

Linton Primary School

New Whole School Curriculum **COMPUTING**

KS1

	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>
KS1	<ul style="list-style-type: none"> Know how to use ICT for various different purposes. Know how to use technology safely and respectfully. Create, store, manipulate and retrieve data in the form of research and recording own works. Know how to create and store data. 	<ul style="list-style-type: none"> Know how to keep themselves and others safe using technology. Use a computer to record results using tables, charts and pictures / pictograms. Know uses of technology beyond school and where to find published information using websites, newspapers and local media. Know how to create and de-bug simple programmes. 	<ul style="list-style-type: none"> Know how to use the internet safely to research information. Research safely and independently using the internet. Explore creative imagery using digital technology. Use the internet to find images for use in own work.
2	<u>Unknown Universe</u> Space exploration, breakthroughs and new discoveries. <i>How are we changing the world?</i>	<u>Heroes and Villains</u> Taking a closer look at making and breaking the rules. <i>Who's got talent and influence?</i>	<u>The Greatest Gift</u> Discussing and debating the impact of talent. <i>What impact will you have on the world?</i>
KS1	<ul style="list-style-type: none"> Know how to use ICT for various different purposes. Know how to use technology safely and respectfully. Create, store, manipulate and retrieve data in the form of research and recording own works. Know how to create and store data. 	<ul style="list-style-type: none"> Know how to keep themselves and others safe using technology. Use a computer to record results using tables, charts and pictures / pictograms. Know uses of technology beyond school and where to find published information using websites, newspapers and local media. Know how to create and de-bug simple programmes. 	<ul style="list-style-type: none"> Know how to use the internet safely to research information. Research safely and independently using the internet. Explore creative imagery using digital technology. Use the internet to find images for use in own work.

<h1>3</h1>	<h2><u>Seasons of Change</u></h2> <p>Charting changes in the environment and over time. Exploring how to cope with change. <i>How can we use change to our advantage?</i></p>	<h2><u>Home Grown</u></h2> <p>Influential individuals from our region who have changed our lives locally, nationally and globally. <i>What are the effects of innovation?</i></p>	<h2><u>Hidden World</u></h2> <p>Using charts, maps and information to establish areas that remain enigmatic. <i>What lies in wait - is still to come?</i></p>
<p>KS1</p>	<ul style="list-style-type: none"> Technology used to record patterns in seasons, as a form of communicating information and creating images. Create seasonal pictures using computers. Investigate using time-lapse and stop motion animation. Use different tools to create own digital images to incorporate into own work. 	<ul style="list-style-type: none"> Explore using digital media to create and animate stories in words and pictures. Use control and programming. Use floor turtle / bee-bots to programme a journey. Give precise and unambiguous instructions. Create imagery using paint programmes and publish own work. Compose digital music to enhance presentation of own work. Understand algorithms and these are implemented on digital devices. 	<ul style="list-style-type: none"> Know how to use technology purposefully to create. Consider how to record digitally to enhance presentation of own work. Devise a game using appropriate software. Create an advert or trailer for game, to include digital sound recording. Know how to use technology to organise and manipulate digital content.
<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"> Technology used to record patterns, as a form of communicating information and creating images. Create seasonal pictures using computers. Investigate using time-lapse and stop motion animation. Use different tools to create own digital images to incorporate into own work. 	<ul style="list-style-type: none"> Use technology to plan, design and record ideas. Know how to use technology purposefully to create. Consider how to record digitally to enhance presentation of own work. Devise a game using appropriate software. Create an advert or trailer for game, to include digital sound recording. Know how to use technology to organise and manipulate digital content. 	<ul style="list-style-type: none"> Create digital maps. Use control and programming. Use floor turtle / bee-bots to programme a journey. Give precise and unambiguous instructions. Create imagery using paint programmes and publish own work. Compose digital music to enhance presentation of own work. Understand algorithms and these are implemented on digital devices.

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 & DL</u> <ul style="list-style-type: none"> Use technology safely, respectfully and responsibly. Recognise acceptable / unacceptable behaviour when using technology and the internet. Creating & storing suitable passwords. Safe reporting. Using sequence, selection and repetition in programmes. Use technologies to input, store, retrieve and present information. Develop word processing skills to present topic work. Locate and respond appropriately to the terms and conditions on websites. Identify unsuitable posts and use of technologies. Identify inappropriate and unacceptable behaviour when analysing resources. Continue to develop skills in identifying risks involved with contact and content and own conduct whilst online. Independently select the most appropriate ICT tools for intended purpose and audience. Format and edit work to improve clarity and purpose using a range of tools. 	<u>DL & CS</u> <ul style="list-style-type: none"> Use logical reasoning to explain how some simple algorithms work and detect and correct errors in algorithms and programs. Explore coding through 'Scratch'. 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. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating content. Use repetition, selection and variables in programs. Explore the effects of changing variables in models and simulations in order to solve a problem. Use strategies to verify the accuracy and reliability of information. Identify and respect restrictions on usage. Understand when and where the internet can be used as a research tool. Understand how search engines work and know that there are different search engines. 	<u>IT, DL & CS</u> <ul style="list-style-type: none"> Design, write and de-bug programmes that accomplish specific goals. Control or simulate physical systems. (Ozobots) Solve problems by decomposing them into smaller parts. Creating Blogs. Develop simple spreadsheet models to investigate a real life problem. Know that programs can be represented in different formats including written and diagrammatic. Understand the need for precision when creating sequences to ensure reliability. Using, understanding and designing spreadsheets. Understand tools used to communicate effectively through blogging. Understand the conditions of use for blogging.
2	<u>Unknown Universe</u> Space exploration, breakthroughs and new discoveries. <i>How are we changing the world?</i>	<u>Heroes and Villains</u> Taking a closer look at making and breaking the rules. <i>Who's got talent and influence?</i>	<u>The Greatest Gift</u> Discussing and debating the impact of talent. <i>What impact will you have on the world?</i>
Lower KS2 Upper KS2	<u>IT</u> <ul style="list-style-type: none"> Use and combine a variety of software to accomplish given goals. Collect and present information. Collect and present data. Recognise and use key layout and design features, e.g. text boxes, columns and borders. Insert and edit simple tables. Analyse and evaluate information. Use a range of devices to capture still and moving images. Create printing blocks by simplifying an initial sketchbook idea. Create prints using a relief or impressed method. Create prints with three colour overlays. Work into prints with a range of colours and media. 	<u>DL</u> <ul style="list-style-type: none"> Understand the risks posed by the internet relating to contact, e.g. bullying, grooming etc. Know how to report safety concerns. 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. Investigate webcams and video conferencing beyond school. Use email as a form of communication. Understand that electronic communication can be malicious or inappropriate. Know how to report suspicions, e.g. through school or CEOP. Understand how inappropriate conduct can put them at risk. Use appropriate communication tools to collaborate and communicate with others beyond school. Use online publishing to reach a global audience. Create individual and group emails. 	<u>CS</u> <ul style="list-style-type: none"> Write programs that achieve specific goals. Know a range of input and output devices and how they can be used. Debug programs that accomplish specific goals through self and peer assessment. Understand how computer simulations can represent real or imaginary situations and how these can help the wider world. Understand how changes can be made quickly and easily in comparison with real life situations. Use procedures in programs. Design, test and refine programs. Use programming software to create simulations. Understand that there are often different ways to solve the same problem or task. Understand that programming software can create simple and complex simulations and use this to create.

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<p>Lower KS2 Upper KS2</p>	<p><u>IT & DL</u></p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly. • Recognise acceptable / unacceptable behaviour when using technology and the internet. • Creating & storing suitable passwords. • Safe reporting. • Using sequence, selection and repetition in programmes. • Use technologies to input, store, retrieve and present information. • Develop word processing skills to present topic work. • <i>Locate and respond appropriately to the terms and conditions on websites.</i> • <i>Identify unsuitable posts and use of technologies.</i> • <i>Identify inappropriate and unacceptable behaviour when analysing resources.</i> • <i>Continue to develop skills in identifying risks involved with contact and content and own conduct whilst online.</i> • <i>Independently select the most appropriate ICT tools for intended purpose and audience.</i> • <i>Format and edit work to improve clarity and purpose using a range of tools.</i> 	<p><u>DL & CS</u></p> <ul style="list-style-type: none"> • Use logical reasoning to explain how some simple algorithms work and detect and correct errors in algorithms and programs. • Explore coding through 'Scratch'. • 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. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating content. • <i>Use repetition, selection and variables in programs.</i> • <i>Explore the effects of changing variables in models and simulations in order to solve a problem.</i> • <i>Use strategies to verify the accuracy and reliability of information.</i> • <i>Identify and respect restrictions on usage.</i> • <i>Understand when and where the internet can be used as a research tool.</i> • <i>Understand how search engines work and know that there are different search engines.</i> 	<p><u>IT, DL & CS</u></p> <ul style="list-style-type: none"> • Design, write and de-bug programmes that accomplish specific goals. • Control or simulate physical systems. (Ozobots) • Solve problems by decomposing them into smaller parts. • Creating Blogs. • <i>Develop simple spreadsheet models to investigate a real life problem.</i> • <i>Know that programs can be represented in different formats including written and diagrammatic.</i> • <i>Understand the need for precision when creating sequences to ensure reliability.</i> • <i>Using, understanding and designing spreadsheets.</i> • <i>Understand tools used to communicate effectively through blogging.</i> • <i>Understand the conditions of use for blogging.</i>
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<p>Lower KS2 Upper KS2</p>	<p><u>IT</u></p> <ul style="list-style-type: none"> • Use and combine a variety of software to accomplish given goals. • Collect and present information. • Collect and present data. • Recognise and use key layout and design features, e.g. text boxes, columns and borders. • Insert and edit simple tables. • Analyse and evaluate information. • Use a range of devices to capture still and moving images. • <i>Create printing blocks by simplifying an initial sketchbook idea.</i> • <i>Create prints using a relief or impressed method.</i> • <i>Create prints with three colour overlays.</i> • <i>Work into prints with a range of colours and media.</i> 	<p><u>DL</u></p> <ul style="list-style-type: none"> • Understand the risks posed by the internet relating to contact, e.g. bullying, grooming etc. • Know how to report safety concerns. • 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. • Investigate webcams and video conferencing beyond school. • Use email as a form of communication. • <i>Understand that electronic communication can be malicious or inappropriate.</i> • <i>Know how to report suspicions, e.g. through school or CEOP.</i> • <i>Understand how inappropriate conduct can put them at risk.</i> • <i>Use appropriate communication tools to collaborate and communicate with others beyond school.</i> • <i>Use online publishing to reach a global audience.</i> • <i>Create individual and group emails.</i> 	<p><u>CS</u></p> <ul style="list-style-type: none"> • Write programs that achieve specific goals. • Know a range of input and output devices and how they can be used. • Debug programs that accomplish specific goals through self and peer assessment. • Understand how computer simulations can represent real or imaginary situations and how these can help the wider world. • Understand how changes can be made quickly and easily in comparison with real life situations. • <i>Use procedures in programs.</i> • <i>Design, test and refine programs.</i> • <i>Use programming software to create simulations.</i> • <i>Understand that there are often different ways to solve the same problem or task.</i> • <i>Understand that programming software can create simple and complex simulations and use this to create.</i>