



Whole School Computing Long Term Overview

Year	Autumn	Spring	Summer
<p>There are 3 key areas of the 'Computing' curriculum which include: IT, Programming and Digital Literacy (Online Safety). In our school we are now going to teach the IT and Programming areas with the support from the recommended 'Teach Computing' curriculum. These are all the units below in red. The planning and resources for all of these units are available to access from the following site: https://teachcomputing.org/curriculum (please see Vicky Light for the school log in details to access these resources). These units are progressive from KS1 and KS2 and include all of the necessary skills that are assessed on our end of key stage assessment grids.</p> <p>The Digital Literacy (Online Safety) areas of the curriculum are the units below in blue. The planning and resources are available from the pdf document 'Online Safety Map Post COVID 2020' this is saved in the 'Computing folder' on One Drive but has also been emailed to teaching staff. These units will be taught as whole school themes with each year group looking at different areas under the overall theme which are progressive and age appropriate. At the end of each half term when the whole school themes are covered each year group will contribute some work for our 'Online Safety' display board in the main corridor. All of our Digital Literacy units link directly to our PSHE curriculum.</p>			
EYFS	<p>As young children take part in a variety of tasks with digital devices, such as moving a Bee Bot around a classroom, they will already be familiar with the device before being asked to undertake tasks related to the key stage one (KS1 - ages 5 - 7 years) computing curriculum, such as writing and testing a simple program. Not only will children be keen to again use a device they had previously enjoyed using, their cognitive load will also be reduced, meaning they are more likely to succeed when undertaking activities linked to the next stage in their learning. Within the revised EYFS statutory framework, the Technology strand within Understanding the World has been removed. However, there are opportunities within each area of the framework to enable practitioners to effectively prepare children for studying the computing curriculum.</p> <p><u>Online Safety Units</u> Autumn A – Media Balance and Well Being (Smartie the Penguin) Autumn B – Cyberbullying (Digiduck's Famous Friend) Spring – Privacy and Security (Barefoot Computing – Safety Snakes) Summer – Relationships and Communication (Digiduck's Big Decision)</p>		
Y1	Autumn A <ul style="list-style-type: none"> ● Technology around us (Unit 1) ● Media Balance and Well Being (Pause for People) Autumn B	Spring A <ul style="list-style-type: none"> ● Programming A – Moving a Robot (Unit 3) Possible links with Maths (position and direction) and Geography (planning routes) ● My Digital Footprint and Identity (Media Balance is important – This is Me) 	Summer A <ul style="list-style-type: none"> ● Creating Media – Digital Writing (Unit 5) Possible links Geo (writing about countries) History (writing about Grace Darling or George Elmy) RE (writing about Buddha)



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	<ul style="list-style-type: none"> • Creating Media – digital painting (Unit 2) Possible links history (homes) or Christmas • Cyberbullying (Media Balance is important – Barefoot Computing Safety Snakes) 	<p>Spring B</p> <ul style="list-style-type: none"> • Data and Information – Grouping Data (Unit 4) Possible links Maths (counting, sorting and grouping) History (comparing and grouping toys) and Science (animals including humans – grouping animals). • Privacy and Security (Safety in my Online Neighbourhood) 	<ul style="list-style-type: none"> • News and Media Literacy (Pause for People – Smartie the Penguin) <p>Summer B</p> <ul style="list-style-type: none"> • Programming B – Animations (Unit 6) Possible links Art and DT (Under the Sea) • Relationships and Communication (Media Balance is important – Jessie and Friends ep 3)
Y2	<p>Autumn A</p> <ul style="list-style-type: none"> • Computing Systems and Networks – IT Around Us (Unit 1) • Media Balance and Well Being (How technology makes you feel) Possible links PSHE <p>Autumn B</p> <ul style="list-style-type: none"> • Creating Media – Digital Photography (Unit 2) Possible links DT (photoframe topic for Christmas) • Cyberbullying (Pause and Think Online) 	<p>Spring A</p> <ul style="list-style-type: none"> • Programming A – Robot Algorithms (Unit 3) Possible links Maths (position and direction) and Geography (planning routes) • My Digital Footprint and Identity (Staying Safe Online) <p>Spring B</p> <ul style="list-style-type: none"> • Data and Information – Pictograms (Unit 4) Possible links with Maths (Pictograms, tally charts and sorting data) DT (Vehicles) History (significant places in their locality) Science (Materials) • Privacy and Security (Internet Traffic Lights) 	<p>Summer A</p> <ul style="list-style-type: none"> • Creating Media – Digital Music (Unit 5) Possible links Music (how music makes you feel, percussion, rhythm, tunes) Science (unit focus is to create music using the movement of animals for inspiration) • News and Media Literacy (Digital Footprint – How long do things stay online?) <p>Summer B</p> <ul style="list-style-type: none"> • Programming B – Programming quizzes (Unit 6) Possible links – quizzes could be made to test pupils’ knowledge of any subject across the curriculum • Relationships and Communication (Pause and Think Online – Lee and Kim Episode 3)
Y3	<p>Autumn A</p> <ul style="list-style-type: none"> • Computing Systems and Networks – Connecting Computer (Unit 1) • Media Balance and Well Being (Device Free Moments) 	<p>Spring A</p> <ul style="list-style-type: none"> • Programming A – Sequencing Sound (Unit 3) Possible links Music (final project is to make a representation of a piano) 	<p>Summer A</p> <ul style="list-style-type: none"> • Creating Media – Desktop Publishing (Unit 5) Pupils will create their own ‘Magazine’ about a topic of their choice using Publisher Possible links Geo (leaflet about water cycle) History (leaflet



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	<p>Autumn B</p> <ul style="list-style-type: none"> • Creating Media – Stop Free Animation (Unit 2) Possible links Literacy (creating storyboards for their animation) DT (animation could be about moving monster/ mythical creature) History (Animation could be about Stone Age) RE (animation could be about a Hindu story) • Cyberbullying (Putting a stop to online meanness) 	<ul style="list-style-type: none"> • My Digital Footprint and Identity (Digital Trails) <p>Spring B</p> <ul style="list-style-type: none"> • Data and Information – Branching Databases (Unit 4) Possible links Maths (sorting and grouping) Science (creating a branch database which could be based on animals or rocks from previous Science units from Autumn Term) • Privacy and Security (That’s Private) 	<p>about Ancient Egypt or Greece) Science (leaflet about the different part of plants or plants that are found in our school grounds and info about them)</p> <ul style="list-style-type: none"> • News and Media Literacy (Let’s Give Credit) <p>Summer B</p> <ul style="list-style-type: none"> • Programming B – Events and Actions in Programmes (Unit 6) Pupils will create their own maze game as their final project. Possible links Maths (position and direction) Maze could be linked to different areas of the curriculum including stories in literacy, could be an Ancient Egyptian theme eg. Lost in a maze in a pyramid • Relationships and Communication (Who is in your Online Community)
Y4	<p>Autumn A</p> <ul style="list-style-type: none"> • Computing Systems and Networks – The Internet (Unit 1) • Media Balance and Well Being (Your rings of responsibility) <p>Autumn B</p> <ul style="list-style-type: none"> • Creating Media – Audio Production (Unit 2) Possible links Music (microphone, speaker and headphones) Literacy - Due to the amount of time required to plan the podcast content, the written parts of the planning template could be completed in a different subject’s lesson (e.g. English, 	<p>Spring A</p> <ul style="list-style-type: none"> • Programming A – Repetition in Shapes (Unit 3) Possible links Maths (Geometry – shapes, patterns and angles) • My Digital Footprint and Identity (This is me) <p>Spring B</p> <ul style="list-style-type: none"> • Data and Information – Data Logging (Unit 4) Possible links Science (different senses, investigation skills incl. observations, measurements, using equipment, data analysis to draw conclusions) Data logged could focus on the main science topic ‘States of Matter- what happens when you heat solids?’ 	<p>Summer A</p> <ul style="list-style-type: none"> • Creating Media – Photo Editing (Unit 5) Possible links Geo (photos of landscapes of North America) Online Safety (fake images and photo editing) • News and Media Literacy (Is Seeing Believing, digital imagery with direct links to IT topic this term) <p>Summer B</p> <ul style="list-style-type: none"> • Programming B – Repetition in Games (Unit 6) Final project is for pupils to design a game with repetition, the theme of their game could link to any area of the curriculum. Possible links History (Viking and Anglo Saxon struggle)



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	<p>or a subject related to the podcast content).</p> <ul style="list-style-type: none"> Cyberbullying (The Power of Words) 	<ul style="list-style-type: none"> Privacy and Security (Password Power-Up) 	<ul style="list-style-type: none"> Relationships and Communication (Our Digital Citizenship Pledge)
Y5	<p>Autumn A</p> <ul style="list-style-type: none"> Computing Systems and Networks – Systems and Searching (Unit 1) Media Balance and Well Being – My Media Choices <p>Autumn B</p> <ul style="list-style-type: none"> Creating Media – Video Production (Unit 2) As the final project is pupil’s producing their own short video the content of the video can be linked to any area of the curriculum: possible links include History (Vikings vs Mayans), Geo (Trade links), Science (What happens to food when we eat it?) Cyberbullying (Be a Super Digital Citizen) 	<p>Spring A</p> <ul style="list-style-type: none"> Programming A – Selection in Physical Computing (Unit 3) My Digital Footprint and Identity (Our Online Tracks) <p>Spring B</p> <ul style="list-style-type: none"> Data and Information – Flat file databases (Unit 4) At the end of the unit pupils will use a real-life database to answer questions and find answers in the context of a flight search based on set parameters. They will take on the role of a travel agent and present their findings, showing how they arrived at their chosen options. Possible links Literacy (speaking and listening), Geography (location of countries) Privacy and Security (Private and Personal Information) 	<p>Summer A</p> <ul style="list-style-type: none"> Creating Media – Introduction to vector graphics (Unit 5) Possible links Art (drawing including comparing freehand drawing to vector drawing) Maths (geometry) News and Media Literacy (A Creator’s Rights and Responsibilities) <p>Summer B</p> <ul style="list-style-type: none"> Programming B – Selection in quizzes (Unit 6) quizzes could be made to test pupils’ knowledge of any subject across the curriculum. Other links with Literacy (creating a storyboard to plan their quiz) Relationships and Communication (Keeping Games fun and friendly)
Y6	<p>Autumn A</p> <ul style="list-style-type: none"> Computing Systems and Networks – Communication and Collaboration (Unit 1) Media Balance and Well Being (Finding My Media Balance) 	<p>Spring A</p> <ul style="list-style-type: none"> Programming A – Variables in Games (Unit 3) As final project is to design their own game this could link to any area of the curriculum. Possible links Art (designing own digital artwork for background) 	<p>Summer A</p> <ul style="list-style-type: none"> Data and Information – Spreadsheets (Unit 4) Final project is for pupils to create a spreadsheet to plan an event so will link well to planning our school Summer Fayre.



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	<p>Autumn B</p> <ul style="list-style-type: none">• Creating Media – Web Page Creation (Unit 2) webpage can be created on a subject for any area of the curriculum. Possible links Literacy (planning and writing the content for their webpage), History (webpage could be about mining in Seaham), Geo (webpage could be about Climate Change), Science (what affects the health of humans? Or electricity)• Cyberbullying (Is it cyberbullying?)	<ul style="list-style-type: none">• My Digital Footprint and Identity (Beyond Gender Stereotypes)	<ul style="list-style-type: none">• Privacy and Security (You Won't Believe This) This is supposed to be Spring B unit but moved to Summer due to SATS preparation. <p>Summer B</p> <ul style="list-style-type: none">• Programming B – Sensing Movement (Unit 6) Use of physical device – Microbit. We will need to order or loan these devices in preparation for this unit.• Relationships and Communication (Digital Friendships) <p>Unit 5 – Creating media (3D Modelling) has been taken out of the Year 6 planning overview due to time constraints for SATS. The Online Safety unit News and Media Literacy (Reading News Online) has also been removed however if there is time at the end of the academic year these units could be taught then.</p>
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