Computing

Clavering
PRIMARY SCHOOL

Computing at Clavering

Behind every innovative idea is the power to think logically, creatively, and computationally! Through the iCompute programme and the National Curriculum for Computing, children develop the essential knowledge and digital skills to thrive in an increasingly technological world.

Our computing curriculum ensures that pupils become competent, confident, and responsible digital citizens. They learn how digital systems work, how to design and debug programs, and how to apply their understanding to solve real-world problems. Using iCompute's progression pathways, pupils explore the three key strands of computing: digital literacy – learning to use technology safely, respectfully, and responsibly.

COMPUTER SCIENCE

Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming. Computer science is seen as the core of computing and underpins the whole of the subject. Because of this, it is fair to say that computer science provides the foundational knowledge required to understand and interpret the other areas of the computing curriculum.

INFORMATION TECHNOLOGY

Information technology provides a context for the use of computers in society. It focuses on how computers are used in different sectors and describes the methods used to create digital artefacts such as presentations, spreadsheets and videos.

DIGITAL LITERACY

The National Centre for Computing Education defines digital literacy as the 'skills and knowledge required to be an effective, safe and discerning user of a range of computer systems'. It covers a range of knowledge and skills, such as using physical devices or knowledge of the features that are likely to mean digital content is reliable.

Computing at Clavering

BUILDING ON THE DFE'S AIMS, OUR CURRICULUM ENSURES THAT PUPILS:
UNDERSTAND AND APPLY THE PRINCIPLES OF COMPUTER SCIENCE, INCLUDING LOGIC, ALGORITHMS, AND DATA REPRESENTATION.
ANALYSE AND SOLVE PROBLEMS BY DECOMPOSING THEM INTO MANAGEABLE STEPS AND CREATING DIGITAL SOLUTIONS.
USE TECHNOLOGY PURPOSEFULLY AND CREATIVELY, CHOOSING THE RIGHT SOFTWARE AND SYSTEMS FOR THEIR GOALS.
RECOGNISE THE POWER OF TECHNOLOGY WHILE MANAGING ITS RISKS THROUGH STRONG ONLINE SAFETY AND DIGITAL WELLBEING EDUCATION.

THROUGH ICOMPUTE'S ENGAGING UNITS—SUCH AS IPROGRAM, INETWORK, IDATA, AND ISAFE—CHILDREN PROGRESS FROM HANDS-ON CODING WITH ROBOTS AND BLOCK PROGRAMMING IN KEY STAGE 1 TO DEVELOPING APPS, GAMES, AND DIGITAL PROJECTS IN KEY STAGE 2. THE SCHEME ALSO INTRODUCES CUTTING-EDGE CONTENT ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING (ILEARNAI), REFLECTING CURRENT DFE PRIORITIES AND PREPARING PUPILS FOR THE FUTURE OF TECHNOLOGY.

BY THE END OF PRIMARY SCHOOL, PUPILS CAN THINK LOGICALLY, DESIGN AND DEBUG PROGRAMS, EVALUATE DIGITAL CONTENT CRITICALLY, AND UNDERSTAND HOW COMPUTERS AND NETWORKS CONNECT OUR WORLD. THEY ARE EMPOWERED TO USE TECHNOLOGY CONFIDENTLY, SAFELY, AND CREATIVELY—BECOMING DIGITAL CITIZENS READY FOR THE NEXT STAGE OF THEIR EDUCATION AND BEYOND.

iCompute iCan - Computing

Year 1	National Curriculum Links	iCan - Computing
iAlgorithm	understand what algorithms are; how they are how implemented as programs on digital devices understand that programs execute by following precise and unambiguous instructions use logical reasoning to predict the behaviour of simple programs create and debug simple programs	I can tell you about something I do every day that needs to be done in order I can follow instructions I can make a set of instructions for others to follow I can change instructions if they are wrong I can follow instructions to do something depending if something is true or false I can read instructions and usually can tell you what I think will happen I can tell you what an algorithm is
iProgram	understand that programs execute by following precise and unambiguous instructions use logical reasoning to predict the behaviour of simple programs create and debug simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can show you something that does something when you give it an instruction I can make a programmable toy go where I want it to go I can draw instructions that would move a toy I can tell you what I think a toy will do if it followed a set of instructions
iWrite	To use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can write a simple sentence using a keyboard I can print my work I can open a document and make a story using a word bank I can save my work I can tell you about when it would be useful to use a word processor
iData	use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can make a pictogram I can use pictograms to answer questions I can sort objects into an order I can make a graph
iModel	use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can use an adventure game and make choices on screen I can recognise what is real and what is not real in an adventure game I can use drawing tools

Year 1	National Curriculum Links	iCan - Computing
iDraw	use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can create a simple self portrait I can use shapes and colours in a digital image The use appropriate shapes and colours in re-creating the work of Sonia Delaunay I can use software to create an image of a character from a nursery rhyme I can combine their work into an eBook
iLearnAI	recognise common uses of information technology beyond school use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can talk about how AI systems are trained by humans and can simulate intelligence I can give examples of AI making mistakes I can give and follow commands in role-play exercises I can categorise information accurately using the criteria I can talk about examples of AI in everyday life, such as smart speakers or robotic vacuums I can use simple AI tools (e.g. to draw and write)
iSafe	use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies recognise common uses of information technology beyond school	I can tell you about the information that only belongs to me I can talk about who I can and should not share personal information with I can talk about people I can and can't trust I can identify someone I can trust (E.g. police officer or teacher) I can tell you about a risky situation when I might need the help of a trusted adult I can talk about how emotions and sensations can make me feel safe or unsafe I can talk about which information is personal to me and whom they should/should not give it to
General	**Information Technology**	I can type simple sentences with a keyboard I can turn a computer on and off I can log on with a username and password I can use the keyboard I can open applications with help I can save and print my work I can use a mouse to point, click and drag objects around a screen I can use the mouse to select icons and items I can print my work I can save my work with help I can tell you why I used a computer to do something

Year 1	National Curriculum Links	iCan - Computing
Digital Literacy		I can move around a website using buttons and picture links
		I can find answers to questions using a website
		I can put together pictures and words to tell you something

Year 2 iProgram	National Curriculum Links	iCan - Computing
	8 understand what algorithms are; how they are how implemented as programs on digital devices	8 I can sequence a set of instructions for making a sandwich
		8 I can create a sequence of instructions
		8 I can use repeat instructions
	8 understand that programs execute by following precise and unambiguous instructions	8 I can draw my own sprite using software
		8 I can create a simple animation
	8 use logical reasoning to predict the behaviour of simple programs	8 I can program two sprites to talk to each other
	8 create and debug simple programs	8 I can make a simple animation which has a background and sprites moving and talking
iPub	8 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	8 I can make a mind map about the World Wide Web I can make a timeline of events in computing history I can design my own vision of futuristic technology I can create a presentation
	To use technology purposefully to create, organise, store, manipulate and retrieve digital content	8 I can create a basic eBook 8 I can refine eBooks to include multimedia
		8 I can use a username and password to access a blog
iBlog	8 To use technology purposefully to create, organise, store, manipulate and retrieve digital content	8 I can write sentences that build on things others have written
		8 I can post a comment on the class blog responding to a post or comment
	8 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	8 I can post a response to a blog expressing an opinion
		8 I can justify my opinion
		8 I can write a blog post about a topic they know
		8 The review posts they have previously written and choose examples of good blog posts

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Year 2 iSearch	National Curriculum Links	iCan - Computing
	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content 8 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or 8 contact on the internet or other online technologies	8 I can find and move around a website 8 I can use the information on a website to answer a question 8 I can order things using information found online 8 I can collect information from a part of a website and present my findings 8 I can create a page for a class book
iAnimate	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content	8 I can create a flipping book 8 I can create character descriptions for a fairy tale 8 I can create a storyboard 8 I can create a script to retell a fairytale
iDo Mail	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content 8 recognise common uses of information technology beyond school 8 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or	8 8 I can type and send an email Icantalkaboutwhyandwhenusingemail would be useful I can send an email with an attachment

Year 2	National Curriculum Links	iCan - Computing
	contact on the internet or other online technologies	
iSafe	8 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	8 I can explain why I shouldn't open an email or attachment without permission
		8 I can talk about why I should not talk to strangers online
		8 I can use ICT to communicate online
		8 I can talk about some ways I can stay safe when using technology
		8 I know that some websites are aimed at me and some are better for what I'm looking for
		8 I understand the need to treat others as I would like to be treated online
		8 I know that some people are not nice online and can bully
		8 I can talk about when I would need to tell a trusted adult about something online
		8 I can search for things online
		8 I know that some websites are aimed at me and some are better for what I'm looking for
General	Information Technology	8 I can move around things using touch, arrow keys or a mouse
		8 I can type with both hands
		8 I can use the backspace button and the delete button to remove text
		8 I can add titles and captions to my work
		8 I can find, change and save my work
		8 I can print my work
		8 I can find things out on the world wide web
	Digital Literacy	8 I can pick a website for something in particular with help
		8 I can find things online with help
		8 I can show you how I found information online
		8 I can be careful about the information I get from websites
		8 I can use useful apps to help me with a task
		8 I can move around a website using links and buttons
		8 I can type addresses into a web browser
		8 I can favourite/bookmark pages online
		8 I can change colours, size and style of text in my work
		8 I can mix sound, words and pictures and tell you what I want them to mean
		8 I know that I might need permission to use things I have found online
		8 I can find websites with help

Year 2	National Curriculum Links	iCan - Computing
		8 I can tell you why I prefer one website to another 8 I can sort things into an order 8 I can make a graph or pictogram 8 I can use a graph or pictogram to answer questions

Year 3	National Curriculum Links	iCan - Computing
iProgram	understand that programs execute by following precise and unambiguous instructions use logical reasoning to predict the behaviour of simple programs create and debug simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content	I can make a sprite move using programming blocks and loops I can move a sprite on stage programming using coordinates I can create an animation where a sprite changes costume I can make an animation with sound effects that are repeated I can predict the shape a drawing function will make when executed I can amend a program to draw shapes using repeats and the pen tool I can make an animation combining images, sounds and movement
iSimulate	use technology purposefully to create, organise, store, manipulate and retrieve digital content use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 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	I understand that computer simulations allow people to try things that would be difficult or impossible to do in real life I can use a simulation to identify patterns and rules I can use and explore an adventure game based on an imaginary world I can use an simulation to try out combinations of things I can make my own simulation
iConnect	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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 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,	I can name some of the activities you can do online I can use hyperlinks on a website I can visit and move around websites to answer questions I can choose and bookmark a favourite I can use search terms and a search engine to answer questions I understand the risks associated with visiting non-credible websites I can decide whether a website is reliable

Year 3	National Curriculum Links		iCan - Computing	
			systems andcontent thataccomplishgiven goals, including collecting, analysing, evaluating and presenting data and information	
iNetwork	8	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	8 8 8 8 8 8	I can explain that a network is things that are connected I can identify key parts of a network I can talk about how information can be passed between devices I can describe how networks connect to the internet using routers I can talk about how networks connect to each other I can model data transfer I can identify the IP address of their favourite website
			8 8	I can understand the words record, field and data when talking about databases I can search and sort records in an electronic database
iData	8	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	8 8 8 8	I can enter multiple records to an existing database I can choose the best holiday destination for different holidaymakers
iPodcast	8	select, use and combine a variety of software 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	8 8 8 8 8 8 8 8	I can record, manipulate and store audio I can edit sound I can plan and record the first draft of a podcast I can talk about ways audio can be changed I can use editing tools to improve the quality of a podcast I can improve podcasts by adding music and other effects I can listen to podcasts made by others and talk about what I like I can suggest improvements

Year 3 General	National Curriculum Links	iCan - Computing
	Digital Literacy	8 I can search online with help
		8 I can change what I'm searching for to get better results
		8 I can present information and my ideas using different tools
		8 I can enter a URL for a website
		8 I can point out some links on web pages and use them
		8 I can talk about how useful websites and apps have been to my work
		8 I can talk about my work and explain why I used particular tools
	Information Technology	8 I can combine images with text
		8 I can use appropriate effects and re-size graphics
		8 I can copy text from an internet page to a document
		8 I can copy images from a web page
		8 I can save, print and retrieve work
		8 I can use software, computers and devices to make simple presentations and create things
		8 I can save my work on the network and online
		8 I can scroll or swipe
		8 I can collect data and talk about its accuracy
		8 I can organise and present data using different tools

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Year 4	National Curriculum Links	iCan - Computing	
iProgram	8 design, write and debug programs that accomplish specific goals 8 use sequence and repetition in programs 8 use logical reasoning to explain how a simple algorithm works and detect and correct errors in algorithms and programs 8 Solve problems by decomposing them into smaller parts 8 create and debug simple programs 8 understand that programs execute by following precise and unambiguous instructions 8 use technology purposefully to create, organise, store, manipulate and retrieve digital content	8 I can draw simple shapes using programming blocks containing direction and loops 8 I can create and test a sequence of statements that make letters of the alphabet 8 I can create programs that change the size of a shape 8 I can program a robot to draw letters of the alphabet 8 I can use if .. then .. else statements in my programs 8 I can plan a number of commands in order to solve a puzzle 8 I can plan algorithms and test programs systematically 8 I can program functions and call them more than once	
iData	8 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 (KS3 edited) 8 understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition…]	I can count in Binary from 1 to 26 (5 bit) I can assign a letter of the alphabet to a binary code I can answer questions using information contained on records I can sort information on records I can use computers to add a record to a database I can answer simple questions using information stored in records 8 I can use a database to create charts representing answers to questions 8 I can search and sort a database to answer a question	

iCompute
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Year 4	National Curriculum Links	iCan - Computing		
iAnimate	select, use and combine a variety of software			
	8 (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	8 I can create a flipping book animation 8 I can draw a series of images on frames with each showing a figure in a different pose 8 I can animate a sequence of digital images 8 I can design and add backgrounds to an animated scene 8 I can plan and make an animation		
iMail	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content 8 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	8 I can simulate sending messages over distance using different methods 8 I can read an email 8 I can compose and send emails 8 I can respond to an email 8 I can send an email with an attachment 8 I can use email to share ideas 8 I can collaborate on a shared project using email		
iSafe	8 use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	8 I can talk what digital media I use 8 I know the five-step method for conducting an online search 8 I can use search criteria 8 I can identify some of the ways online content can be evaluated for reliability 8 I can give examples about appropriate/inappropriate content for online sharing I can explain the consequences of sharing without consent 8 I can identify appropriate people to turn to for help 8 I can talk about copyright 8 I can talk about strategies for recognising and responding to risky online interaction 8 I can rate the riskiness of online scenarios 8 I know some solutions for dealing with cyberbullying 8 I can identify ways information can be found online about people 8 I can determine the accuracy of information and know the difference between assumption, opinion, and fact		

iCompute iCan - Computing

Year 4	National Curriculum Links		iCan - Computing		
		8	I know that personal information you share online becomes part of your reputation, which can last a long time		
		8	I know to speak to a trusted adult if I think my identity has been stolen		
			I am careful about how and whom I share my personal information with		
		8	I know that personal information you share online becomes part of your reputation, which can last a long time		
		8	I know to speak to a trusted adult if I think my identity has been stolen		
		8	I am careful about how and whom I share my personal information with		
		8			
		8	I know that some people online may not be who they say they are		
iLearn AI	8 design, write and debug programs that accomplish specific goals	8	I can tell you that AI is all around us and part of our everyday lives		
	8 understand that programs execute by following precise and unambiguous instructions	8	I can point out devices and systems that use AI		
		8	I can define AI being computers or machines performing tasks that usually need human intelligence		
	8 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		I can explain machine learning as the process that computers learn from data input by humans		
		8	I know that AI systems learn over time with practise and training data affects how reliable they are		
		8	I can train a machine learning model		
		8	I can test a machine learning model		
	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content	8	I can create a simple AI system		
iPhotoEdit	8 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	8	I can explain the purpose of photo editing		
		8	I can perform basic editing operations like cropping and rotating		
		8	I can select and apply colours and filters on my own		
		8	I can select and duplicate objects		
		8	I can talk about the ethical implications of photo editing		
		8	I can point out differences between real and digitally created/altered images		
	8 use technology purposefully to create, organise, store, manipulate and retrieve digital content	8	I can talk about AI generated images		

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Year 4	National Curriculum Links		iCan - Computing		
General	**Information Technology**		8 I can use a keyboard with increasing confidence 8 I can vary fonts, colours and effects 8 I can cut, copy and paste 8 I can import text, audio and graphics from devices, networks and online 8 I can change images: crop, resize and edit them 8 I insert and edit hyperlinks 8 I can create things for a particular audience 8 I can evaluate my own and other's work and suggest improvements 8 I can create diagrams and graphs to answer questions 8 I can talk about what data I need to collect to answer a question 8 I can use and compare graphs and charts 8 I can organise, present and interpret data		
	Digital Literacy		8 I can open, create, send and forward email 8 I can attach files to digital communications – like email and blogs 8 I can open and save attachments 8 I use a range of digital tools to communicate (E.g. blogs, chatting, commenting) with purpose 8 I use search engines to find things online 8 I can use effective search terms to find specific information 8 I can check the accuracy and reliability of information I know the difference between opinion, assumption and fact		

Year 5	National Curriculum Links	iCan - Computing
iDraw	8 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	8 I can create vector images out of shapes and lines 8 I can duplicate, move, resize, and rotate graphical objects 8 I can zoom in and out to add detail to graphical objects 8 I can change the order of layers in a vector drawing
iModel	8 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 design, write and debug programs that accomplish	8 I can use graphical modelling software to create 3D shapes 8 I can group 3D objects to create a model 8 I can zoom in and out to add detail 8 I can explore possibilities using graphical models 8 I can use conditional if... then... else statements
iProgram	8 specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 8 use sequence, selection, and repetition in programs; work with variables and various forms of input and output 8 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	8 I can use x-y coordinates to program movement 8 I know that boolean statements can only be true or false 8 I know that variables are stored and be used to keep track of values (E.g. scores) 8 I can use variables in programs 8 I use sequence, selection, conditions and repetition in my programs 8 I can design a algorithms before I program them 8 I test my programs in a systematic way to help me find bugs 8 I debug my programs 8 I can evaluate my work and make improvements

Year 5	National Curriculum Links	iCan - Computing
iWeb	use technology purposefully to create, organise, store, manipulate and retrieve digital content 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	I can act out the Internet I can talk about ways different services on the internet can be used to work with others I can tell you the difference between the Internet and the World Wide Web I can talk about how HTML code tells the computer what to put in a space on a web page I can edit HTML code to change the text appearing on a web page I recognise basic HTML and can identify what some item are (e.g. an image) I can change an image on a website I can read basic HTML and predict what a website would look like I can use HTML code to create web content I can remix a web page to make my own which has images and text
iCrypto	use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	I can encrypt and decrypt simple messages I can communicate simple messages through signals I know that messages can be sent electronically I can send and decode messages using Morse Code I can encode and decode messages using a cipher I know the importance of cryptography throughout time
iEditVideo	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	I can record video clips that use techniques from my storyboard. I can trim and arrange video clips using editing tools. I can add transitions to make my video flow smoothly. I can add music and sound effects to enhance my video. I can add text overlays to explain or highlight parts of my video. I can sync sound effects and music to match the visuals in my video.
iSafe	use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	I can talk about the risks and benefits of using various forms of communication I know what makes information personal and private I follow safety rules and behave responsibly when using technology I can talk about personal safety in real life and online I know the SMART rules for communicating online I can check the validity of online content

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Year 5	National Curriculum Links	iCan - Computing
General		8 I am sensible about which information I can trust
		8 I can compare different sources of information I can communicate online safety and sensibly
		8 I know that people can be bullied online and this is called cyberbullying
		8 I can talk about the different ways people can be bullied online
		8 I know what to do if I come across cyberbullying
		8 I can cross-check information provided on one website against that provided on another
		8 I can create digital content for specific purposes
		8 I can use basic safety measures when using technology and working online
		8 I can use appropriate search criteria to find information and check if it is reliable and useful
		8 I know that personal information should only be given to trusted sources
		8 I know that some information on the internet may be misleading or inaccurate and that it needs to be checked
		8 ! use technology and online services to communicate and collaborate
		8 I can identify some of the risks involved in communicating online and take steps to avoid them
	Information Technology	8 I understand that information in the form of text, sound and pictures can be combined to create digital content and communicate with an audience
		8 I can design and create digital content for a particular purpose and audience
		8 I can create digital content that uses both text and images
		8 I can choose and use the appropriate advanced features of word processing or presentation software
	Digital Literacy	8 I know that a computer network consists of a number of computers and devices that are connected
		8 I can suggest a range of activities you can do using the internet, including web browsing
		8 I can find information by navigating around a number of websites using hyperlinks and button

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Year 6	National Curriculum Links	iCan - Computing
iProgram	8 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 8 use sequence, selection, and repetition in programs; work with variables and various forms of input and output 8 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 8 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 8 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	8 I can identify a range of input devicesused in playing computer games 8 I can write and change computer programs to make them do a number of things 8 I can use loops, variables and conditional statements (if..then) in computer programs 8 I can design a program and detail the objects, interactions and rules for a game 8 I can use variables and program the rules necessary to progress in a game 8 I can program a game that has more than one level 8 I can identify mistakes in my own and other's computer programs 8 I can systematically test my programs to find bugs and correct them

Year 6	National Curriculum Links	iCan - Computing
iApp	8 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 8 use sequence, selection, and repetition in programs; work with variables and various forms of input and output 8 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	8 I can talk about what benefits mobile technology brings to modern culture (e.g. communication, collaboration, social, business etc.) 8 I can create an app that includes images, buttons and sound 8 I can use variables, loops, conditionals (if .. then), procedures and functions in my programs 8 I can identify mistakes in my own and other's computer programs 8 I can make changes to my code when things do not execute as expected 8 I can write code using a text-based programming language 8 I can split a problem into smaller steps to help solve it and know this is called decomposition 8 I can use algorithms to come up with solutions to problems
iModel	8 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	8 I can build a simple house using modelling tools 8 I can explain the tools used in creating my model 8 I can add components to a model 8 I can design model 8 I can build a model to a design 8 I can identify improvements that could be made to a model 8 I can amend my models to improve them 8 I can import and add images

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Year 6	National Curriculum Links	iCan - Computing
iData	Select, use and combine a variety of software on a range of digital devices to design & create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	I can use a spreadsheet to solve problems I can use the correct formula to carryout calculations I can create, edit and copy graphs using a spreadsheet I can use the SUM function in formulae to add numerical data I can use the data in a spreadsheet to answer questions and make choices
iNetwork	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	I can talk about the benefits of being connected I know a computer network is a group of computers that are connected I can talk about how the Internet is many networks connected and is a Wide Area Network (WAN) I know that a router sends and receives data as packets I know that websites have an address and are located on web servers around the world I can tell you the difference between the World Wide Web and the Internet I can find the location of a website using a computer I can talk about the number of routers (hops) a request to visit a website passes through before reaching its location I can describe how search engines 'crawl' links on websites to find out which web pages are available on the world wide web I know that search results are organised in order of popularity and this is called being 'ranked' I can explain how search results are ranked by search engines I can use effective search terms to find things online I can set out content on a web page using basic HTML I can style content on a web page using basic CSS

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Year 6	National Curriculum Links	iCan - Computing
iSafe	8 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	8 I can talk about the risks and benefits of communicating online 8 I understand what is personal and private information and when/where to share it 8 I can give you examples of situations that would call for getting help 8 I can identify one or more people I can trust (E.g. police officer or teacher) 8 I can talk about the importance of never sharing passwords, except with parents or guardians 8 I can talk about the importance of screen locks that protect devices 8 I know how to create passwords that are hard to guess, yet easy to remember 8 I can make decisions about information sharing on the sites and services I use 8 I can identify situations of harassment or bullying online 8 I can talk about specific ways to respond to bullying when I see it 8 I can explain how to behave if I experience harassment 8 I know how to respond to negativity online 8 I can identify situations when it's better to communicate face-to-face rather than to message 8 I recognise that looking for help for myself or other people is a sign of strength 8 I know that there are tools available to report online abuse 8 I can talk about when and why it would be appropriate to use online reporting
iLearnAI	8 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 8 use sequence, selection, and repetition in programs; work with variables and various forms of input and output 8 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 8 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	8 I know that computers can be taught to learn and the process is called machine learning 8 I know that data is used to train computers 8 I know that AI can respond to a range of input 8 I can classify data 8 I can create input data for machine learning models 8 I know that AI models make predictions based on input data 8 I can talk about how the quality, amount and type of training data affects the accuracy and reliability of machine learning systems 8 I know that training data can be biased 8 I can train machine learning models to recognise and respond to text, movement and emotion 8 I can talk about how the quality and type of training data affect the accuracy and reliability of machine learning systems 8 I can discuss the role of AI in society, including ethical considerations

iCompute iCan - Computing

Year 6	National Curriculum Links	iCan - Computing
iMicrobit	8 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 8 use sequence, selection, and repetition in programs; work with variables and various forms of input and output 8 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	8 write and debug programs 8 use sequence, selection, and repetition 8 use variables and inputs to create programs that control micro:bit's 8 transfer and test programs on the micro:bit 8 use logical reasoning to explain how algorithms work 8 can detect and correct errors in code
General	**Information Technology** 8 Select, use and combine a variety of software on a range of digital devices to design & create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	8 I can use a keyboard quickly and accurately 8 I can create interactive presentations that combine text, images, sound and video 8 I can use hyperlinks in my presentations 8 I can format and edit my work to make it better 8 I can create, improve and understand graphs and charts 8 I can design questions and perform searches using more than one criteria on databases/spreadsheets 8 I can check the reliability of data 8 I can investigate the effects of changing variables 8 I can make and test predictions using digital tools 8 I can use a spreadsheet to solve problems 8 I can use the correct formula to carryout calculations 8 I can create, edit and copy graphs using a spreadsheet 8 I can use the SUM function in formulae to add numerical data 8 I can use the data in a spreadsheet to answer questions and make choices

Year 6	National Curriculum Links	iCan - Computing
Digital Literacy		8 I can present data to a given audience and display findings using a range of digital tools 8 I can communicate and collaborate online at schools and outside of it (E.g. messaging, gaming) 8 I can share my work with a wide audience (E.g. blogging, publishing web pages) 8 I understand when and where I can use the Internet to find things out 8 I can explain what copyright is and how it applies to things I would like to use 8 I know that I need permission to use other people's work in mine 8 I can tell you how to check whether information online is reliable or useful 8 I can explain how online research involves putting information together, understanding it and working out whether it is useful or good