

# Linton Primary School

## New Whole School Curriculum **COMPUTING**

### KS1

	Autumn Term	Spring Term	Summer Term
<b>1</b>	<u>Mind Over Matter</u> Looking at overcoming adversity, developing a 'Growth Mindset'. <i>What provides individuals with the motivation and determination to succeed?</i>	<u>Fight for Survival</u> Investigating settlements, communities and food chains. <i>What are the characteristics of success and failure?</i>	<u>Incredible Journeys</u> Taking a look at habitats, migration and nomadic lifestyles. <i>What drives them on?</i>
KS1	<ul style="list-style-type: none"> <li>Know how to use ICT for various different purposes.</li> <li>Know how to use technology safely and respectfully.</li> <li>Create, store, manipulate and retrieve data in the form of research and recording own works.</li> <li>Know how to create and store data.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to keep themselves and others safe using technology.</li> <li>Use a computer to record results using tables, charts and pictures / pictograms.</li> <li>Know uses of technology beyond school and where to find published information using websites, newspapers and local media.</li> <li>Know how to create and de-bug simple programmes.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to use the internet safely to research information.</li> <li>Research safely and independently using the internet.</li> <li>Explore creative imagery using digital technology.</li> <li>Use the internet to find images for use in own work.</li> </ul>
<b>2</b>	<u>Seasons of Change</u> Charting changes in the environment and over time. Exploring how to cope with change. <i>How can we use change to our advantage?</i>	<u>Home Grown</u> Influential individuals from our region who have changed our lives locally, nationally and globally. <i>What are the effects of innovation?</i>	<u>Hidden World</u> Using charts, maps and information to establish areas that remain enigmatic. <i>What lies in wait - is still to come?</i>
KS1	<ul style="list-style-type: none"> <li>Technology used to record patterns in seasons, as a form of communicating information and creating images.</li> <li>Create seasonal pictures using computers.</li> <li>Investigate using time-lapse and stop motion animation.</li> <li>Use different tools to create own digital images to incorporate into own work.</li> </ul>	<ul style="list-style-type: none"> <li>Explore using digital media to create and animate stories in words and pictures.</li> <li>Use control and programming.</li> <li>Use floor turtle / bee-bots to programme a journey.</li> <li>Give precise and unambiguous instructions.</li> <li>Create imagery using paint programmes and publish own work.</li> <li>Compose digital music to enhance presentation of own work.</li> <li>Understand algorithms and these are implemented on digital devices.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to use technology purposefully to create.</li> <li>Consider how to record digitally to enhance presentation of own work.</li> <li>Devise a game using appropriate software.</li> <li>Create an advert or trailer for game, to include digital sound recording.</li> <li>Know how to use technology to organise and manipulate digital content.</li> </ul>

<h1>3</h1>	<h2><u>Unknown Universe</u></h2> <p>Space exploration, breakthroughs and new discoveries. <i>How are we changing the world?</i></p>	<h2><u>Heroes and Villains</u></h2> <p>Taking a closer look at making and breaking the rules. <i>Who's got talent and influence?</i></p>	<h2><u>The Greatest Gift</u></h2> <p>Discussing and debating the impact of talent. <i>What impact will you have on the world?</i></p>
<p>KS1</p>	<ul style="list-style-type: none"> <li>• Know how to use ICT for various different purposes.</li> <li>• Know how to use technology safely and respectfully.</li> <li>• Create, store, manipulate and retrieve data in the form of research and recording own works.</li> <li>• Know how to create and store data.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to keep themselves and others safe using technology.</li> <li>• Use a computer to record results using tables, charts and pictures / pictograms.</li> <li>• Know uses of technology beyond school and where to find published information using websites, newspapers and local media.</li> <li>• Know how to create and de-bug simple programmes.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to use the internet safely to research information.</li> <li>• Research safely and independently using the internet.</li> <li>• Explore creative imagery using digital technology.</li> <li>• Use the internet to find images for use in own work.</li> </ul>
<h1>4</h1>	<h2><u>Secrets of the Deep</u></h2> <p>Examining innovation underground and underwater. <i>What will the impact of new discoveries be?</i></p>	<h2><u>The Weird and the Wonderful</u></h2> <p>Looking at civilisations and discoveries that have surprised, astounded and amazed. <i>What is the value of having an open mind?</i></p>	<h2><u>Awesome Explorers</u></h2> <p>Considering who we remember and why. Delving into methods of recording. <i>What are the common characteristics of adventure?</i></p>
<p>KS1</p>	<ul style="list-style-type: none"> <li>• Technology used to record patterns, as a form of communicating information and creating images.</li> <li>• Create seasonal pictures using computers.</li> <li>• Investigate using time-lapse and stop motion animation.</li> <li>• Use different tools to create own digital images to incorporate into own work.</li> </ul>	<ul style="list-style-type: none"> <li>• Use technology to plan, design and record ideas.</li> <li>• Know how to use technology purposefully to create.</li> <li>• Consider how to record digitally to enhance presentation of own work.</li> <li>• Devise a game using appropriate software.</li> <li>• Create an advert or trailer for game, to include digital sound recording.</li> <li>• Know how to use technology to organise and manipulate digital content.</li> </ul>	<ul style="list-style-type: none"> <li>• Create digital maps.</li> <li>• Use control and programming.</li> <li>• Use floor turtle / bee-bots to programme a journey.</li> <li>• Give precise and unambiguous instructions.</li> <li>• Create imagery using paint programmes and publish own work.</li> <li>• Compose digital music to enhance presentation of own work.</li> <li>• Understand algorithms and these are implemented on digital devices.</li> </ul>

# KS2

	Autumn Term	Spring Term	Summer Term
1	<u>Mind Over Matter</u> Looking at overcoming adversity, developing a 'Growth Mindset'. <i>What provides individuals with the motivation and determination to succeed?</i>	<u>Fight for Survival</u> Investigating settlements, communities and food chains. <i>What are the characteristics of success and failure?</i>	<u>Incredible Journeys</u> Taking a look at habitats, migration and nomadic lifestyles. <i>What drives them on?</i>
Lower KS2 Upper KS2	<u>IT &amp; DL</u> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly.</li> <li>Recognise acceptable / unacceptable behaviour when using technology and the internet.</li> <li>Creating &amp; storing suitable passwords.</li> <li>Safe reporting.</li> <li>Using sequence, selection and repetition in programmes.</li> <li>Use technologies to input, store, retrieve and present information.</li> <li>Develop word processing skills to present topic work.</li> <li>Locate and respond appropriately to the terms and conditions on websites.</li> <li>Identify unsuitable posts and use of technologies.</li> <li>Identify inappropriate and unacceptable behaviour when analysing resources.</li> <li>Continue to develop skills in identifying risks involved with contact and content and own conduct whilst online.</li> <li>Independently select the most appropriate ICT tools for intended purpose and audience.</li> <li>Format and edit work to improve clarity and purpose using a range of tools.</li> </ul>	<u>DL &amp; CS</u> <ul style="list-style-type: none"> <li>Use logical reasoning to explain how some simple algorithms work and detect and correct errors in algorithms and programs.</li> <li>Explore coding through 'Scratch'.</li> <li>Understand computer networks including the internet; how they can provide multiple services, such as the www; and the opportunities they offer for communication and collaboration.</li> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating content.</li> <li>Use repetition, selection and variables in programs.</li> <li>Explore the effects of changing variables in models and simulations in order to solve a problem.</li> <li>Use strategies to verify the accuracy and reliability of information.</li> <li>Identify and respect restrictions on usage.</li> <li>Understand when and where the internet can be used as a research tool.</li> <li>Understand how search engines work and know that there are different search engines.</li> </ul>	<u>IT, DL &amp; CS</u> <ul style="list-style-type: none"> <li>Design, write and de-bug programmes that accomplish specific goals.</li> <li>Control or simulate physical systems. (Ozobots)</li> <li>Solve problems by decomposing them into smaller parts.</li> <li>Creating Blogs.</li> <li>Develop simple spreadsheet models to investigate a real life problem.</li> <li>Know that programs can be represented in different formats including written and diagrammatic.</li> <li>Understand the need for precision when creating sequences to ensure reliability.</li> <li>Using, understanding and designing spreadsheets.</li> <li>Understand tools used to communicate effectively through blogging.</li> <li>Understand the conditions of use for blogging.</li> </ul>
2	<u>Seasons of Change</u> Charting changes in the environment and over time. Exploring how to cope with change. <i>How can we use change to our advantage?</i>	<u>Home Grown</u> Influential individuals from our region who have changed our lives locally, nationally and globally. <i>What are the effects of innovation?</i>	<u>Hidden World</u> Using charts, maps and information to establish areas that remain enigmatic. <i>What lies in wait - is still to come?</i>
Lower KS2 Upper KS2	<u>IT</u> <ul style="list-style-type: none"> <li>Use and combine a variety of software to accomplish given goals.</li> <li>Collect and present information.</li> <li>Collect and present data.</li> <li>Recognise and use key layout and design features, e.g. text boxes, columns and borders.</li> <li>Insert and edit simple tables.</li> <li>Analyse and evaluate information.</li> <li>Use a range of devices to capture still and moving images.</li> <li>Create printing blocks by simplifying an initial sketchbook idea.</li> <li>Create prints using a relief or impressed method.</li> <li>Create prints with three colour overlays.</li> <li>Work into prints with a range of colours and media.</li> </ul>	<u>DL</u> <ul style="list-style-type: none"> <li>Understand the risks posed by the internet relating to contact, e.g. bullying, grooming etc.</li> <li>Know how to report safety concerns.</li> <li>Use a range of digital tools to communicate, e.g. contributing to chats, discussions, forums, blogs or texts, making purposeful contributions / response to an others' question or comment.</li> <li>Investigate webcams and video conferencing beyond school.</li> <li>Use email as a form of communication.</li> <li>Understand that electronic communication can be malicious or inappropriate.</li> <li>Know how to report suspicions, e.g. through school or CEOP.</li> <li>Understand how inappropriate conduct can put them at risk.</li> <li>Use appropriate communication tools to collaborate and communicate with others beyond school.</li> <li>Use online publishing to reach a global audience.</li> <li>Create individual and group emails.</li> </ul>	<u>CS</u> <ul style="list-style-type: none"> <li>Write programs that achieve specific goals.</li> <li>Know a range of input and output devices and how they can be used.</li> <li>Debug programs that accomplish specific goals through self and peer assessment.</li> <li>Understand how computer simulations can represent real or imaginary situations and how these can help the wider world.</li> <li>Understand how changes can be made quickly and easily in comparison with real life situations.</li> <li>Use procedures in programs.</li> <li>Design, test and refine programs.</li> <li>Use programming software to create simulations.</li> <li>Understand that there are often different ways to solve the same problem or task.</li> <li>Understand that programming software can create simple and complex simulations and use this to create.</li> </ul>

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<p>Lower KS2 Upper KS2</p>	<p><u>IT &amp; DL</u></p> <ul style="list-style-type: none"> <li>• Use technology safely, respectfully and responsibly.</li> <li>• Recognise acceptable / unacceptable behaviour when using technology and the internet.</li> <li>• Creating &amp; storing suitable passwords.</li> <li>• Safe reporting.</li> <li>• Using sequence, selection and repetition in programmes.</li> <li>• Use technologies to input, store, retrieve and present information.</li> <li>• Develop word processing skills to present topic work.</li> <li>• <i>Locate and respond appropriately to the terms and conditions on websites.</i></li> <li>• <i>Identify unsuitable posts and use of technologies.</i></li> <li>• <i>Identify inappropriate and unacceptable behaviour when analysing resources.</i></li> <li>• <i>Continue to develop skills in identifying risks involved with contact and content and own conduct whilst online.</i></li> <li>• <i>Independently select the most appropriate ICT tools for intended purpose and audience.</i></li> <li>• <i>Format and edit work to improve clarity and purpose using a range of tools.</i></li> </ul>	<p><u>DL &amp; CS</u></p> <ul style="list-style-type: none"> <li>• Use logical reasoning to explain how some simple algorithms work and detect and correct errors in algorithms and programs.</li> <li>• Explore coding through 'Scratch'.</li> <li>• Understand computer networks including the internet; how they can provide multiple services, such as the www; and the opportunities they offer for communication and collaboration.</li> <li>• Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating content.</li> <li>• <i>Use repetition, selection and variables in programs.</i></li> <li>• <i>Explore the effects of changing variables in models and simulations in order to solve a problem.</i></li> <li>• <i>Use strategies to verify the accuracy and reliability of information.</i></li> <li>• <i>Identify and respect restrictions on usage.</i></li> <li>• <i>Understand when and where the internet can be used as a research tool.</i></li> <li>• <i>Understand how search engines work and know that there are different search engines.</i></li> </ul>	<p><u>IT, DL &amp; CS</u></p> <ul style="list-style-type: none"> <li>• Design, write and de-bug programmes that accomplish specific goals.</li> <li>• Control or simulate physical systems. (Ozobots)</li> <li>• Solve problems by decomposing them into smaller parts.</li> <li>• Creating Blogs.</li> <li>• <i>Develop simple spreadsheet models to investigate a real life problem.</i></li> <li>• <i>Know that programs can be represented in different formats including written and diagrammatic.</i></li> <li>• <i>Understand the need for precision when creating sequences to ensure reliability.</i></li> <li>• <i>Using, understanding and designing spreadsheets.</i></li> <li>• <i>Understand tools used to communicate effectively through blogging.</i></li> <li>• <i>Understand the conditions of use for blogging.</i></li> </ul>
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