Computing Curriculum at Launde

Intent

Computing at Launde School intends to develop 'thinkers of the future' through a modern, consistent and relevant education in computing. We want to equip pupils to use computational thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a

means to drive their generation forward into the future.



Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online.

Our aim is to provide a computing curriculum that is designed to balance acquiring a broad and deep knowledge alongside opportunities to apply skills in various digital contexts. Beyond teaching computing discreetly, we will give pupils the opportunity to apply and develop what they have learnt across wider learning in the curriculum.

Our computing curriculum is high quality, well thought out and is planned to demonstrate progression through the year groups. The curriculum we use for the teaching of computing is from the 'Teach Computing'

Curriculum and covers all aspects of the National Curriculum. This scheme was chosen as it has been created by subject experts and based on the latest pedagogical research. It provides an innovative progression framework where computing content (concepts, knowledge, skills and objectives) has been organised into interconnected networks called learning graphs.

The curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum is divided into 3 strands: computer science, information technology and digital literacy, with the aims of the curriculum reflecting this distinction.

Our curriculum for computing aims to ensure all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer science)
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Computer science)
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information technology)
- are responsible, competent, confident and creative users of information and communication technology. (Digital literacy)



Despite not being explicitly on the Early Years Curriculum, we at Launde Primary School feel that it is important to give opportunities for children to use technology in different forms from the first year that are at school. In EYFS, the children have a regular slot in the computer suite and we teach the children basic skills, like turning on the computer, operating a simple programme, programming bee-bots. In the Early years and beyond, children here at Launde are able to access interactive whiteboards during lessons. There is opportunity for children to use ICT skills, for example in the shop they get to use a digital card machine and a till. All of these basic skills are in preparation for when they move up through the school and their skills progress in each key stage and year group.

The most relevant statements for Computing are taken from physical Development, personal, Social and Emotional Development, Understanding the World and Expressive Arts and Design

Implementation

We teach computing every week to ensure the skills development is regular and consistent.

We have a range of technology for the children to use to support their skills development. We have class sets of ipads and two computer suites with desktop computers in, one in KS2 and one in FS/KS1. Each teaching areas has an interactive whiteboard. We also have additional computing hardware such as beebots, crumble kits etc to support the curriculum delivery. There is a clear structure to the lessons where children are taught a new skill, have an opportunity to practise and then apply their learnt skills.



A key part of implementing our computing curriculum is to ensure that safety of our pupils is paramount. We take online safety very seriously and we aim to give children the necessary skills to keep themselves safe online. Children have a right to access safe online spaces and to benefit from all the opportunities that a connected world can bring them, appropriate to their age and stage. Online safety and responsible use of technology are topics covered in computing and PSHE lessons, assemblies and during events such as Safer Internet Day. We follow Childnet's 'SMART with a heart rules' for safer internet use and posters can be found in all classrooms around the school.

All children are provided with Microsoft accounts which allow access to TEAMS. This enables children to access their homework remotely. All pupils get an equitable offer to IT to complete research and homework tasks. Our pupils who are registered as pupil Premium have a laptop computer allocated to them from Year 2 to Year 6. In EYFS and Year 1, the children have an ipad to use at home. All devises have the correct safer use software installed.

Within Computing, we encourage a creative and collaborative environment in which pupils can learn to express and challenge themselves. The success of the curriculum itself is assessed through the analysis of yearly progress data, lesson observations, pupil voice and skills audits. This then informs future adaptions of the scheme of work and help to ensure that progression is evident throughout school alongside constant review to ensure it is relevant to the children's learning experiences.



Impact

In order to demonstrate that we have accomplished our aims, pupils at Launde Primary School will:

- Be enthusiastic and confident in their approach towards computing
- Present as competent and adaptable 'Computational Thinkers' who are able to use identified concepts and approaches in all of their learning.
- Be able to identify the source of problems and work with perseverance to 'debug' them.
- Create and evaluate their own project work.
- Have a secure understanding of the positive applications and specific risks associated with a broad range of digital technology
- Transition to secondary school with a keen interest in the continued learning of this subject.

Compu	ıting in EYFS	
3 - 4 Years	Personal, Social and Emotional Development	Remember rules without needing an adult to remind them
	Physical Development	Match their developing physical skills to tasks and activities in the setting
	Understanding the World	Explore how things work
Reception	Personal, Social and Emotional Development	 Show resilience and perseverance in the face of a challenge know and talk about the different factors that support their overall health and wellbeing: Sensible amounts of screen time
	Physical Development	Develop their small motor skills so that they can use a range of tools competently, safely and confidently
	Expressive Arts and Design	Explore, use and refine a variety of artistic effects to express their ideas and feelings
ELG	Personal, Social and Emotional Development: Managing Self	 Be confident to try new activities and show independence, resilience and perseverance in the face of challenge Explain the reasons for rules, know right from wrong and try and behave accordingly
	Expressive Arts and Design: Creating with materials	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function

			Computing Lo	ng term plan		
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Technology Around Us	Creating Media – Digital painting	Programming A – Moving a Robot	Data & Information – Grouping Data	Creating Media – Digital Writing	Programming B – Programming Animations
Year 2	Computing systems and networks – IT around us	Creating Media – Digital Photography	Programming A – Robot Algorithms	Creating Media – Digital Music	Programming B – Programming quizzes	Data and Information - Pictograms
Year 3	Computing systems & Networks – Connecting Computers	Creating Media	Programming A – Sequencing Sounds	Data and Information – Branching Databases	Creating Media – Desktop Publishing	Programming B – Events and actions Programs
Year 4	Computing systems and networks – The Internet	Creating Media – Audio Production	Programming A – Repetition in Shapes	Data and Information – Data Logging	Creating Media – Photo Editing	Programming B – Repetition in games
Year 5	Computing systems and networks – systems and searching	Creating Media – Video Production	Programming A – Selection in physical computing	Data and Information – flat file databases	Creating Media – Introduction to vector graphics	Programming B – Selection in quizzes
Year 6	Computing systems and networks – Communication and collaboration	Creating Media – web page creation	Programming A – Variables in games	Data and information – Introduction to spreadsheets	Creating Media – 3D Modelling	Programming B – Sensing Movement

Lesson sequences of learning

						National Curriculum Links	Teach Computing Taxonomy		
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ira	d Ord	Unit Name	Less	Learning Objectives	-I can explain how these technology examples	1. 1. 1. 1. 1. 1. 1. 1.	A C C D D F H	P S Links	Connected World
		Computing systems			help us				
1	1	and networks - Technology around	1	-To identify technology	- I can explain technology as something that helps				 Copyright and ownership Health, well-being and lifestyle
		us			- I can locate examples of technology in the				ricasii, iren being and in essyre
					classroom				
.		Computing systems and networks -			-I can name the main parts of a computer				- Copyright and ownership
'	1	Technology around	2	-To identify a computer and its main parts	- I can switch on and log into a computer				- Health, well-being and lifestyle
		us Computing systems			- I can use a mouse to click and drag	······			
.		and networks -		-To use a mouse in different ways	-I can click and drag to make objects on a screen				- Copyright and ownership
'	'	Technology around	,	-10 use a mouse in dirrerent ways	- I can use a mouse to create a picture				- Health, well-being and lifestyle
		us Computing systems			- I can use a mouse to open a program				
, l	1	and networks -	4	-To use a keyboard to type on a computer	-l can save my work to a file				- Copyright and ownership
·		Technology around	,	To use a neyboard to type on a compater	- I can say what a keyboard is for				- Health, well-being and lifestyl
		Computing systems			- I can type my name on a computer				
1	1	and networks -	5	-To use the keyboard to edit text	-l can delete letters				- Copyright and ownership
	-	Technology around us		,	- I can open my work from a file - I can use the arrow keys to move the cursor				- Health, well-being and lifestyle
					-I can discuss how we benefit from these rules				
,		Computing systems and networks -		-To create rules for using technology	- I can give examples of some of these rules				- Copyright and ownership
'	'	Technology around	6	responsibly	- I can identify rules to keep us safe and healthy when we are using technology in and beyond the				- Health, well-being and lifestyl
		us			home				
					-I can draw lines on a screen and explain which tools I used				
1	2	Creating media – Digital painting	1	-To describe what different freehand tools do	- I can make marks on a screen and explain which			Art and Design	
		Digital painting			tools lused				
					- I can use the paint tools to draw a picture -I can make marks with the square and line tools	······			
1	2	Creating media -	2	-To use the shape tool and the line tools	- I can use the shape and line tools effectively			Art and Design	
'	-	Digital painting	-	- 10 use the shape tool and the line tools	- I can use the shape and line tools to recreate the			Art slid Desigli	
					work of an artist -I can choose appropriate shapes				
1	2	Creating media – Digital painting	3	-To make careful choices when painting a digital picture	- I can create a picture in the style of an artist			Art and Design	
		Digital painting		picture	- I can make appropriate colour choices			·····	
.		Creating media -			colours to recreate the work of an artist - I can say which tools were helpful and why				
1	2	Digital painting	4	-To explain why I chose the tools I used	- I know that different paint tools do different			Art and Design	
					iobs -I can change the colour and brush sizes				
1	2	Creating media -	5	-To use a computer on my own to paint a picture	- I can make dots of colour on the page			Art and Design	
'	-	Digital painting		- To use a comparer on my own to paint a picture	- I can use dots of colour to create a picture in the			Art and Design	
					style of an artist on my own -I can explain that pictures can be made in lots of				
				_	different ways				
1	2	Creating media - Digital painting	6	-To compare painting a picture on a computer and on paper	- I can say whether I prefer painting using a computer or using paper			Art and Design	
		Digital painting		and on paper	- I can spot the differences between painting on a				
					computer and on paper				
		Programming A -			-I can match a command to an outcome - I can predict the outcome of a command on a				
1	3	Moving a robot	1	-To explain what a given command will do	device			English - writing	
					- I can run a command on a device -I can follow an instruction		<u> </u>		
1	3	Programming A - Moving a robot	2	-To act out a given word	- I can rollow an instruction - I can give directions			English - writing	
		iviovilig a robot			- I can recall words that can be acted out				
				l <u>-</u> ,	-I can compare forwards and backwards movements				
1	3	Programming A - Moving a robot	3	-To combine forwards and backwards commands to make a sequence	- I can predict the outcome of a sequence			English - writing	
					involving forwards and backwards commands - I can start a sequence from the same place				
					-I can compare left and right turns				
,	3	Programming A -	4	-To combine four direction commands to make	- I can experiment with turn and move commands to move a robot			English - writing	
		Moving a robot	•	sequences	- I can predict the outcome of a sequence				
					involving up to four commands				
,	3	Programming A -	5	-To plan a simple program	-I can choose the order of commands in a sequence			English - writing	
'	,	Moving a robot	,	- 1 o bran a simple brodram	- I can debug my program			English - writing	
					- I can explain what my program should do -I can identify several possible solutions				
1		Programming A -	6	-To find more than one solution to a problem	- I can plan two programs			English - writing	
		Moving a robot			- I can use two different programs to get to the same place				

		Data and			Land describes the street of the de-	
	4	information - Grouping data	1	-To label objects	-l can describe objects using labels - l can identify the label for a group of objects - l can match objects to groups	- Copyright and ownersh
	4	Data and information -	2	-To identify that objects can be counted	-l can count a group of objects -l can count objects	- Copyright and ownersh
+	4	Grouping data Data and information -	3	-To describe objects in different ways	- I can group objects -I can describe an object -I can describe a property of an object	- Copyright and ownersh
	4	Grouping data Data and information -	4	-To count objects with the same properties	- I can find objects with similar properties -I can count how many objects share a property -I can group objects in more than one way	- Copyright and ownersh
		Grouping data Data and			- I can group similar objects -I can choose how to group objects	
	4	information - Grouping data	5	-To compare groups of objects	- I can describe groups of objects - I can record how many objects are in a group - I can compare groups of objects	- Copyright and ownersh
	4	Data and information – Grouping data	6	-To answer questions about groups of objects	- I can decide how to group objects to answer a question - I can record and share what I have found	- Copyright and ownersh
	5	Creating media – Digital writing	1	-To use a computer to write	- I can identify and find keys on a keyboard - I can open a word processor - I can recognise keys on a keyboard	- Privacy and security
	5	Creating media – Digital writing	2	-To add and remove text on a computer	-l can enter text into a computer -l can use backspace to remove text -l can use letter, number, and space keus	- Privacy and security
	5	Creating media - Digital writing	3	-To identify that the look of text can be changed on a computer	-I can explain what the keys that I have learnt about already do -I can identify the toolbar and use bold, italic, and underline -I can type capital letters	- Privacy and security
	5	Creating media – Digital writing	4	-To make careful choices when changing text	- I can change the font - I can change the font - I can select all of the text by clicking and dragging - I can select a word by double-clicking	- Privacy and security
	5	Creating media - Digital writing	5	-To explain why I used the tools that I chose	-l can decide if my changes have improved my writing - I can say what tool I used to change the text - I can use 'undo' to remove changes	- Privacy and security
	5	Creating media - Digital writing	6	-To compare typing on a computer to writing on paper	-I can explain the differences between typing and writing -I can make changes to text on a computer -I can make changes to text on a computer -I can say why I prefer typing or writing	- Privacy and security
	6	Programming B - Programming animations	1	-To choose a command for a given purpose	-I can compare different programming tools -I can find which commands to move a sprite -I can use commands to move a sprite -I can use commands to move a sprite	
	6	Programming B - Programming animations	2	-To show that a series of commands can be joined together	-I can run my program -I can use a Start block in a program -I can use more than one block by joining them together	
	6	Programming B - Programming animations	3	-To identify the effect of changing a value	- I can change the value - I can find blocks that have numbers - I can gan what happens when I change a value	
	6	Programming B - Programming animations	4	-To explain that each sprite has its own instructions	-l can add blocks to each of my sprites -l can delete a sprite -l can show that a project can include more than one sprite	
	6	Programming B - Programming animations	5	-To design the parts of a project	- I can choose appropriate artwork for my project - I can choose appropriate artwork for my project - I can create an algorithm for each sprite - I can decide how each sprite will move	
	6	Programming B - Programming animations	6	-To use my algorithm to create a program	- I can sad programming blocks based on my algorithm - I can test the programs I have created - I can test the programs with the sad of the sad	

- 1		Computing systems		-To recognise the uses and features of	-I can describe some uses of computers				
2	1	and networks - IT around us	1	information technology	- I can identify examples of computers - I can identify that a computer is a part of IT				- Health, well-being and lifes
2	1	Computing systems and networks - IT around us	2	-To identify the uses of information technology in the school	-I can identify examples of IT - I can identify that some IT can be used in more than one way - I can sort school IT by what it's used for				- Health, well-being and lifes
2	1	Computing systems and networks - IT	3	-To identify information technology beyond school	-l can find examples of information technology -l can sort ∏ by where it is found				- Health, well-being and lifes
2	1	around us Computing systems and networks - IT	4	-To explain how information technology helps us	- I can talk about uses of information technology -I can demonstrate how IT devices work together - I can recognise common types of technology	 			- Health, well-being and lifes
2	1	around us Computing systems and networks - IT	5	-To explain how to use information technology	- I can say why we use IT technology - I can say how rules can help keep me safe		<mark></mark>		- Health, well-being and life:
		around us Computing systems		safely -To recognise that choices are made when using	- I can talk about different rules for using IT -I can explain the need to use IT in different ways	 			
2	1	and networks - IT around us	6	information technology	- I can identify the choices that I make when using IT - I can use IT for different types of activities				- Health, well-being and life
2	2	Creating media - Digital photography	1	-To use a digital device to take a photograph	photo - I can recognise what devices can be used to take photographs - I can talk about how to take a photograph			Art and design	- Self-image and identity
2	2	Creating media – Digital photography	2	-To make choices when taking a photograph	-I can explain the process of taking a good photograph -I can explain why a photo looks better in portrait or landscape format -I can take photos in both landscape and portrait format			Art and design	- Self-image and identity
2	2	Creating media - Digital photography	3	-To describe what makes a good photograph	rormac - I can discuss how to take a good photograph - I can identify what is wrong with a photograph - I can improve a photograph by retaking it			Art and design	- Self-image and identity
2	2	Creating media - Digital photography	4	-To decide how photographs can be improved	-l can experiment with different light sources -l can explain why a picture may be unclear -l can explore the effect that light has on a photo			Art and design	- Self-image and identity
2	2	Creating media - Digital photography	5	-To use tools to change an image	-l can explain my choices -l can recognise that images can be changed -l can use a tool to achieve a desired effect			Art and design	- Self-image and identity
2	2	Creating media – Digital photography	6	-To recognise that photos can be changed	-I can apply a range of photography skills to capture a photo -I can identify which photos are real and which have been changed -I can recognise which photos have been changed			Art and design	- Self-image and identity
2	3	Programming A - Robot algorithms	1	-To describe a series of instructions as a sequence	-I can choose a series of words that can be enacted as a sequence -I can follow instructions given by someone else -I can give clear instructions			Music	
2	3	Programming A - Robot algorithms	2	-To explain what happens when we change the order of instructions	-I can show the difference in outcomes between two sequences that consist of the same commands -I can use an algorithm to program a sequence on a floor robot -I can use the same instructions to create different algorithms			Music	
2	3	Programming A - Robot algorithms	3	-To use logical reasoning to predict the outcome of a program	-I can compare my prediction to the program			Music	
:	3	Programming A - Robot algorithms	4	-To explain that programming projects can have code and artwork	-I can explain the choices I made for my mat design -I can identify different routes around my mat -I can test my mat to make sure that it is usable			Music	
2	3	Programming A - Robot algorithms	5	-To design an algorithm	- I can test my mat to make sure that it is usable -I can create an algorithm to meet my goal -I can explain what my algorithm should achieve -I can use my algorithm to create a program			Music	
2	3	Programming A - Robot algorithms	6	-To create and debug a program that I have	task - I can put together the different parts of my program			Music	

		Data and			-l can compare totals in a tally chart		
۱ ا	6	information - Pictograms	1	-To recognise that we can count and compare objects using tally charts	- I can record data in a tally chart - I can represent a tally count as a total	Maths - Privacy and se	
					-I can enter data onto a computer		
	_	Data and		-To recognise that objects can be represented	- I can use a computer to view data in a different		
- 1	6	information - Pictograms	2	as pictures	format	Maths - Privacy and se	ecurity
		Pictograms			- I can use pictograms to answer simple questions about objects		
-		Data and			-I can explain what the pictogram shows		
	6	information -	3	-To create a pictogram	- I can organise data in a tally chart	Maths - Privacy and se	security
		Pictograms			- I can use a tally chart to create a pictogram		
		B			-I can answer 'more than'/'less than' and		
	6	Data and information -	4	-To select objects by attribute and make	'most/least' questions about an attribute - I can create a pictogram to arrange objects by	Maths - Privacy and se	securitu
- 1		Pictograms	,	comparisons	an attribute		,
					- I can tally objects using a common attribute		
					-l can choose a suitable attribute to compare		
	6	Data and information -	5	-To recognise that people can be described by	people	Maths - Privacy and se	cocuritu
- 1	۰	Pictograms	'	attributes	- I can collect the data I need - I can create a pictogram and draw conclusions	ividus - Frivacy and se	ecurity
		1			from it		
					-I can give simple examples of why information		
		Data and		To applyin that we can recent information	should not be shared		
	6	information -	6	-To explain that we can present information using a computer	- I can share what I have found out using a computer	Maths - Privacy and se	ecurity
		Pictograms		1 5 7	- I can use a computer program to present		
_					information in different ways		
					-I can describe music using adjectives		
	4	Creating media -	1	-To say how music can make us feel	- I can identify simple differences in pieces of music	- Copyright and	ad owner
	•	Digital music	'	To say non maste can make as reci	- I can say what I do and don't like about a piece	Sopyright	- Commen
					of music		
					-I can create a rhythm pattern		
	4	Creating media -	2	-To identify that there are patterns in music	- I can explain that music is created and played by humans	- Copyright and	nd auras
	•	Digital music	•	-10 Identity that there are patterns in masic	- I can play an instrument following a rhythm	- сорунди ан	,a owner
			1		pattern		
		Creating media -	1		-I can connect images with sounds		
	4	Digital music	3	-To experiment with sound using a computer	- I can relate an idea to a piece of music	- Copyright and	id owner
					- I can use a computer to experiment with pitch -I can explain how my music can be played in	······································	
		Creating media -	١.	1_	different ways		4.
	4	Digital music	4	-To use a computer to create a musical pattern	- I can identify that music is a sequence of notes	- Copyright and	d owner
					- I can refine my musical pattern on a computer		
		Creating media -			-I can add a sequence of notes to my rhythm		
	4	Digital music	5	-To create music for a purpose	- I can create a rhythm which represents an animal I've chosen	- Copyright and	id owner
					- I can create my animal's rhythm on a computer		
					-I can explain how I changed my work		
	4	Creating media - Digital music	6	-To review and refine our computer work	- I can listen to music and describe how it makes	- Copyright and	nd owner
		Digital music		1	me feel - I can review my work		
	_	Programming D		-To explain that a sequence of commands has a	-fical fatencity chac a program needs to be started		
	5	Programming	1	start	- I can identify the start of a sequence		
		quizzes			- I can show how to run my program -I can change the outcome of a sequence of		
		D			commands		
-	5	Programming B - Programming	2	-To explain that a sequence of commands has an	- I can match two sequences with the same		
-	•	quizzes	-	outcome	outcome		
		1			- I can predict the outcome of a sequence of commands		
					-I can build the sequences of blocks I need		
		Programming B -			- I can decide which blocks to use to meet the		
	5	Programming	3	-To create a program using a given design	design		
		quizzes			- I can work out the actions of a sprite in an algorithm		
		Programming B -			-I can choose backgrounds for the design		
	5	Programming	4	-To change a given design	- I can choose characters for the design		
		quizzes			- I can create a program based on the new design		
		Programming B -			-I can build sequences of blocks to match my		
	5	Programming	5	-To create a program using my own design	design - I can choose the images for my own design		
		quizzes			- I can choose the images for my own design - I can create an algorithm		
		Programming B -			-I can compare my project to my design		
	5	Programming	6	-To decide how my project can be improved	- I can debug my program		
		quizzes			- I can improve my project by adding features		

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	d Ord	Unit Name	Less	Learning Objectives	Success Criteria	2	2	2	2.	2 2	2 7	A .	C	C	D	D	ΕŤ	п	H	P S:	: *	Links	Connected World
3	1	Computing systems and networks - Connecting computers	1	-To explain how digital devices function	-I can explain that digital devices accept inputs -I can explain that digital devices produce outputs -I can follow a process																		
3	1	Computing systems and networks - Connecting computers	2	-To identify input and output devices	-I can classify input and output devices -I can describe a simple process -I can describe a diquist device																		
3	1	Computing systems and networks - Connecting computers	3	-To recognise how digital devices can change the way we work	-l can explain how I use digital devices for different activities - I can recognize similarities between using digital devices and non-digital tools - I can suggest differences between using digital devices and non-digital tools																		
3	1	Computing systems and networks – Connecting computers	4	-To explain how a computer network can be used to share information	-l can discuss why we need a network switch -l can explain how messages are passed through multiple connections -l can recognise different connections																		
3	1	Computing systems and networks - Connecting computers	5	-To explore how digital devices can be connected	-l can demonstrate how information can be passed between devices -l can explain the role of a switch, server, and wireless access point in a network -l can recognize that a computer network is made up of a number of devi	ces																	
3	1	Computing systems and networks – Connecting computers	6	-To recognise the physical components of a network	-l can identify how devices in a network are connected together -l can identify networked devices around me -l can identify the benefits of computer networks																		
3	2	Creating media - Stop-frame animation	1	-To explain that animation is a sequence of drawings or photographs	-l can create an effective flip book—style animation -l can draw a sequence of pictures -l can explain low an animationflip book works																		- Copyright and ownership - Managing online informati
3	2	Creating media - Stop-frame animation	2	-To relate animated movement with a sequence of images	-1 can create an effective stop-frame animation -1 can explain why little changes are needed for each frame -1 can predict what an animation will look like																		- Copyright and ownership - Managing online informati
3	2	Creating media - Stop-frame animation	3	-To plan an animation	-I can break down a story into settings, characters and events -I can create a storyboard -I can decreate an animation that is achievable on screen																		- Copyright and ownership - Managing online informati
3	2	Creating media - Stop-frame animation	4	-To identify the need to work consistently and carefully	-I can evaluate the quality of my animation -I can review a sequence of frames to check my work -I can use onion skinning to their me make small changes between frames																		- Copyright and ownership - Managing online informati
3	2	Creating media - Stop-frame animation	5	-To review and improve an animation	-I can evaluate another learner's animation -I can explain ways to make my animation better -I can improve my animation based on feedback																		- Copyright and ownership - Managing online informat
3	2	Creating media - Stop-frame animation	6	-To evaluate the impact of adding other media to an animation	-1 can add other media to my animation -1 can evaluate my final film -1 can explain why! added other media to my animation																		- Copyright and ownership - Managing online informati

3	3	Programming A - Sequencing sounds	1	-To explore a new programming environment	-1 can explain that objects in Scratch have attributes (linked to) -1 can identify the objects in a Scratch project (sprites, backdrops) -1 can recognize that commands in Scratch are represented as blocks	
3	3	Programming A - Sequencing sounds	2	-To identify that commands have an outcome	-1 can choose a word which describes an on-screen action for my plan -1 can create a program following a design -1 can identify that each sprite is controlled by the commands I choose	
3	3	Programming A - Sequencing sounds	3	-To explain that a program has a start	-I can create a sequence of connected commands -I can explain that the objects in my project will respond exactly to the code -I can starts program in different ways	
3	3	Programming A - Sequencing sounds	4	-To recognise that a sequence of commands can have an order	-I can combine sound commands -I can explain what a sequence is -I can order notes into a sequence	
3	3	Programming A - Sequencing sounds	5	-To change the appearance of my project	-I can build a sequence of commands -I can decide the actions for each sprite in a program -I can make design choices for my artwork	
3	3	Programming A - Sequencing sounds	6	-To create a project from a task description	-I can identify and name the objects I will need for a project - I can implement my algorithm as code - I can relate a task description to a design	
3	4	Data and information - Branching databases	1		-I can create two groups of objects separated by one attribute -I can investigate questions with yes/no answers -I can make up a wes/no question about a collection of objects	
3	4	Data and information - Branching databases	2	-To identify the attributes needed to collect data about an object	-I can arrange objects into a tree structure -I can create a group of objects within an existing group -I can select an attribute to separate objects into groups	
3	4	Data and information - Branching databases	3	-To create a branching database	-I can group objects using my own yes/no questions -I can select objects to arrange in a branching database -I can test my branching database to see if I works	
3	4	Data and information - Branching databases	4	-To explain why it is helpful for a database to be well structured	-1 can compare two branching database structures -1 can create yes/ho questions using given attributes -1 can explain that questions need to be ordered carefully to split objects into similarly sized groups	
3	4	Data and information - Branching databases	5	-To plan the structure of a branching database	-I can create a physical version of a branching database - I can create questions that will enable objects to be uniquely identified - I can independently croste questions to use in a branching database	
3	4	Data and information – Branching databases	6	-To independently create an identification tool	-I can create a branching database that reflects my plan -I can suggest real-world uses for branching databases -I can work with a partner to set my identification tool	

5	Creating media - Desktop publishing	1	-To recognise how text and images convey information	-I can explain the difference between text and images - I can identify the advantages and disadvantages of using text and images - I can recognise that text and images can communicate mescages clearly	- Copyright and ownership - Managing online information
5	Creating media - Desktop publishing	2	-To recognise that text and layout can be edited	-I can change font style, size, and colours for a given purpose -I can edit text -I can edit text can be changed to communicate more clearly	- Copyright and ownership - Managing online information
5	Creating media - Desktop publishing	3	-To choose appropriate page settings	-I can create a template for a particular purpose -I can define the term 'page orientation' -I can recognise placeholders and say why they are important	- Copyright and ownership - Managing online information
5	Creating media – Desktop publishing	4	-To add content to a desktop publishing publication	-I can choose the best locations for my content - I can make changes to content after I've added it - I can pasts text and impage to greate a magazine cover	- Copyright and ownership - Managing online information
5	Creating media - Desktop publishing	5	-To consider how different layouts can suit different purposes	-I can choose a suitable layout for a given purpose - I can identify different layouts - I can match a layout to a purpose	- Copyright and ownership - Managing online information
5	Creating media - Desktop publishing	6	-To consider the benefits of desktop publishing	-I can compare work made on desktop publishing to work created by hand -I can identify the uses of desktop publishing in the real world -I can say why desktop publishing might be helpful	- Copyright and ownership - Managing online information
6	Programming B - Events and actions in programs	1	-To explain how a sprite moves in an existing project	-I can choose which keys to use for actions and explain my choices - I can explain the relationship between an event and an action - I can identify a way to improve a program	
6	Programming B - Events and actions in programs	2	-To create a program to move a sprite in four directions	-I can choose a character for my project - I can choose a suitable size for a character in a maze - I can program movement	
6	Programming B - Events and actions in programs	3	-To adapt a program to a new context	-I can choose blocks to set up my program -I can consider the real world when making design choices -I can use a programming extension	
6	Programming B - Events and actions in programs	4	-To develop my program by adding features	-I can build more sequences of commands to make my design work - I can choose withde keys to turn on additional features - I can identify additional features from a given set of blocke)	
6	Programming B - Events and actions in programs	5	-To identify and fix bugs in a program	-I can match a piece of code to an outcome - I can modify a program using a design - I can seed a program using a design - I can seed a program squincts a given design	
6	Programming B - Events and actions in programs	6	-To design and create a maze-based challenge	-I can evaluate my project - I can implement my design - I can make design choices and justify them	
	5 5 5 5 6 6 6 6	publishing Creating media - Desktop publishing Programming B - Events and actions in programs Programming B - Events and actions in programs	publishing Creating media - Desktop publishing Programming B - Events and actions in programs Frogramming B - Events and actions in programs Programming B - Events and actions in programs	publishing Information Creating media - Desktop publishing 2	Security and Security Securit

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4	1	Computing systems and networks - The Internet	1	-To describe how networks physically connect to other networks	-I can demonstrate how information is shared across the internet -I can describe the internet as a network of networks -I can discuss why a network neede protecting	
4	1	Computing systems and networks - The Internet	2	-To recognise how networked devices make up the internet	-I can describe networked devices and how they connect - I can explain that the internet is used to provide many services - I can recognise that the World Wide Web contains websites and web pages	
4	1	Computing systems and networks - The Internet	3	-To outline how websites can be shared via the World Wide Web (WWW)	-I can describe how to access websites on the \w'\w'\w' -I can describe where websites are stored when uploaded to the \w'\w'\w' -I can describe where websites are stored when uploaded to the \w'\w'\w' -I can explain the types of media that can be shared on the \w'\w'\w'	
4	1	Computing systems and networks - The Internet	4	-To describe how content can be added and accessed on the World Wide Web (WWW)	-I can explain that internet services can be used to create content online -I can explain what media can be found on websites -I can recipalise that I can add content to the W"W"	
4	1	Computing systems and networks - The Internet	5	-To recognise how the content of the WWW is created by people	-I can explain that there are rules to protect content -I can explain that websites and their content are created by people -I can explain that websites and their content on websites -I can expansive who owns the content on websites	
4	1	Computing systems and networks - The Internet	6	-To evaluate the consequences of unreliable content	-I can explain that not everything on the World Wide Web is true - I can explain why I need to think carefully before I share or reshare content - I can explain why some information I find online may not be honest, securate, or legal	
4	2	Creating media - Audio production	1	-To identify that sound can be recorded	-I can explain that the person who records the sound can say who is allowed to use it -I can identify the input and output devices used to record and play sound -I can use a computer to record sudio	- Copyright and ownership
4	2	Creating media - Audio production	2	-To explain that audio recordings can be edited	-I can discuss what sounds can be added to a podcast - I can inspect the soundwave view to know where to trim my recording - I can re-record my voic to improve my recording	- Copyright and ownership
4	2	Creating media - Audio production	3	-To recognise the different parts of creating a podcast project	-I can explain how sounds can be combined to make a podcast more engaging -I can plan appropriate content for a podcast -	- Copyright and ownership
4	2	Creating media - Audio production	4	-To apply audio editing skills independently	-I can improve my voice recordings -I can record content following my plan -I can record the quality of my recordings	- Copyright and ownership
4	2	Creating media - Audio production	5	-To combine audio to enhance my podcast project	-I can arrange multiple sounds to create the effect I want - I can explain the difference between saving a project and exporting an audio file - I can open my project to continue working on it	- Copyright and ownership
4	2	Creating media - Audio production	6	-To evaluate the effective use of audio	-I can choose appropriate edits to improve my podcast - I can listen to an audio recording to identify its strengths - I can suggest improvements to an audio recording	- Copyright and ownership

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4	3	Programming A - Repetition in shapes	1	-To identify that accuracy in programming is important	-I can create a code snippet for a given purpose -I can explain the effect of changing a value of a command -I can program a computer by typing commands									
4	3	Programming A - Repetition in shapes	2	-To create a program in a text-based language	-I can test my algorithm in a text-based language -I can use a template to create a design for my program -I can urite an algorithm to produce a given outcome									
4	3	Programming A – Repetition in shapes	3	-To explain what 'repeat' means	-I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, datence moves -I can identify patterns in a sequence -I can use a count-controlled loop to produce a given outcome									
4	3	Programming A – Repetition in shapes	4	-To modify a count-controlled loop to produce a given outcome	-1 can choose which values to change in a loop -1 can identify the effect of changing the number of times a task is repeated -1 can predict the outcome of a program containing a count-controlled loop									
4	3	Programming A - Repetition in shapes	5	-To decompose a task into small steps	-I can explain that a computer can repeatedly call a procedure -I can identify chunks' of actions in the real world -I can use a procedure in a program									
4	3	Programming A - Repetition in shapes	6	-To create a program that uses count-controlled loops to produce a given outcome	-I can design a program that includes count-controlled loops -I can develop my program by debugging it -I can make use of my design to write a program									
4	4	Data and information - Data logging	1	-To explain that data gathered over time can be used to answer questions	-I can choose a data set to answer a given question -I can identify data that can be gathered over time -I can pudgest questione that can be answered using a given data set									
4	4	Data and information - Data logging	2	-To use a digital device to collect data automatically	-I can explain what data can be collected using sensors -I can identify that data from sensors can be recorded -I can use data from a sensor to answer a quien question									
4	4	Data and information - Data logging	3	-To explain that a data logger collects 'data points' from sensors over time	-I can identify the intervals used to collect data -I can recognize that a data logger collects data at given points -I can talk about the data that I have captured									
4	4	Data and information - Data logging	4	-To recognise how a computer can help us analyse data	-I can explain that there are different ways to view data -I can sort data to find information -I can view data at different levels of datail									
4	4	Data and information - Data logging	5	-To identify the data needed to answer questions	-I can plan how to collect data using a data logger -I can propose a question that can be answered using logged data -I can use a data logger to collect data									
4	4	Data and information - Data logging	6	-To use data from sensors to answer questions	-I can draw conclusions from the data that I have collected -I can explain the benefits of using a data logger -I can interpret data that has been collected using a data logger									

5	Creating media – Photo editing	1	-To explain that the composition of digital images can be changed	-l can explain why I might crop an image - I can improve an image by rotating it - I can use photo editing software to crop an image	- Copyright and ownership - Self-image and identity
5	Creating media – Photo editing	2	-To explain that colours can be changed in digital images	-I can experiment with different colour effects - I can explain that different colour effects make you think and feel different things -I can explain whe I chose certain colour effects	- Copyright and ownership - Sell-image and identity
5	Creating media – Photo editing	3	-To explain how cloning can be used in photo editing	- I can add to the composition of an image by cloning - I can identify how a photo edit can be improved - I can remove parts of an image using cloning	- Copyright and ownership - Self-image and identity
5	Creating media – Photo editing	4	-To explain that images can be combined	-1 can experiment with tools to select and copy part of an image -1 can explain why photoe might be edited -1 can use a range of tools to copy between images	- Copyright and ownership - Self-image and identity
5	Creating media – Photo editing	5	-To combine images for a purpose	-1 can choose suitable images for my project -1 can create a project that is a combination of other images -1 can describe the imagel want to create	- Copyright and ownership - Self-image and identity
5	Creating media – Photo editing	6	-To evaluate how changes can improve an image	-I can combine text and my image to complete the project -I can review images against a given criteria -I can use redoach to guide making changes	- Copyright and ownership - Self-image and identity
6	Programming B - Repetition in games	1	-To develop the use of count-controlled loops in a different programming environment	-1 can list an everyday task as a set of instructions including repetition -1 can modify a snippet of code to create a given outcome -1 can predict the outcome of a snippet of code	
6	Programming B - Repetition in games	2	-To explain that in programming there are infinite loops and count controlled loops	-1 can choose when to use a count-controlled and an infinite loop -1 can modify loops to produce a given outcome -1 can recognize that some programming languages enable more than one process to be run at once	
6	Programming B - Repetition in games	3	-To develop a design that includes two or more loops which run at the same time	-1 can choose which action will be repeated for each object -1 can evaluate the effectiveness of the repeated sequences used in my program -1 can explain what the outcome of the repeated action should be	
6	Programming B - Repetition in games	4	-To modify an infinite loop in a given program	-1 can explain the effect of my changes -1 can identify which parts of a loop can be changed -1 can re-use existing code simplets on new aprites	
6	Programming B - Repetition in games	5	-To design a project that includes repetition	-1 can develop my own design explaining what my project will do -1 can evaluate the use of repetition in a project -1 can select the parts of a cityen project to use in my own design	
6	Programming B - Repetition in games	6	-To create a project that includes repetition	-l can build a program that follows my design -l can evaluate the steps I followed when building my project -l can refine the algorithm in my design	
	5 5 5 5 6 6	5 Creating media - Photo editing 6 Programming B - Repetition in games	5 Creating media - Photo editing 2 5 Creating media - Photo editing 3 5 Creating media - Photo editing 4 5 Creating media - Photo editing 5 5 Creating media - Photo editing 6 6 Programming B - Repetition in games 2 6 Programming B - Repetition in games 3 6 Programming B - Repetition in games 4 6 Programming B - Repetition in games 5 6 Programming B - Repetition in games 5 7 Programming B - Repetition in games 5	1	Image: can be changed - I can explain why Inighter cop an image - I can improve a timing by proteining - I can improve a timing by proteining - I can improve a timing by proteining - I can explain that colour front - I can explain that different colour effects - I can explain that images - I can explain that the images - I can explain that the colour effects - I can explain that the colour effects - I can explain that the colour effects - I can explain why photon enjoy of wherein explain edges - I can explain that the colour explain that images - I can explain that the colour explain that images - I can explain that the colour explain that images - I can explain that - I can explain that images - I can explain that - I can explain tha

5	1	Computing systems and networks - Systems and searching	1	-To explain that computers can be connected together to form systems	-I can describe that a computer system features inputs, processes, and outputs -I can explain that computer systems communicate with other devices -I can explain that systems are built using a number of parts	-Co	opyright and ownership
5	1	Computing systems and networks - Systems and searching	2	-To recognise the role of computer systems in our lives	-l can explain the benefits of a given computer system -l can identify tasks that are managed by computer systems -l can identify the human elements of a computer system	- Co	opyright and ownership
5	1	Computing systems and networks - Systems and searching	3	-To experiment with search engines	-I can compare results from different search engines -I can make use of a web search to find specific information -I can refine my web search	-Co	opyright and ownership
5	1	Computing systems and networks - Systems and searching	4	-To describe how search engines select results	-I can explain why we need tools to find things online -I can recognize the role of web crawlers in creating an index -I can relate a search term to the search engine's index	-Co	opyright and ownership
5	1	Computing systems and networks - Systems and searching	5	-To explain how search results are ranked	-I can explain that a search engine follows rules to rank results - I can give examples of criteria used by search engines to rank results - I can order a list by rank	- Ca	opyright and ownership
5	1	Computing systems and networks - Systems and searching	6	-To recognise why the order of results is important, and to whom	-I can describe some of the ways that search results can be influenced - I can explain how search engines make money - I can recognize some of the limitations of search engines	- Ca	opyright and ownership
5	2	Creating media - Video production	1	-To explain what makes a video effective	-l can compare features in different videos -l can explain that video is a vizual media format -l can ideatify features of video	- On	lanaging online information nline relationships nline reputation Llf-image and identity
5	2	Creating media - Video production	2	-To identify digital devices that can record video	-1 can experiment with different camera angles -1 can identify and find features on a digital video recording device -1 can make use of a microphota.	- On - On	lanaging online information nline relationships nline reputation Ilf-image and identity
5	2	Creating media - Video production	3	-To capture video using a range of techniques	-l can capture video using a range of filming techniques -l can review how effective my video is -l can guagest filming techniques for a given purpose	- On - On	lanaging online information nline relationships nline reputation llf-image and identity
5	2	Creating media - Video production		-To create a storyboard	-l can create and save video content -l can decide which filming techniques I will use -l can outline the scenes of my video	- On	lanaging online information nline relationships nline reputation llf-image and identity
5	2	Creating media - Video production	5	-To identify that video can be improved through reshooting and editing	-I can explain how to improve a video by reshooting and editing - I can select the correct tools to make edits to my video - I can store, retrieve, and export my recording to a computer	- On	lanaging online information nline relationships nline reputation slf-image and identity
5	2	Creating media - Video production	6	-To consider the impact of the choices made when making and sharing a video	-I can evaluate my video and share my opinions - I can make edits to my video and improve the final outcome - I can recognise that my choices when making a video will impact on the quality of the final outcome	- Mt - On	lanaging online information nline relationships nline reputation elf-image and identity

5	3	Programming A - Selection in physical computing	1	-To control a simple circuit connected to a computer	-I can create a simple circuit and connect it to a microcontroller - I can explain what an infinite loop does I can program a microcontroller to make an LED switch on	
5	3	Programming A – Selection in physical computing	2	-To write a program that includes count- controlled loops	-I can connect more than one output component to a microcontroller -I can design sequences that use count-controlled loops -I can use a count-controlled loop to control outputs	
5	3	Programming A - Selection in physical computing	3	-To explain that a loop can stop when a condition is met	-I can design a conditional loop -I can explain that a condition is either true or false -I can program a microcontroller to respond to an input	
5	3	Programming A - Selection in physical computing	4	-To explain that a loop can be used to repeatedly check whether a condition has been met	-I can explain that a condition being met can start an action - I can identify a condition and an action in my project - I can use selection (an 'ifthen' statement) to direct the flow of a program	
5	3	Programming A - Selection in physical computing	5	-To design a physical project that includes selection	-I can create a detailed drawing of my project -I can describe what my project will do -I can identify a real-world example of a condition starting an action	
5	3	Programming A - Selection in physical computing	6	-To create a program that controls a physical computing project	-I can test and debug my project -I can use selection to produce an intended outcome -I can write an algorithm that describes what my model will do	
5			1	-To use a form to record information	-I can create a database using cards -I can explain how information can be recorded -(can order, sort, and group my data cards	
5			2	-To compare paper and computer-based databases	-l can choose which field to sort data by to answer a given question -l can explain what a field and a record is in a database -l can navigate a flat-file database to compare different views of information	
5	4	Data and information - Flat-file databases	3	-To outline how you can answer questions by grouping and then sorting data	-I can combine grouping and sorting to answer specific questions - I can explain that data can be grouped using chosen values - I can group information using a database	
5			4	-To explain that tools can be used to select specific data	-I can choose multiple criteria to answer a given question - I can choose which field and value are required to answer a given question - I can outline how (AND) and (OP) can be used to refine data selection	
5	4	Data and information - Flat-file databases	5	-To explain that computer programs can be used to compare data visually	-I can explain the benefits of using a computer to create charts - I can refine a chart by selecting a particular filter - I can select an appropriate chart to visually compare data	
5	4	Data and information – Flat-file databases	6	-To use a real-world database to answer questions	-I can ask questions that will need more than one field to answer - I can present my findings to a group - I can refine a search in a real-world context	
	5 5 5 5 5 5 5 5 5	5 3 5 3 5 3 5 3 5 4 5 4 5 4 5 4	physical computing Programming A - Selection in physical computing Data and information - Flat-file databases Data and information - Flat-file databases	physical computing Programming A - Selection in physical computing Data and information - Flat-file databases Data and information - Flat-file databases	physical computing Programming A - Selection in physical computing project Data and information - Flat-file atlabases To explain that tools can be used to select specific data Data and information - Flat-file atlabases To explain that tools can be used to select specific data Data and information - Flat-file atlabases To explain that tools can be used to select specific data	Computer - Computer -

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	5	5	Creating media - Introduction to vector graphics	1	-To identify that drawing tools can be used to produce different outcomes	-I can discuss how vector drawings are different from paper-based Irawings I can experiment with the shape and line tools I can recomise that vector drawings are made using shapes	- Copyright and ownership
	5	5	Creating media - Introduction to vector graphics	2	-To create a vector drawing by combining shapes	-l can explain that each element added to a vector drawing is an object I can identify the shapes used to make vector drawing I can move, resise, and rotate objects of have duplicated	- Copyright and ownership
	5	5	Creating media - Introduction to vector graphics	3	-To use tools to achieve a desired effect	-l can explain how alignment grids and resize handles can be used to aprove consistency I can modify objects to create a new image I can use the soom tool to help me add detail to my drawings	- Copyright and ownership
	5	5	Creating media - Introduction to vector graphics	4	-To recognise that vector drawings consist of layers	-I can change the order of layers in a vector drawing I can identify that each added object creates a new layer in the drawing I can use layering to create an image	- Copyright and ownership
	5	5	Creating media - Introduction to vector graphics	5	-To group objects to make them easier to work with	l can copy part of a drawing by duplicating several objects I can recognise when I need to group and ungroup objects I can recognize when I need to group and ungroup objects	- Copyright and ownership
	5	5	Creating media – Introduction to vector graphics	6	-To apply what I have learned about vector drawings	-I can compare vector drawings to freehand paint drawings I can create a vector drawing for a specific purpose I can reflect on the skills! I have uged and why I have used them	- Copyright and ownership
	5	6	Programming B - Selection in quizzes	1	-To explain how selection is used in computer programs	l can identify conditions in a program I can modify a condition in a program I can recal how conditions are used in selection	
	5	6	Programming B - Selection in quizzes	2	-To relate that a conditional statement connects a condition to an outcome	- can create a program with different outcomes using selection can identify the condition and outcomes in an "i then else" statement can use selection in an infinite loop to check a condition	
	5	6	Programming B - Selection in quizzes	3	-To explain how selection directs the flow of a program	I can design the flow of a program which contains "if then else" I can explain that program flow can branch according to a condition I can show that a condition can direct program flow in one of two ways	
	5	6	Programming B - Selection in quizzes	4	-To design a program which uses selection	-l can identify the outcome of user input in an algorithm I can outline a given task I can use a decian format to outline my project	
	5	6	Programming B - Selection in quizzes	5	-To create a program which uses selection	-I can implement my algorithm to create the first section of my program I can share my program with others I can sets my program	
	5	6	Programming B - Selection in quizzes	6	-To evaluate my program	-l can extend my program further I can identify the setup code I need in my program I can identify ways the program could be improved	

6	1	Computing systems and networks - Communication and collaboration	1	-To explain the importance of internet addresses	-I can describe how computers use addresses to access websites - I can explain that internet devices have addresses - I can recognise that data is transferred using agreed methods	- Managing onlin - Online reputatio	line information tion
6	1	Computing systems and networks - Communication and collaboration	2	-To recognise how data is transferred across the internet	-I can explain that all data transferred over the internet is in packets - I can explain that data is transferred over networks in packets - I can ideatify and explain the main parts of a data packet	- Managing onlin - Online reputatio	ine information tion
6	1	Computing systems and networks - Communication and collaboration	3	-To explain how sharing information online can help people to work together	-1 can explain that the internet allows different media to be shared -1 can recognize how to access shared files stored online -1 can send information over the internet in different ways	- Managing onlin - Online reputatio	ine information ion
6	1	Computing systems and networks - Communication and collaboration	4	-To evaluate different ways of working together online	-I can explain how the internet enables effective collaboration - I can identify different ways of working together online - I can recognise that working together on the internet can be public or private.	- Managing onlin - Online reputatio	line information tion
6	1	Computing systems and networks - Communication and collaboration	5	-To recognise how we communicate using technology	-I can choose methods of communication to suit particular purposes - I can explain the different ways in which people communicate - I can identify that there are a variety of ways to communicate over the internet.	- Managing onlin - Online reputatio	
6	1	Computing systems and networks - Communication and collaboration	6	-To evaluate different methods of online communication	-I can compare different methods of communicating on the internet -I can decide when I should and should not share information online -I can explain that communication on the internet may not be private	- Managing onlin - Online reputatio	ine information tion
6	2	Creating media - Web page creation	1	-To review an existing website and consider its structure	-I can discuss the different types of media used on websites -I can explore a website -I know that websites are written in HTML	- Copyright and - Online relations	
6	2	Creating media - Web page creation	2	-To plan the features of a web page	-I can draw a web page layout that suits my purpose -I can recognise the common features of a web page -I can evaquest media to include on my page	- Copyright and - Online relations	
6	2	Creating media - Web page creation	3	-To consider the ownership and use of images (copyright)	-I can describe what is meant by the term 'fair use' -I can find copyright-free images -I can eav why I should use copyright-free images	- Copyright and - Online relations	
6	2	Creating media - Web page creation	4	-To recognise the need to preview pages	-I can add content to my own web page -I can evolute what my web page looks like on different devices and suggest/make edits -I can preview what my web page looks like	- Copyright and - Online relations	
6	2	Creating media - Web page creation	5	-To outline the need for a navigation path	-I can describe why navigation paths are useful -I can explain what a navigation path is -I can make multiple web pages and link them using hyperlinks	- Copyright and - Online relations	
6	2	Creating media - Web page creation	6	-To recognise the implications of linking to content owned by other people	-I can create hyperlinks to link to other people's work -I can evaluate the user experience of a website -I can explain the implication of linking to content owned by others	- Copyright and - Online relations	d ownership Aships

6	3	Programming A – Variables in games	1	-To define a 'variable' as something that is changeable	-I can explain that the way a variable changes can be defined - I can identify examples of information that is variable - I can identify that variables can hold numbers or letters	
6	3	Programming A - Variables in games	2	-To explain why a variable is used in a program	-I can explain that a variable has a name and a value -I can identify a program variable as a placeholder in memory for a single value -I can recognise that the value of a variable can be changed	
6	3	Programming A - Variables in games	3	-To choose how to improve a game by using variables	-I can decide where in a program to change a variable - I can make use of an event in a program to set a variable - I can recognise that the value of a variable of a vari	
6	3	Programming A - Variables in games	4	-To design a project that builds on a given example	-I can choose the artwork for my project - I can create algorithms for my project - I can creating my decign choices	
6	3	Programming A - Variables in games	5	-To use my design to create a project	-I can choose a name that identifies the role of a variable - I can create the artwork for my project - I can text the code that I have written	
6	3	Programming A - Variables in games	6	-To evaluate my project	-I can identify ways that my game could be improved - I can chare my game with others - I can use variables to extend my game	
6	4	Data and information – Spreadsheets	1	-To create a data set in a spreadsheet	-I can collect data - I can enter data into a spreadsheet - I can enter data into a spreadsheet - I can songest how to structure my data	
6	4	Data and information – Spreadsheets	2	-To build a data set in a spreadsheet	-I can apply an appropriate format to a cell - I can choose an appropriate format for a cell - I can choose an appropriate format for a cell - I can capable what an item of data is	
6	4	Data and information – Spreadsheets	3	-To explain that formulas can be used to produce calculated data	-I can construct a formula in a spreadsheet - I can explain which data types can be used in calculations - I can identify that changing inputs changes outputs	
6	4	Data and information – Spreadsheets	4	-To apply formulas to data	-I can apply a formula to multiple cells by duplicating it - I can calculate data using different operations - I can craste a formula which includes a range of cells	
6	4	Data and information – Spreadsheets	5	-To create a spreadsheet to plan an event	-I can apply a formula to calculate the data I need to answer questions - I can explain why data should be organised - I can use a preadsheet to answer questions	
6	4	Data and information – Spreadsheets	6	-To choose suitable ways to present data	-I can produce a chart -I can suggest when to use a table or chart -I can use a chart to show the answer to questions	

6	5	Creating media - 3D Modelling	1	-To recognise that you can work in three dimensions on a computer	-I can add 3D shapes to a project -I can move 3D shapes relative to one another -I can view 3D shapes from different perspectives	- Privacy and security
6	5	Creating media - 3D Modelling	2	-To identify that digital 3D objects can be modified	-I can lift/lower 3D objects -I can recolour a 3D object -I can recolour a 5D object -I can recolour a object in three dimensions	- Privacy and security
6	5	Creating media - 3D Modelling	3	-To recognise that objects can be combined in a 3D model	-I can duplicate 3D objects -I can group 3D objects -I can proup 6 object in three dimensions	- Privacy and security
6	5	Creating media - 3D Modelling	4	-To create a 3D model for a given purpose	-I can accurately size 3D objects - I can combine a number of 3D objects - I can combine a number of 3D objects - I can combine a property of the state of the st	- Privacy and security
6	5	Creating media - 3D Modelling	5	-To plan my own 3D model	-I can analyse a 3D model -I can choose objects to use in a 3D model -I can choose objects to a design	- Privacy and security
6	5	Creating media - 3D Modelling	6	-To create my own digital 3D model	-I can construct a 3D model based on a design -I can explain how my 3D model could be improved -I can explain y my 3D model to improve it	- Privacy and security
6	6	Programming B - Sensing movement	1	-To create a program to run on a controllable device	-I can apply my knowledge of programming to a new environment - I can test my program on an envilator - I can test my program on program to a controllable device	
6	6	Programming B - Sensing movement	2	-To explain that selection can control the flow of a program	-I can determine the flow of a program using selection - I can identify examples of conditions in the real world - I can use a variable in an if, then, else statement to select the flow of a program	
6	6	Programming B - Sensing movement	3	-To update a variable with a user input	-I can experiment with different physical inputs - I can explain that checking a variable doesn't change its value - I can use a condition to change a variable	
6	6	Programming B - Sensing movement	4	-To use a conditional statement to compare a variable to a value	-I can explain the importance of the order of conditions in else, if statements -I can modify a program to achieve a different outcome -I can modify a program to achieve a different outcome -I can use an operand [e.g. <>= in an if, then statement	
6	6	Programming B - Sensing movement	5	-To design a project that uses inputs and outputs on a controllable device	-I can decide what variables to include in a project -I can decign the algorithm for my project -I can decine the program flow for my project	
6	6	Programming B - Sensing movement	6	-To develop a program to use inputs and outputs on a controllable device	-I can create a program based on my design - I can test my program against my design - I can use a range of approaches to find and fix bugs	