

Y4 Computing	TERM 1A		TERM 1B		TERM 2A		TERM 2B		TERM 3A		TERM 3B	
	Think before you post & This is me		Microbits: Electricity (x5) https://microbit.org/teach/lessons/electrical-conductors-unit-of-work/		Reliability & Thinkuknow – Sharing photos and videos (Safer Internet Day during Feb)		Kodable & Hour of code		Computer systems and networks – the Internet		Film making	
	Key knowledge To know not to share a friend’s personal information. To know if we are concerned about anything we should tell an adult we trust. To know we must keep our personal information safe and secure by not sharing it with people we don’t know. To know personal information can include our full name, address, name of our school, passwords and phone number. To know personal information is not our favourite colour, a song we like or what we had for lunch.	Key skills To be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Key knowledge To know how to identify different inputs and outputs. To understand ‘selection’ when describing the input of a circuit. To know how to show decisions (selection) in algorithms through a flow chart. To understand the value of testing/debugging a program.	Key skills To be able to write a computer program in order to solve a problem. To be able to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. To be able to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.	Key knowledge To know anyone can make a website and some information online is opinion not fact. To know some websites are trying to sell us things. To know Internet searching is improved by using the correct keywords. To know when we search for information safely online, we use a children’s search engine (Swiggle, Kiddle, Gogglekids, KidRex). To know if we see something upsetting we minimise the page and tell an adult we trust.	Key skills To be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Key knowledge To know if the sequence, or order of the instructions, given to the computer is wrong, the program won’t run correctly. To know sequence is important in a computer algorithm because the correct order of steps is needed for the algorithm to work. To know loops are essential for many of the repetitive tasks commonly required in programming. To know the main purpose of loops is to prevent repetitive code. To know typing out the same code over and over increases programming time and likeliness of bugs.	Key skills To be able to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. To be able to use sequence, selection, and repetition in programs; work with variables and various forms of input and output. To be able to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Key knowledge To know the World Wide Web is one of many services which are offered over the internet. To know how a network can share messages with another network to form the internet. To know the internet lets us view the World Wide Web. To know the World Wide Web is part of the internet which contains websites and web pages. To know the World Wide Web can be accessed on a variety of devices. To know not everything on the internet is true, honest or accurate.	Key skills To be able to 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. To be able to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. To be able to select, use, and combine a variety of software (including internet services) on a range of digital devices. To be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Key knowledge To know iMovie allows us to create films on iPads. To know our films must explain what Barnes Primary is doing to be more sustainable. To know a successful film is well planned, with ideas that flow in order (just like a piece of writing). You can add photos or video from your photo library. To know added photos appear for a duration of 3 to 6 seconds. To know you can shorten or extend the duration using the trim handles. To know a Ken Burns effect can the camera appear to sweep across and in on the image. To know if you click on a photo a menu will appear below it which will allow you to add text, filters and you can shorten and lengthen the duration.	Key skills To be able to 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. To be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
	Enquiry/question/outcome/activity/genre of unit/text Why do we need to keep personal information secure online? Know a range of ways to report concerns. How does what I post online affect my identity?		Enquiry/question/outcome/activity/genre of unit/text How can I represent selection of inputs using decision boxes?		Enquiry/question/outcome/activity/genre of unit/text How can I recognise the difference between fact and opinion?		Enquiry/question/outcome/activity/genre of unit/text		Enquiry/question/outcome/activity/genre of unit/text What is the internet made of? What is a website? Who owns the internet? Can I believe what I read?		Enquiry/question/outcome/activity/genre of unit/text How can I edit a successful film using different editing techniques?	
	Key vocabulary (tier 2) adult concern favourite share trust	Key vocabulary (tier 3) internet keywords online personal information search engine	Key vocabulary (tier 2) debug input output	Key vocabulary (tier 3) decision/selection flow chart	Key vocabulary (tier 2) adult fact opinion trust	Key vocabulary (tier 3) content internet keywords online search engine	Key vocabulary (tier 2) instructions order sequence	Key vocabulary (tier 3) coding debugging program	Key vocabulary (tier 2) accurate honest information message websites	Key vocabulary (tier 3) internet network network security router	Key vocabulary (tier 2) duration length photo sustainable	Key vocabulary (tier 3) extend filters Ken Burns library photo trim