Year 5 Computing Coverage

As coders we identify how we can make things happen and solve problems when they arise
As digital creators we learn how to use and make content to share our ideas safely
As online users we learn how to stay safe and act appropriately when using technology.

	Autumn Term 1 Computing lessons Code.org – Course E *Sphero	Autumn Term 2 Computing lessons – I Can Animate an iMovie	Spring Term Computing lessons – We are Toy Designers (Y4 book) ***Collect data for we are meteorologists**	Summer Term 1 Computing lessons – We are meteorologists (Y4 book)	Summer Term 2 Computing lessons – We are cryptographers
National Curriculum	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	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	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 select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	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 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Subject Focus	In this unit children will work through a series of small steps to build upon and reinforce earlier skills (conditionals if, else, until). They will manipulate more than one sprite on screen. They will also begin to create and experiment with their own function blocks Personal data and passwords	In this unit children will creating a number of different stop frame animation scenes to tell the story of Shackleton's journey. They will then link this together with iMovie. Ext. They could use puppet pals/Actual Video footage/Real pictures to enhance their work Copyright Searching for images Searching for information which is based upon limited knowledge	In this unit the children will work together to design a simple toy that incorporates sensors and outputs. They will then create an on-screen prototype of their toy in scratch. Finally they pitch their toy idea to a Dragon's Den-style panel. We will also talk about the safety of toys (including Bluetooth) and making sure they are not easy to 'hack'.	In this unit children will analyse the data that they have collected about the weather in excel, take on the role of a meteorologist and present the weather along with images. Watermarks and copyright discussion	In this unit children learn about communicating information securely through the introduction of cryptography (the science of keeping communication and information secret). They investigate early methods of communicating over distances, learn about two early ciphers and consider what makes a secure password
Top Ten / Fab Five	1 Write codes for multiple sprites	1 Create a storyboard to design their animation	1 Plan a new product for an intended audience 2 Be creative with code 3 Explore the use of costumes within scratch	1 Collect data (Previous term) 2 Input data into a spreadsheet	1 Experiment with transmitting information over long distances – semaphore

Year 5 Computing Coverage

	2 Create their own functions as a way of writing efficient code	2 Combine I Can Animate with iMovie 3 Add another source (puppet pals/Actual Video footage/Real pictures to enhance their work) 4 Create a list of acknowledgements/jobs of who did what 5 Insert a soundtrack	4 Apply what I have learned to a real life situation 5 Work collaboratively to overcome problems 6 Pitch an idea to peers	3 Use graphing tools to identify trends 4 Select data which supports their point 5 Present their findings	2 Recap Morse code 3 Create and crack codes using the Caesar cipher 4 Experiment with substitution ciphers 5 Create strong passwords
Unit specific Vocabulary					Cipher, password, semaphore, substitution
Software Knowledge	Code.org	I Can Animate, iMovie	Scratch, PowerPoint	Excel, PowerPoint	Online resources

Year 5 Computing Coverage

	Autumn Term Class Lessons - Application	Spring Term Class Lessons - Application	Summer Term Class Lessons - Application
National Curriculum	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
	- Internet Research and reliability linked to space, Shackleton and Scott - Green Screen dance to tell and astronaut's story.	- Internet Research and reliability linked to the rainforest and Ancient Maya	- Internet Research and reliability linked to natural disasters
		April Fool's Day, Critical thinking skills to the test about what can be trusted online - UKSIC's Trust me resource	
	We also invite PCSOs into school at various points in the year to address issues and pass on key messages. This tends to reflect what is happening and needs at the time.		

Green highlighting indicates areas linked to online safety.