













Whole School Computing Curriculum Overview 2023/2024

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Foundation Stage	e-safety lesson	 <p>There are rules to being safe online. What is personal information? Who is a trusted person? (Jessie and Friends Video)</p>	 <p>Online Bullying I can describe ways that people can be unkind with devices (not sharing devices, taking photos without permission) Jessie and Friends (video 1)</p>	 <p>EYFS Blog Looking at the school blog and understanding that we can share pictures online with permission</p>	 <p>Don't believe everything you read on the internet. Penguin Pig book</p>	 <p>iStay Safe lesson Children visit websites and learn how to do this safely.</p>	 <p>Recap that there are rules to being safe online. What have we learned this year?</p>
	Session 1	 <p>iMake Algorithm Sequencing nursery rhymes using a flow chart</p>	 <p>iCan Sort Sorting leaves into groups</p>	 <p>iTell Stories (1) Create puppets to help retell a traditional tale</p>	 <p>iCan Program Program a BeeBot to move around a floor mat</p>	 <p>iMake Pictograms Create a pictogram based on The Very Hungry Caterpillar.</p>	 <p>iCan Model Dress a doll or teddy in appropriate clothes for the weather, then use modelling software to dress a tedding online</p>
	Session 2	 <p>iCan Sequence Sequencing making a sandwich</p>	 <p>iAm Logical Playing 'guess who' with toys.</p>	 <p>iTell Stories (2) Use puppets from previous session to retell a traditional tale,</p>	 <p>iCan Control Programming BeeBots to do jumps on a numberline</p>	 <p>iOrganise Data (1) Create bar graphs using cubes, use technology to make the charts the children make on paper.</p>	 <p>iGuess Beasts A treasure hunt using QR codes</p>
	Session 3	 <p>iCan Direct Play games and move round an obstacle course using direction language. Play games online.</p>	 <p>iMake Pixel Art To know that digital images are made of pixels</p>	 <p>iTell Stories (3) Children record each other and create a digital book including images and sound</p>	 <p>iCan Direct Play games and move round an obstacle course using direction language. Play games online.</p>	 <p>iOrganise Data (2) Continue to use technology to make the charts the children make on paper.</p>	 <p>iFind Patterns Recapping maths from earlier in the year – repeating patterns</p>
















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Year 1	e-safety lesson		iWatch	iPlay	iShare	iPlay more	
	Element of computing	  iAlgorithm 6 sessions	  iModel 5 sessions	  iDraw 5 sessions	 iProgram (1) 6 sessions	 iProgram (2) 6 sessions	  iData 4 sessions
	Overview	Predominantly unplugged activities to introduce the concepts of algorithms being a set of instructions that need to be followed in order.	An introduction to computer modelling to represent real and imaginary environments. The children can make choices and investigate alternatives whilst creating their own representations.	In this unit, children explore and develop skills using digital tools to create and edit graphical art.	An introduction to algorithms and programming. Using physical and virtual toys to perform actions and understanding that computers are controlled by instructions.	An introduction to the app 'Scratch Jr'. The children will design and program animated stories. This will lay the foundations for their ongoing work in computing.	A range of unplugged/ tablet and computer lessons to explain the collection of data and its uses. Links to maths and data handling.
	Apps/ programs required	Unplugged worksheets	Online links	Paintz website	Programmable toys (beebots), online links	Scratch Jr, online links	Unplugged worksheets and online links









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Year 2	e-safety lesson	iDetail	iCarnival	iGame	iInfo	iHero	
	Element of computing	  iProgram – 1 6 sessions	   iSearch 6 sessions	  iAnimate 6 sessions	  iPub 6 sessions	  iBlog 6 sessions	  iDo Mail 4 sessions
	Overview	An introduction to visual programming language using Scratch. The children will create simple animations	Children will use the internet to find out answers to questions, learning the importance of accuracy and checking multiple sources.	The children will explore stop motion animation through story telling.	Children will learn about the advances in technology over time. They will present their findings and develop digital literacy skills through interactive e-books.	Children will learn that a blog is an online conversation with an audience that can respond. They will develop their writing and digital literacy skills by creating and responding to blog posts.	An introduction to emails. Exploring how emails are transmitted and how they can transmit communication over distance.
	Apps/ programs required	Unplugged worksheets. Scratch	Unplugged worksheets. Online links	Unplugged worksheets. iPads. Craft resources	Laptops/iPads. Online lines Presentation software.	Unplugged worksheets. Laptops.	Laptops


















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Year 3	e-safety lesson	iBlock	iFind out	iFriend	iFeel	iProtect	iChat
	Element of computing	 iProgram 6 sessions	 iSimulate 5 sessions	 iNetwork 4 sessions	 iData 5 sessions	 iConnect 6 sessions	 iPodcast 6 sessions
	Overview	A visual introduction to programming language using the context of game development. Children will develop their own animations.	Children begin to understand that computer simulations can represent real and imaginary situations. They explore simulations, investigate options and test predictions. They evaluate the usefulness of simulations.	Introduction to networks. Children explore real-world examples of networks. They learn how digital devices are connected to form networks and how computer networks connect to form the internet.	Children learn how information in databases is organised and interrogated. They use databases and add records using information found online.	Children explore the differences between the internet and the world wide web involving surfing, searching and evaluating. They learn how to use search engines safely and effectively.	Children will explore, develop, and edit audio by podcasting. They will use technology to capture and manipulate sound, amend and modify their work and explore various podcasting features and audio effects.
	Apps/ programs required	Scratch. Resources from website.	Simulation games (links), worksheets, Scratch.	Drawing software. Links, Craft resources, Worksheets	Worksheets, links, Google Earth.	Links. Worksheets. Post-It notes. PowerPoint	Links. Technology capable of playing and recording sound.









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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	e-safety lesson	iPrivate	iPower	iSearch	iRespect	iSecure iKnow spam	iCommunicate iBeat cyber bullying
	Element of computing	   iProgram 6 sessions	  iData 6 sessions	  iAnimate 5 sessions	   iMail 5 sessions	   iProgram 8 sessions	  iAlgorithm 5 sessions
	Overview	A visual introduction to programming language using the context of game development. Children will develop their own animations.	Introduction to the concept of data being represented digitally on computers. Children will begin to understand that data is represented using numbers and learn how data is stored and manipulated.	Introduction to designing and creating computer animations. The children will create narratives and combine them with artwork to make their own animated story.	Children learn to use email to send and receive messages. They will learn about communicating over distances and how to use email safely.	Using visual programming language using the context of art. This unit also introduces text-based coding language. Children use both of these to investigate angles and negotiate mazes.	Reinforcing the concept of algorithms being a set of instructions.
	Apps/ programs required	Scratch. Resources from website.	Worksheets. Beads and bead strings. Online resources	Links. Worksheets. Paper to create flipbooks. Tracing paper. Animation software. iPads.	Communication devices (or photos of them). Email account.	Lightbot. Links. Stackable bricks.	
















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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	e-safety lesson	iCommunicate	iPersonal	iStay Safe	iTrust	iChat	iKnow Bullying
	Element of computing	 iProgram (1) 6 sessions	 i Draw 6 sessions	 iCrypto 6 sessions	 iWeb 6 sessions	 iProgram (1) 8 sessions	 iModel 6 sessions
	Overview	Using visual programming language using the context of art. This unit also introduces text-based coding language. Children use both of these to investigate angles and negotiate mazes.	An introduction to graphical drawing using digital tools. Children will explore how images are constructed from shapes and use a variety of geometric shapes, lines, colours, effects and layering to create graphic images.	An introduction to cryptography. Children will learn how to communicate securely over distances. They will explore a number of different methods of cryptography and understand the need for secure communication.	Children will explore how the World Wide Web allows people to connect, work together and share information. This includes working with the basic components of website programming HTML and how webpages are constructed.	Return to the visual coding language in Scratch but in the context of games development to design games and explore the concepts of conditionals (true/false), data iteration (repeat of instructions until a condition is met) and incremental development (adding a little detail at a time to a design until it is correct).	Introduces children to graphical modelling in 3D. Children will explore working with 3D shapes and design and build a model of their ideal school playground.
	Apps/ programs required	Worksheets. Turtle software. Robomind. Links	Computers, Sketchup	Links, worksheets, spreadsheet, torches	Printed and laminated resources, links, well known song, information books.	Scratch, cups and sticky notes, worksheets	Lego, links, graph paper, rulers, protractors, online resources.



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Year 6	e-safety lesson	iSecure/ iPrivate	iPlay/ iKind	iUpstand/ iNice	iTone	iGet Help	iReport
	Element of computing	  iModel 6 sessions	  iProgram (1) 6 sessions	  iNetwork 6 sessions	  iData 6 sessions	   iApp 6 sessions	  iProgram (2) 6 sessions
	Overview	Pupils build on their learning from Year 5 and use 3D modelling software (Google SketchUp) to make a 3D model of a WW2 air raid shelter design.	Return to the visual coding language in Scratch but in the context of games development to design games and explore the concepts of conditionals (true/false), data iteration (repeat of instructions until a condition is met) and incremental development (adding a little detail at a time to a design until it is correct).	Children explore how computers connect people to allow them to work together to share information and resources.	An introduction to spreadsheets. Children find out how information is entered into a spreadsheet and how formulae can be used to calculate totals. They then move on to producing charts and creating their own spreadsheets.	Children extend their programming skills by introducing mobile app development using MIT's app inventor. This units involves computer science learning in a context that is meaningful to children's digital lives. The children learn the value and uses of apps and develop their own.	Children return to the visual coding language of Scratch in the context of games development to design games and explore the concepts of conditionals (true/false), data iteration (repeat of instructions until a condition is met), incremental development (adding a little detail at a time to a design until it is correct) and systematic testing.
	Apps/ programs required	Laptops, Google SketchUp	Scratch, Worksheets, Online resources	Plastic cups, string, making tape, links, online resources, laptops	Excel, online resources	Links, App Inventor 2	Laptops, Looking Glass app, links, online resources.



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