



**Long Term Planning: Computing**

Autumn Term	Weeks 1-5	Weeks 6-12
<p><b>Year 1</b></p>	<p><b>E-safety - Smartie the penguin</b>  <i>(NC ~ use technology safely, keeping personal information private; identify where to go for help when they have a concern about content on the internet or other online technologies)</i></p>	<p><b>Technology around us</b>  <i>(NC ~ use technology purposefully to create and store digital content            ~ recognise common uses of information technology in school            ~ use technology safely, keeping personal information private; identify where to go for help when they have a concern about content on the internet or other online technologies)</i></p>
<p><b>Year 2</b></p>	<p><b>E-safety – Jessie &amp; friends</b>  <i>(NC ~ use technology safely and respectfully            ~ identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies)</i></p>	<p><b>Information technology around us</b>  <i>(NC ~ recognise common uses of information technology beyond school            ~ use technology purposefully to create, organise, store, manipulate and retrieve digital content            ~ use technology safely and respectfully)</i></p>
<p><b>Year 3</b></p>	<p><b>E-safety &amp; Developing touch typing and keyboard skills</b>  <i>(NC ~ use technology safely, respectfully and responsibly            ~ identify a range of ways to report concerns about content and contact            ~ use a variety of software (including internet services) to accomplish given goals, including presenting information            ~ design and create content)</i></p>	<p><b>Connecting computers - Computing systems and networks</b>  <i>(NC ~ understand computer networks            ~ work with various forms of input and output            ~ use a variety of software (including internet services) to accomplish given goals, including presenting information)</i></p>
<p><b>Year 4</b></p>	<p><b>E-safety</b>  <i>(NC ~ Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact            ~ Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals)</i></p>	<p><b>The internet - Computing systems and networks</b>  <i>(NC ~ 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            ~ use search technologies effectively, appreciate how results are selected            ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals)</i></p>



	<p><b>Year 5</b></p>	<p><b>E-safety</b> (NC ~ use technology safely, respectfully and responsibly; recognise appropriate/inappropriate behaviour; identify a range of ways to report concerns about content and contact ~ be discerning in evaluating digital content</p>	<p><b>Sharing information – Computing systems and networks</b> (NC ~ use technology safely, respectfully and responsibly; recognise appropriate/inappropriate behaviour; identify a range of ways to report concerns about content and contact ~ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information ~ 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)</p>	
	<p><b>Year 6</b></p>	<p><b>E-safety</b> (NC ~ Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact ~ Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</p>	<p><b>Programming – Variables</b> (NC ~ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into 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 ~ Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</p>	<p><b>Internet communication</b> (NC ~ understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration. ~ use search technologies effectively, appreciate how results are selected and ranked, be discerning in evaluating content ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information?)</p>



Spring Term	Weeks 1-6	Weeks 7-12
Year 1	<p><b>Creating media – Digital writing</b></p> <p>(NC ~ use technology purposefully to create, and store digital content ~ use technology safely, keeping personal information private; identify where to go for help when they have a concern about content on the internet or other online technologies)</p>	<p><b>Programming – Moving a robot</b></p> <p>(NC ~ understand what algorithms are ~ create simple programs ~ understand that algorithms are implemented as programs on digital devices ~ recognise common uses of information technology beyond school)</p>
Year 2	<p><b>Programming – Robot algorithms</b></p> <p>(NC ~ understand that programs execute by following precise and unambiguous instructions ~ debug simple programs ~ use technology respectfully ~ use technology purposefully to create, organise and store, manipulate and retrieve digital content)</p>	<p><b>Creating media – Writing, music and images</b></p> <p>(NC ~ use technology purposefully to create, organise, store, manipulate and retrieve digital content ~ use technology respectfully)</p>
Year 3	<p><b>Programming – Sequences</b></p> <p>(NC ~ Write and debug programs that accomplish specific goals ~ Use sequence and repetition in programs; work with variables and various forms of input and output ~ Use logical reasoning to detect and correct errors in algorithms and programs ~ Use a variety of software (including internet services) on digital devices to create a range of programs, and content to accomplish given goals, including presenting information ~ use technology, safely, respectfully and responsibly)</p>	<p><b>Creating media – Desktop publishing</b></p> <p>(NC ~ use search technologies effectively ~ Use a variety of software (including internet services) on digital devices to create a range of programs, and content to accomplish given goals, including presenting information ~ use technology, safely, respectfully and responsibly)</p>
Year 4	<p><b>Data and information – Collecting data/graphs</b></p> <p>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing and presenting data and information)</p>	<p><b>Programming – Repetition in shapes</b></p> <p>(NC ~ design and debug programs that accomplish specific goals, including simulating physical systems; solve problems by decomposing them into smaller parts ~ use logical reasoning to detect and correct errors in algorithms ~ use selection and repetition in programs work with variables ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing and presenting data and information)</p>
Year 5	<p><b>Programming</b></p> <p>(NC ~ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into parts)</p>	<p><b>Creating media – Vector drawing and video editing</b></p> <p>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</p>



		<ul style="list-style-type: none"> <li>~ use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>~ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</li> </ul>	<ul style="list-style-type: none"> <li>~ use technology safely, respectfully and responsibly; recognise appropriate/inappropriate behaviour; identify a range of ways to report concerns about content and contact</li> <li>~ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content)</li> </ul>
Year 6		<p style="text-align: center;"><b>Creating media – 3D modelling</b></p> <p><i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <ul style="list-style-type: none"> <li>~ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>	<p style="text-align: center;"><b>Creating media – Web page creation</b></p> <p><i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</i></p> <ul style="list-style-type: none"> <li>~ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> <li>~ Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul>



Summer Term	Weeks 1-6		Weeks 7-12	
Year 1	<p align="center"><b>Programming – Introduction to animation</b></p> <p align="center"><i>(NC ~ understand what algorithms are ~ create simple programs ~ understand that algorithms are implemented as programs on digital devices ~ recognise common uses of information technology beyond school ~ use technology purposefully to create and store digital content ~ use technology safely and keep personal information private)</i></p>		<p align="center"><b>Data and information – Grouping and sorting data</b></p> <p align="center"><i>(NC ~ use technology purposefully to create and store digital content ~ use technology safely and keep personal information private)</i></p>	
Year 2	<p align="center"><b>Creating media – Writing, music and images</b></p> <p align="center"><i>(NC ~ use technology purposefully to create, organise, store, manipulate and retrieve digital content ~ use technology respectfully)</i></p>	<p align="center"><b>Data and information – Pictograms</b></p> <p align="center"><i>(NC ~ use technology purposefully to create, organise, store, manipulate and retrieve digital content ~ use technology respectfully)</i></p>	<p align="center"><b>Programming</b></p> <p align="center"><i>(NC ~ understand that programs execute by following precise and unambiguous instructions ~ debug simple programs ~ use technology respectfully ~ use technology purposefully to create, organise and store, manipulate and retrieve digital content)</i></p>	
Year 3	<p align="center"><b>Creating media – Animation</b></p> <p align="center"><i>(NC ~ Use a variety of software (including internet services) on digital devices to create a range of programs, and content to accomplish given goals, including presenting information ~ use technology, safely, respectfully and responsibly)</i></p>	<p align="center"><b>Data and information – Branching databases</b></p> <p align="center"><i>(NC ~ Use a variety of software (including internet services) on digital devices to create a range of programs, systems and content to accomplish given goals, including collecting, analysing and presenting data and information)</i></p>	<p align="center"><b>Programming – Events and actions</b></p> <p align="center"><i>(NC ~ Write and debug programs that accomplish specific goals ~ Use sequence and repetition in programs; work with variables and various forms of input and output ~ Use logical reasoning to detect and correct errors in algorithms and programs ~ Use a variety of software (including internet services) on digital devices to create a range of programs, systems and content to accomplish given goals, including presenting information)</i></p>	
Year 4	<p align="center"><b>Creating media – Audio and photo editing</b></p> <p align="center"><i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing and presenting data and information ~ use search technologies effectively, appreciate how results are selected)</i></p>		<p align="center"><b>Programming – Repetition in games</b></p> <p align="center"><i>(NC ~ design and debug programs that accomplish specific goals, including simulating physical systems; solve problems by decomposing them into smaller parts ~ use logical reasoning to detect and correct errors in algorithms ~ use selection and repetition in programs work with variables ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing and presenting data and information)</i></p>	



	<p><b>Year 5</b></p>	<p><b>Data and information – Flat file databases</b>  <i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information                      ~ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content)</i></p>	<p><b>Creating media – 3D Modelling</b>  <i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information                      ~ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content)</i></p>
	<p><b>Year 6</b></p>	<p><b>Data and information – Spreadsheets</b>  <i>(NC ~ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</i></p>	<p><b>Programming – Sensing</b>  <i>(NC ~ 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                      ~ Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information)</i></p>

\*The computing curriculum is based on a spiral curriculum. This means that each of the key themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited early and opportunities for retrieval of prior knowledge are built into every unit.