



At Black Torrington C of E School , we believe in giving children the skills needed for the 21<sup>st</sup> Century – computing is a key component of this. Our curriculum is designed to give our learners the skills and knowledge needed to access computing technology.

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

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

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

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



**Programme of study**

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



Year 1			
Subject	Knowledge	Skills	Key Vocabulary
<p>Understanding algorithms and e-safety</p> <p>Create and de-bug simple programmes and e-safety</p> <p>Digital literacy and e-safety</p>	<p>Children know that an algorithm is a set of instructions</p> <p>Children understand that devices follow algorithms precisely and unambiguously</p> <p>Children know how to create a simple algorithm</p> <p>Children know that a program is a set of instructions that execute a task</p> <p>Children know that a program is created by a set of algorithms</p> <p>Children know how to create digital content (<i>e.g. word processing documents</i>)</p> <p>Children know how to save digital content</p> <p>Children know how to retrieve digital content</p> <p>Children know what personal information is</p>	<p>Children can create a simple algorithm</p> <p>Children can test a simple algorithm</p> <p>Children can de-bug a simple algorithm</p> <p>Children can create a simple program</p> <p>Children can test a simple program</p> <p>Children can de-bug a simple program</p> <p>Children can create digital content</p> <p>Children can save digital content</p> <p>Children can retrieve digital content</p> <p>Children can use online safety tools</p> <p>Children use a computer programme to create art</p>	<p><b>Algorithm</b></p> <p><b>Program</b></p> <p><b>Bug</b></p> <p><b>De-bug</b></p> <p><b>Digital</b></p> <p><b>Digital content</b></p> <p><b>e-safety</b></p> <p><b>online safety</b></p>



	<p>Children know that they should not share personal information online (including photos)</p> <p>Children can recognise online threats to their safety</p> <p>Children know where to seek help with online safety</p>		
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--

Year 2			
Subject	Knowledge	Skills	Key Vocabulary
<p>Logical reasoning and e-safety</p> <p>Digital literacy beyond school and e-safety</p> <p>Digital content and e-safety</p>	<p>Children know that technological devices are unambiguously and precisely logical</p> <p>Children know that programs are defined by algorithms and will follow them logically</p> <p>Children know how to use a range of programs at home and school</p> <p>Children can create digital content beyond school (e.g. <i>creating posters using digital photos, publishing programs</i>)</p> <p>Children know how to organise digital content using folders and sub folders</p>	<p>Children can predict the behavior of a program using logical reasoning</p> <p>Children can create digital content using a range of programs</p> <p>Children can create digital content outside of the school environment</p> <p>Children can organise digital content in folders and sub folders</p> <p>Children can manipulate digital content</p> <p>Children can spot unsafe content</p>	<p><b>Logic</b></p> <p><b>Logical reasoning</b></p> <p><b>Folders</b></p>



	<p>Children know how to manipulate digital content</p> <p>Children know common methods of stealing personal information</p> <p>Children know what safe online groups look like</p>	<p>Children can use a program to create music</p> <p>Children can use a program to create and manipulate photos</p>	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------	--

Year 3			
Subject	Knowledge	Skills	Key Vocabulary
<p>Connecting computers</p> <p>Graphics and presentations including research and e-safety</p> <p>Sequencing in music</p> <p>Building databases</p> <p>Desktop publishing</p>	<p>Children understand how devices connect to one another</p> <p>Children understand the benefits and functions of connected devices</p> <p>Children know how to use graphic programs</p> <p>Children know how to create an animation</p> <p>Children know how to design simple programs</p> <p>Children know how to create simple programs</p>	<p>Children can connect a device to others</p> <p>Children can create graphics and animations using technology</p> <p>Children can design a program to complete a given task</p> <p>Children can create a program to complete a given task</p>	<p><b>Connections</b></p> <p><b>Internet</b></p> <p><b>Wireless</b></p> <p><b>Data</b></p> <p><b>Graphics</b></p>



	<p>Children know how to de-bug simple programs</p> <p>Children understand the use of data storing and sorting programmes</p> <p>Children know how to use programs to create a document</p>	<p>Children can de-bug a simple program to complete a given task</p> <p>Children can store, sort and retrieve data</p> <p>Children can present information using programs</p>	
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Year 4			
Subject	Knowledge	Skills	Key Vocabulary
<p>Working with Data and e-safety</p> <p>Networks and communications and e-safety</p>	<p>Children know how to organise data on digital programs (e.g. spreadsheets)</p> <p>Children use data stored digitally to create charts and graphs</p>	<p>Children can organise data and retrieve information from digital data sources</p> <p>Children can represent data</p> <p>Children can use networks to communicate with others</p>	<p><b>Data sources</b></p> <p><b>Communications networks</b></p>



<p>Audio editing</p>	<p>Children understand computer networks such as the internet</p> <p>Children know that technology can be used to communicate instantly with people around the world</p> <p>Children know how to be safe when communicating via digital technology (<i>acceptable use</i>)</p> <p>Children know how digital data can be manipulated to mislead readers</p> <p>Children know they have a responsibility to act respectfully online.</p> <p>Children know how to use digital devices to record audio</p> <p>Children know how to edit audio in digital files</p> <p>Children understand the use of digital devices for photos</p>	<p>Children can identify unsafe uses of computer networks</p> <p>Children can record and edit audio using digital devices.</p> <p>Children can create and edit photos using digital devices</p>	
----------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Year 5			
Subject	Knowledge	Skills	Key Vocabulary



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





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