <li>➤ Rehearse timings with musical software.</li> <li>➤ Add effects to a track.</li> <li>➤ Use different input and output devices for sound recording.</li> </ul> <p><u>Software/Hardware/Links:</u> <a href="https://www.twinkl.co.uk/resource/tp2-i-159-planit-computing-year-5-radio-station-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-159-planit-computing-year-5-radio-station-unit-pack</a></p> <p><b>Key vocabulary:</b> Audacity, audio, record, re-record, edit, play stop, skip, waveform, track, backing track, voiceover, mute, gain, radio jingle, podcast.</p>	<p><b>Multi-Media.</b> <b>(Information Technology)</b> <b>Focus:</b> Children to use software to understand how to control devices.</p> <p><b>NC Ref:</b> <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Draw and interpret a flowchart with the correct symbols.</li> <li>➤ Create and edit a flowchart to control a simulated device.</li> <li>➤ Control multiple outputs at the same time.</li> <li>➤ Use a decision symbol based on the status of an input.</li> <li>➤ Create a repeating loop.</li> <li>➤ Create a flowchart program containing a subroutine.</li> <li>➤ Design, write and debug a flowchart program for a given task.</li> </ul> <p><u>Software/Hardware/Links:</u> Flowol.</p> <p><a href="https://www.twinkl.co.uk/resource/tp2-i-074-planit-computing-year-5-controlling-devices-flowol-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-074-planit-computing-year-5-controlling-devices-flowol-unit-pack</a></p> <p><b>Key vocabulary:</b> Flowol, flowchart, control, mimic, start, stop, delay, process, decision, input loop, subroutine.</p>	<p><b>Understand Algorithms</b> <b>(Computer Science)</b> <b>Focus:</b> Children to create their own block based programming using variables and conditional.</p> <p><b>NC Ref:</b> <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts;</i> <i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output;</i> <i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p> <ul style="list-style-type: none"> <li>➤ Use sequence, selection, and repetition in programs; work with variables.</li> <li>➤ Work with various forms of input and output.</li> <li>➤ Program and debug a character game.</li> <li>➤ Uses variables, mathematical conditionals, and loops to achieve set goals.</li> </ul> <p><u>Software/Hardware/Links:</u> Scratch <a href="https://projects.raspberrypi.org/en/codeclub/scratch-module-2">https://projects.raspberrypi.org/en/codeclub/scratch-module-2</a></p> <p><b>Key vocabulary:</b> clone, broadcast, variables, mathematical conditionals.</p>

Yr 5	Year 5 Digital Literacy - On-line Safety					
<p><b>(Self image)</b>  <b>Focus:</b> Children understand how and why identities can be copied, modified or altered.</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ To explain someone's online identity can be different to their identity in 'real life'.</li> <li>➤ To describe how someone might change their identity online.</li> <li>➤ To explain the positive reasons for changing your online identity and the negative reasons for doing so.</li> <li>➤ To know strategies to respond to pressure from friends including online</li> <li>➤ To know how and why images online might be manipulated, altered, or faked</li> <li>➤ To know how to recognise when images might have been altered</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://projectevolve.co.uk/toolkit/content/s-elf-image-and-identity/7-11/i-can-explain-how-identity-online-can-be-copied-modified-or-altered/?from=years">https://projectevolve.co.uk/toolkit/content/s-elf-image-and-identity/7-11/i-can-explain-how-identity-online-can-be-copied-modified-or-altered/?from=years</a></p> <p><b>Key vocabulary:</b> identity, modify, alter, positive, negative, pressure, manipulated, faked, altered, anonymous, disguise, fraud, manipulation.</p>	<p><b>(Online Relationships)</b>  <b>Focus:</b> Children learn that they can make positive contributions and be part of online communities</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ To know the impact of the need for peer approval in different situations, including online</li> <li>➤ To know ways to participate effectively in discussions online and manage conflict or disagreements</li> <li>➤ To give examples of the online (or offline) communities to which I belong.</li> <li>➤ To describe some of the positive things I do in these communities and can explain how my behaviour impacts on others.</li> <li>➤ To describe how online communities collaborate and the benefit of doing this.</li> <li>➤ To know about sharing things online, including rules and laws relating to this</li> <li>➤ To know how to recognise what is appropriate to share online</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-make-positive-contributions-and-be-part-of-online-communities/?from=years">https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-make-positive-contributions-and-be-part-of-online-communities/?from=years</a></p> <p><b>Key vocabulary:</b> community, interface, collaborate, collaboration, peer approval, managing conflict, disagreements, law.</p>	<p><b>(Online Bullying)</b>  <b>Focus:</b> Children understand how to become upstanders when they see cyberbullying.</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ To know how to get advice and report concerns about personal safety, including online</li> <li>➤ Recognize what cyberbullying is.</li> <li>➤ Show ways to be an upstander by creating a digital citizenship superhero comic strip</li> <li>➤ To recognise unsafe or suspicious content online</li> <li>➤ Reflect on the characteristics that make someone an upstanding digital citizen.</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://www.common sense.org/education/digital-citizenship/lesson/be-a-super-digital-citizen">https://www.common sense.org/education/digital-citizenship/lesson/be-a-super-digital-citizen</a></p> <p><b>Key vocabulary:</b> upstanders, cyberbullying, resolve, characteristics, digital citizen, upstanding, superhero, suspicious, advice.</p>	<p><b>(Health and Well Being)</b>  <b>Focus:</b> Children explain ways technology can affect healthy sleep and. describe some of the issues.</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ To know why people choose to communicate through social media and some of the risks and challenges of doing so .</li> <li>➤ Understand simple properties of healthy sleep.</li> <li>➤ Can recount simple benefits of sleep on body's health.</li> <li>➤ Can offer suggestions on how use of technology before sleep could affect quality of sleep.</li> <li>➤ To know how balancing time online with other activities helps to maintain their health and wellbeing.</li> <li>➤ To know strategies to manage time spent online and foster positive habits e.g. switching phone off at night.</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/sleep-issues/?from=years">https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/sleep-issues/?from=years</a></p> <p><b>Key vocabulary:</b> positive impact, factors, negative impact, benefits, balance, [properties, challenges, positive habits.</p>	<p><b>(Privacy and Security)</b>  <b>Focus:</b> Children know how apps may request payments and they understand that they need to seek permission before purchasing any in-app purchases.</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ Recognise that features in games/apps may be purchased with real money.</li> <li>➤ Understand that some online purchases (e.g. loot boxes) do not guarantee to give items that are worth the same value as what is paid.</li> <li>➤ To know that organisations can use personal information to encourage people to buy things</li> <li>➤ To recognise what online adverts look like.</li> <li>➤ To compare content shared for factual purposes and for advertising</li> <li>➤ To know why people might choose to buy or not buy something online e.g. from seeing an advert.</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-explain-how-and-why-some-apps-may-request-or-take-payment-for-additional-content-e-g-in-app-purchases-and-explain-why-i-should-look-for-permission-from-a-trusted-adult-before-purchasing/?from=years">https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-explain-how-and-why-some-apps-may-request-or-take-payment-for-additional-content-e-g-in-app-purchases-and-explain-why-i-should-look-for-permission-from-a-trusted-adult-before-purchasing/?from=years</a></p> <p><b>Key vocabulary:</b> loot box,( Loot boxes are virtual treasure chests containing undisclosed items that can be used in games.), vlogger, organisations, adverts, advertising, persuasion, temptation, fraud, gambling.</p>	<p><b>(Managing information online)</b>  <b>Focus:</b> Children learn how their digital footprint can affect their online reputation.</p> <p><b>NC Ref:</b>  <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p> <ul style="list-style-type: none"> <li>➤ Define the term "digital footprint" and identify the online activities that contribute to it.</li> <li>➤ Identify ways they are -- and are not -- in control of their digital footprint.</li> <li>➤ Understand what responsibilities they have for the digital footprints of themselves and others.</li> <li>➤ To know that everything shared online has a digital footprint.</li> <li>➤ To know how to protect personal information online.</li> <li>➤ To know how to identify potential risks of personal information being misused.</li> </ul> <p><b>Software/Hardware/links</b>  <a href="https://www.common sense.org/education/digital-citizenship/lesson/our-online-tracks">https://www.common sense.org/education/digital-citizenship/lesson/our-online-tracks</a></p> <p><b>Key vocabulary:</b> inference, fossil, digital footprint, responsibilities, personal information, misuse, responsibility.</p>	

Yr 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><b>Data. (Information Technology)</b>  <b>Focus:</b> Children to use more complex formula to calculate in a spreadsheet.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Format and label parts of a spreadsheet. Cell sizes, titles.</li> <li>➤ Use complex formula in a spreadsheet.</li> <li>➤ Copy cells &amp; formulae using copy &amp; paste &amp; fill across &amp; down.</li> <li>➤ Format cells.</li> <li>➤ Add charts to other documents and resize and format.</li> <li>➤ Produce more complex charts/graphs changing colours and patterns.</li> <li>➤ To use brackets to organise formulae.</li> </ul> <p><b>Software/Hardware/Links:</b>  Excel  <a href="https://www.twinkl.co.uk/resource/tp2-i-041-new-planit-computing-year-6-spreadsheets-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-041-new-planit-computing-year-6-spreadsheets-unit-pack</a></p> <p><b>Key vocabulary:</b> Average, brackets, ascending, descending.</p>	<p><b>Using Algorithms (Computer Science)</b>  <b>Focus:</b> Children to write algorithms and debug code to achieve a goal.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ To design, write, using selection and debug my own flowchart program for a given task.</li> <li>➤ Use sequence, selection, and repetition in programs; work with variables.</li> <li>➤ Work with various forms of input and output.</li> <li>➤ Program and debug a character game</li> <li>➤ Uses mathematical conditionals, and nested loops to achieve set goals.</li> <li>➤ To modify existing algorithms and code to change the effect of the program.</li> </ul> <p><b>Software/Hardware/Links:</b>  Scratch  <a href="https://scratch.mit.edu/projects/311908079/">https://scratch.mit.edu/projects/311908079/</a>  <a href="https://projects.raspberrypi.org/en/codeclub/scratch-module-3">https://projects.raspberrypi.org/en/codeclub/scratch-module-3</a></p> <p><b>Key vocabulary:</b> procedures, conditionals.</p>	<p><b>Understanding networks (Computer Science)</b>  <b>Focus:</b> Children understand networks communicate and are joined together.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Know that the internet is a physical network of hardware and software and that information moves around the internet in packets.</li> <li>➤ Recognise different parts of a school or office network e.g. server, switch, router, client, WIFI point.</li> <li>➤ Understand how computer networks enable computers to communicate and collaborate.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://teachcomputing.org/resources/year-5-lesson/year-6-lesson">https://teachcomputing.org/resources/year-5-lesson/year-6-lesson</a></p> <p><b>Key vocabulary:</b> router, hardware, packets, binary, server, switch, client, wi-fi.</p> <p><b>Web navigation skills. (Information Technology)</b>  <b>Focus:</b> Children to understand how search engines work and rank results.</p> <p><b>NC Ref:</b>  <i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</i></p> <ul style="list-style-type: none"> <li>➤ To recognise the role of web crawlers in creating an index.</li> <li>➤ To explain that search results are ordered.</li> <li>➤ To explain that a search engine follows rules to rank relevant pages.</li> <li>➤ To know how to assess which search results are more reliable than others.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://www.barefootcomputing.org/resources/selecting-search-activity">https://www.barefootcomputing.org/resources/selecting-search-activity</a></p> <p><b>Key vocabulary:</b> web crawlers, index, indexes, rank.</p> <p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children to use an online simulation of a robot to solve problems with algorithms to improve children's critical and computational thinking.</p> <p><b>NC Ref:</b>  <i>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</i></p>	<p><b>Multi-Media. (Information Technology)</b>  <b>Focus:</b> Children to use software to make a leaving film for parents.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ Plan and write a script using appropriate software.</li> <li>➤ Plan for the use of special effects/transitions to enhance their video.</li> <li>➤ Use a video camera (ipad) to record.</li> <li>➤ Import video files into a video editing program.</li> <li>➤ Speak clearly into the camera/video</li> <li>➤ Arrange video files to form a complete film.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://www.twinkl.co.uk/resource/tp2-i-220-planit-computing-year-6-film-making-unit-pack">https://www.twinkl.co.uk/resource/tp2-i-220-planit-computing-year-6-film-making-unit-pack</a></p> <p><b>Key vocabulary:</b> import, video editing, transitions, script.</p>	<p><b>Multi-Media. (Information Technology)</b>  <b>Focus:</b> Children to use publishing software to design and complete a range of media tasks.</p> <p><b>NC Ref:</b>  <i>Select use and combine a variety of software (including Internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <ul style="list-style-type: none"> <li>➤ To confidently choose the correct page set up option when creating my document.</li> <li>➤ To confidently use text-formatting tools, including heading and body text.</li> <li>➤ To incorporate graphics where appropriate, using the most effective text wrapping formats.</li> <li>➤ To search clipart including online</li> <li>➤ To format my text with WordArt.</li> </ul> <p><b>Software/Hardware/Links:</b>  Microsoft Word, Publisher, Powerpoint, Paint</p> <p><b>Key vocabulary:</b> heading, body text.</p>	<p><b>Understand Algorithms (Computer Science)</b>  <b>Focus:</b> Children to complete more complex programming with a micro-bit.</p> <p><b>NC Ref:</b>  <i>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.</i></p> <ul style="list-style-type: none"> <li>➤ Be able to use a program to sequence, use conditionals, functions and use a variety of inputs and outputs (Microbit – show an image when shaken).</li> <li>➤ Be able to reliably modify existing algorithms and code to change the effect of the program.</li> <li>➤ Use logical reasoning to detect and correct errors in algorithms.</li> <li>➤ Know how to break sets of instructions into short steps to achieve goal.</li> </ul> <p><b>Software/Hardware/Links:</b>  <a href="https://microbit.org/projects/make-it-code-it/?filters=intermediate">https://microbit.org/projects/make-it-code-it/?filters=intermediate</a>  Complete Fahrenheit thermometer and tilt alarm for functions.</p> <p><b>Key vocabulary:</b> micro-bit, modify.</p>

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.

- To test, refine and predict the outcome of a set of commands.
- Use logical reasoning to explain how some algorithms work.
- Program a number of algorithms that achieve a specific outcome.
- To give an on screen character specific directional instructions that takes them from x to y.

Software/Hardware/Links:  
Code Monkey  
<https://hourofcode.com/como>

**Key vocabulary:** specific outcome

Yr 6

**Year 6 Digital Literacy - On-line Safety**

**(Self -Image)**

**Focus:** Children describe issues online that might make themselves or others feel scared or sad and can give examples of how they might get help, both on and offline.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- To describe issues online that might make me or others feel sad, worried, uncomfortable or frightened.
- To know and can give examples of how I might get help, both on and offline.
- To explain why I should keep asking until I get the help I need.
- To know the rules and principles for keeping safe online, how to recognise risks, harmful content and contact, and how to report them.
- To know where and how to report concerns and get support with issues online.
- To know what to do and whom to tell if they are frightened or worried about something they have seen online.
- To know strategies for dealing with requests for personal information or images of themselves.
- To be able to identify types of images that are appropriate to share with others and those which might not be appropriate.
- That images or text can be quickly shred with others even when only sent to one person and what the impact of this might be.
- What to do if they take, share, or come across an image which may upset, hurt, or embarrass them or others.
- How to report the misuse of personal information or sharing of upsetting content / images online.

Software/Hardware/links  
<https://projectevolve.co.uk/sign-in/?redirect=%2Ftoolkit%2Fresources%2Fcontent%2Fself-image-and-identity%2F7-11%2Fi>

**(Online Relationships)**

**Focus:** Children understand how they could support others online especially if they are having difficulties.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- To understand some of the difficulties some people may have, including online.
- To describe what I can do to support others online, both friends and people I know less well.
- To understand how to report problems online and can name a number of reporting routes that I could use or suggest to someone else.
- To know what sorts of boundaries are appropriate in friendships with peers and others (including in a digital context).
- To know about the benefits of safe internet use e.g. learning, connecting and communicating.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/online-relationships/7-11/i-can-demonstrate-how-i-would-support-others-including-those-who-are-having-difficulties-online/?from=years>

**Key vocabulary:** supporting, issues, difficulties, reporting routes, boundaries, peers, benefits.

**(Online Bullying)**

**Focus:** Children learn what cyberbullying is and is not and what to do to stop it.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Recognise similarities and differences between in-person bullying, cyberbullying, and being mean.
- Empathise with the targets of cyberbullying.
- Identify strategies for dealing with cyberbullying and ways they can be an upstander for those being bullied.
- To know that bullying (including cyberbullying) has a negative and often lasting impact on mental wellbeing.
- To know about different types of bullying (including cyber-bullying), the impact of bullying, responsibilities of bystanders (primarily reporting bullying to an adult) and how to get help.

Software/Hardware/links  
<https://www.common sense.org/education/digital-citizenship/lesson/is-it-cyberbullying>

**Key vocabulary:** target, bystander, in-person bullying, empathy, empathise.

**(Health and Well Being)**

**Focus:** Children describe common systems that regulate age-related content and describe their purpose.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Recognise content rating symbols and describe what they mean/what content they may cover (e.g. PEGI icons for content, BBFC symbols for age ratings, etc).
- Show some understanding of the purpose and limitations of these systems (e.g. purpose is to inform about the themes present in the content, not all content is age regulated, not all content is covered under the same rating system.)
- Demonstrate an awareness of why some content is age regulated (e.g. affects mood, affects thinking, may result in emulation, could result in harm?)
- To know why social media, some computer games and online gaming, for example, are age restricted.
- To know about the different age-rating systems for social media, TV, films, games and online gaming.
- Why age restrictions are important and how they help people make safe decisions about what to watch, use or play.
- To know that social media sites have age restrictions and regulations for use
- To know the reasons why some media and online content is not appropriate for children

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/health-well-being-and-lifestyle/7-11/common-rating-systems/?from=years>

**(Privacy and Security)**

**Focus:** Children learn and explain what app permissions are.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Recognise that app permissions allow access to our personal information.
- Understand the relationship between the value of data and the ethics of collecting that data.
- Be aware that the data we share is valuable to app developers.
- To know how information and data is shared and used online.
- To know that for most people the internet is an integral part of life and has many benefits.
- To know how devices store and share information
- To understand how two-factor authentication is used to ensure additional safety.

Software/Hardware/links  
<https://projectevolve.co.uk/toolkit/content/privacy-and-security/7-11/i-can-explain-what-app-permissions-are-and-can-give-some-examples-from-the-technology-or-services-i-use-i-can-describe-simple-ways-to-increase-privacy-on-apps-and-services-that-provide-privacy-settings/?from=years>

**Key vocabulary:** permission, deny, privacy settings, ethics, developers, two-factor authentication.

**(Managing information online)**

**Focus:** Children learn how gender stereotypes shape our experiences online.

**NC Ref:**  
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

- Define "gender stereotype" and describe how they can be present online.
- Describe how gender stereotypes can lead to unfairness or bias.
- Create an avatar and a poem that show how gender stereotypes impact who they are.
- To know that the same principles apply to online relationships as to face-to-face relationships, including the importance of respect for others online including when we are anonymous.
- I know how to report discrimination online
- To know how to consider the effect of their online actions on others and know how to recognise and display respectful behaviour online and the importance of keeping personal information private.
- To know how online content can be designed to manipulate people's emotions and encourage them to read or share things
- To know how to report inappropriate online content or contact

Software/Hardware/links  
<https://www.common sense.org/education/digital-citizenship/lesson/beyond-gender-stereotypes>

**Key vocabulary:** bias, gender, stereotype, discrimination, equality, diversity, anonymous, anonymity.

<p><a href="#">can-describe-issues-online-that-could-make-anyone-feel-sad-worried-uncomfortable-or-frightened-i-know-and-can-give-examples-of-how-to-get-help-both-on-and-offline%2F%3Ffrom%3Dstrands</a></p> <p><b>Key vocabulary:</b> ridiculed, blamed, report worries, misuse, embarrassment, upsetting content, online images, threatened, insecure, traumatised, manipulated, ashamed, discredited, humiliated, isolated, belittled.</p>			<p><b>Key vocabulary:</b> U/PG/12a/12/15/18, PEGI, age boundaries, consistency, protection, awareness, visibility, rating, icons, limitations, age-regulated, emulation.</p>		
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