

Whitehall Park Primary School
Whole School Computing Curriculum Overview

Areas of Learning:

Programming

How do you create and debug programs? How do you use sequence, selection and repetition in programs? What are algorithms and how will they help you solve problems?

How can you develop logical thinking to explain and correct errors in algorithms and programs?

Handling Data

How do we use technology purposefully to create, organise, store, manipulate and retrieve data?
What devices and software will we use and combine to collect, analyse, evaluate and present data?

Technology in our lives













What are the common uses of technology in our lives? What can we learn about the computer networks we use? What are the things we do on the Internet? How can we communicate and collaborate with others? How do we use technology purposefully and effectively to search for, and to retrieve digital content? How do we evaluate digital content?








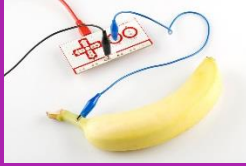




Multi Media













How do we use technology purposefully to create, organise, store, manipulate and retrieve digital content? What devices and software will we use and combine to accomplish given goals? How will we present information?

E-Safety

How do we use technology safely, respectfully and responsibly? Where do we go for help and support? What should we keep private?

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2				
Year 1	E-Safety Agree sensible e-Safety rules for the classroom Tell an adult	E-Safety Keep passwords private. Tell you what personal information is.		E-Safety Keep passwords private. Agree sensible e-Safety rules. Tell an adult							
	Espresso Coding 	Snow is falling, all around us... 	Break and Remake 	Espresso Coding 	Carnival 	Olympics 	We are animators... <ul style="list-style-type: none"> To understand that when a computer does something it is following instructions called code Practise giving instructions to make objects on the screen move when the program starts Learn how to make objects move when they are clicked Practise coding to make things move when they are clicked Learn to add your own images and make them move when the program starts up Learn to add your own images and make them move when they are clicked 	We are meteorologists... <ul style="list-style-type: none"> Keep a tally of the weather, sunlight, rainfall Create pictograms/bar graphs on (JIT2) Look at images and videos of Antarctic and Artic Blog/publish results Create weather podcasts Look at ice cubes and snow under a microscope 	We are architects... <ul style="list-style-type: none"> Create shape pictures on paint (2Paint) Sequence building construction pictures add captions and voice over (Photostory 3) Shape sorter (iBoard) Stop motion animation of a vehicle moving (iMovie). 	We are magic coders... <ul style="list-style-type: none"> Learn how to combine start events and click events to make a simple game Practise combining start events and click events to make a simple game Practise combining start events and click events to make a magic castle. Learn to draw things in the background. Practise combining start events and click events to make a city. Learn to draw things in the background Learn to make your own app or game, using click events and start events to make your pictures move Learn to make your own app or game. Add your own pictures, and learn to add your own events too. 	We are anthropologists... <ul style="list-style-type: none"> Comparing pictures of the rainforest Watching videos of tropical animals Creating head dress designs 2Paint/Purple Mash Save the rainforest leaflets and posters (word/publisher)
Year 2	E-Safety Keep password and private information safe Know who sees work online Know what to do - report	E-Safety Kind and polite in real life and on internet Tell somebody if feel upset		E-Safety Recognise sensible amounts of time to spend online Use technology safely Know where to go for help and support							
	Espresso Coding 	Cracking Ideas 	Espresso Coding 	Great and Ghastly Events 	Amazing space and places in the UK 	Scratch 	We are story makers... <ul style="list-style-type: none"> Learn how to make an object do simple things when keys are pressed on the keyboard Learn how to code an object to move around the screen when keys are pressed Learn how to move an object on an iPad/ tablet screen using 'swipes'. (You can do this with a mouse too) Learn how to code an object to change direction when different keys are pressed on a keyboard Learn how to change an object's direction on an iPad/ tablet screen using 'swipes'. (You can do this with a mouse too) Learn to make your own app or game. Add your own pictures, and learn to add your own events too 	We are inventors... <ul style="list-style-type: none"> Create animations of inventions work Create, save and publish explanation text (word) Virtual experiments (Espresso) Blog/Tweet ideas 	We are flight controllers... <ul style="list-style-type: none"> Learn how to program buttons to move another object around Learn how to program buttons to move another object around, so you can create a simple game Learn how to give instructions to make objects on the screen move when the program starts. Learn how to program buttons to move a monster around the screen, seeking items of fruit Learn to make your own app or game, using click and start events Learn to make your own app or game, programming objects logically with clear instructions and debugging code when there is a problem 	We are historians... <ul style="list-style-type: none"> Research events using search engines Safe searches PowerPoint presentations of events from the past. Retelling a story/event using Puppet Pals 	We are Londoners... <ul style="list-style-type: none"> Locating landmarks on Google Maps Comparing Satellite images of different locations Combine writing, pictures and sounds to make an animated story (2create a Story). Create talking postcards Brochure

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
E-Safety	E-Safety Protect personal information Use safety features of websites, know how to report		E-Safety Downloading files and games Good choices about time online Post positive comments online		E-Safety Secure password Protect personal information		
	Year 3	A picture says a 1000 words 	Scratch 	Scratch 	Ancient Greece 	Hour of Code 	Eurovision 
We are photographers... <ul style="list-style-type: none"> Use iPads to take pictures Retrieve pictures Use Paint/photo editor to manipulate picture and save and print Understand how a camera works. 		We are drawing with edits... <ul style="list-style-type: none"> 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 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 	We are drawing shapes on screen... <ul style="list-style-type: none"> 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 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 	We are travel agents... <ul style="list-style-type: none"> Create a virtual tour guide... (Photostory 3) Research Ancient Greece Compare different website's usefulness iBook on an Ancient Greek Topic E.g. Food (Book Creator) 	We are coding together... <ul style="list-style-type: none"> Solve problems by decomposing them into smaller parts ⌘ Use logical reasoning to explain how some simple algorithms work ⌘ Detect and correct errors in algorithms and programs Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems Programming Use sequence, selection and repetition in programs ⌘ Work with variables ⌘ Work with various forms of input and output 	We are globe trotters? <ul style="list-style-type: none"> Search maps Compare images and landmarks. Create an opinion poll of the best place to visit in the world. Present feedback in a tally/chart Understand how computers are connected. The difference between the internet and the WWW. Greenscreen travelling to different worlds 	
E-Safety	E-Safety Protecting myself and my friends Know what can be seen online and who by		E-Safety Information safe online, know how to report Comment positively and respectfully online		E-Safety Secure password Comment positively and respectfully online		
	Year 4	The sound of music 	MaKey MaKey 	Rocking Romans 	Scratch 	Reduce, Reuse, Recycle 	Raging Rivers 
We are musicians... <ul style="list-style-type: none"> Create a band (Garage band) Record sounds Search for sound effects to add to a piece of writing Learn how computer scientists find information Use data logging to investigate sound levels 		We are programmers... <ul style="list-style-type: none"> Controlling computers using everyday objects 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 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 	We are comic writers... <ul style="list-style-type: none"> Create a class comic on a Roman event (comic life app), Save, Print, import images. Determine which sites are reliable and which sites are not Research Roman life and the Roman Empire. Identify the best words to use in order to generate a good search result. 	We are virtual tour guides... <ul style="list-style-type: none"> 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 understand computer networks; how they can provide multiple services and the opportunities they offer for communication and collaboration 	We are news reporters... <ul style="list-style-type: none"> Create newspaper reports on recycling issues Create a letter to the editor of a newspaper from a green group. Save, edit and print. Create a news flash article. (Moviemaker/iMovie) 	We are gamers... <ul style="list-style-type: none"> Collect data about children's favourite games and record in a spreadsheet then convert into a graph Create a branching database Plan a TV or online advert for a game created in Scratch using still and moving images, sound and text to good effect. Living and non-living sorting activity (Espresso) 	

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
E-Safety	E-Safety Know resources which can be downloaded and used		E-Safety What is posted online can be seen and affect others Important to communicate kindly and respectfully Explain importance of reporting to an adult		E-Safety Protect personal information Report concerns and protecting friends Spending too much time online		
	Year 5	Scratch 	Achievement and Legacies... 	Kudo 	Conflict 	Around the World in 80 days 	Natural Disaster 
		We are quiz masters... <ul style="list-style-type: none"> 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 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 	We are biographers... <ul style="list-style-type: none"> Use search engines to collect information about achievements of the past in order to create an interactive biography about an event/person (on Scratch or PowerPoint). Children will think about effective strategies to enable their search. Use an unfamiliar tool e.g. Thinglink or Photopeach to create content for a presentation Use Padlet, Primary Pad or Linoit to collaborate with other children to create and share ideas as well as providing feedback. 	We are game makers... <ul style="list-style-type: none"> Better understand the steps involved in creating a computer programme. Improve problem-solving skills, and foster problem-solving practices. Follow online and offline directions more fluidly. Learn to compose stories in an alternative format and through varying mediums Implicitly practice maths through branching and scoring. Develop more positive attitudes towards computer programming Create increasingly complex games - thus showing a deeper understanding for complex coding sequences. show evidence of perspective taking and empathy in game play. Collaboratively work to create innovative solutions. 	We are journalists... <ul style="list-style-type: none"> Debate the use of online video sharing. (link to e-Safety) Explore the use of chroma key compositing (green screening). Plan and prepare a video presentation of a War advert. Create a War recruitment poster (paint/purplemash/publisher) Minecraft Story Telling 	We are travellers... <ul style="list-style-type: none"> Create an Ebook of the different places explore and discovered. Publish Ebook and import multimedia Email a pen pal or a school abroad 	We are app developers... <ul style="list-style-type: none"> Creating apps Importing pictures and text about natural disasters around the world Creating posters about global warming and how to safe our planet. Publishing and advertising. Create Graphs and tables to show rising heat levels in certain parts of the world
E-Safety	E-Safety Explain consequences of spending too much time online or on a game.		E-Safety Support friends to protect themselves and make good choices online Explain consequences to myself and others of not communicating kindly and respectfully		E-Safety Protect personal data Age appropriate and reliable website Cyberbullying		
	Year 6	Inside Out 	Kudo 	Iron Man 	Raspberry Pi 	Bollywood 	Html 
		We are biologists... <ul style="list-style-type: none"> Create an online survey/opinion poll about healthy and unhealthy lifestyle choices. Analyse the data and present findings. Use data loggers to conduct an investigation into materials that are the best at blocking light. Present the findings of the investigation 	We are game makers again... <ul style="list-style-type: none"> Better understand the steps involved in creating a computer programme. Improve problem-solving skills, and foster problem-solving practices. Follow online and offline directions more fluidly. Learn to compose stories in an alternative format and through varying mediums Implicitly practice maths through branching and scoring. Develop more positive attitudes towards computer programming Create increasingly complex games - thus showing a deeper understanding for complex coding sequences. 	We are publishers... <ul style="list-style-type: none"> Understand a school network drive Write a non-chronological report about the Iron Age. Make hyperlinks to documents/Folders and webpages. Blog about a day in the life of... Children research and post findings. 	We are computer engineers... <ul style="list-style-type: none"> Inside a computer Building computers Programming with Scratch 	We are film producers... <ul style="list-style-type: none"> Write a Play script (word) Create a Bollywood film Record frames, edit, improve, save. Add graphics, letters/words 	We are web page creators... <ul style="list-style-type: none"> Creating Webpages with HTML and CSS IP addresses Networks Search Engines

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| | | <ul style="list-style-type: none">• Show evidence of perspective taking and empathy in game play.• Collaboratively work to create innovative solutions. | | | | |
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