Avonwood Primary School Computing Curriculum

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Computing Curriculum

Contents

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Computing Curriculum

EYFS

Term & Focus	Early Learning Goal	Pupil outcomes / Year 1 readiness Skills, knowledge and understanding	Other opportunities to develop understanding
Autumn Education for a Connected World Self-image and identity Online Relationships **Spring** Education for a Connected World Online Reputation Online Bullying Managing Online Information **Summer** Education for a Connected World Health, Well-Being and Lifestyle Privacy and Security Copyright and Ownership	N/A	**Education for a Connected World** Self-image and identity I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset I can explain how this could be either in real life or online. Online relationships I can recognise some ways in which the internet can be used to communicate I can give examples of how I (might) use technology to communicate with people I know Online reputation I can identify ways that I can put information on the internet Online Bullying I can describe ways that some people can be unkind online I can offer examples of how this can make others feel Managing Online Information I can talk about how I can use the internet to find things out	● When out in the locality, ask children to help to press the button at the pelican crossing, or speak into an intercom to tell somebody you have come back ● Provide a range of materials and objects to play with that work in different ways for different purposes, for example, egg whisk, torch, other household implements, pulleys, construction kits and tape recorder. ● Provide a range of programmable toys, as well as equipment involving ICT, such as computers.

I can identify devices I could use to access information on the internet
I can give simple examples of how to find information (e.g. search engine, voice activated searching).

<u>Health, Well-Being and Lifestyle</u>
I can identify rules that help keep us safe and healthy in and beyond the home when using technology
I can give some simple examples

<u>Privacy and Security</u>
I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location)
I can describe the people I can trust and can share this with
I can explain why I can trust them.

<u>Copyright and Ownership</u>
I know that work I create belongs to me
I can name my work so that others know it belongs to me

Computing Curriculum

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Grouping and Sorting (2 weeks) Pictograms (3 weeks) Lego Builders (3 weeks)	● 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. ● use technology purposefully to create, organise, store, manipulate and retrieve digital content ● Create and debug simple programs	**Education for a Connected World** Self-image and identity I know why I need to tell someone if they make me feel sad, embarrassed or upset Online relationships I know why it is important to be considerate and kind to people online **Purple Mash** 1.2 Grouping and Sorting I know how to sort objects 1.3 Pictograms I know data can be represented in a picture format I know how to use a pictogram to record information 1.4 Lego Builders I know the importance of following instructions I know that an algorithm is a step-by-step set of precise instructions I know that debugging means correcting errors	**Education for a Connected World** Self-image and Identity I can recognise that there may be people online who could make me feel sad, embarrassed or upset. I can explain what to do if something happens that makes me feel sad, worried, uncomfortable or frightened. I can give examples of when and how to speak to an adult I can trust. Online relationships I can use the internet with adult support to communicate with people I know I can explain why it is important to be considerate and kind to people online **Purple Mash** 1.2 Grouping and Sorting I can sort and group depending on a variety of criteria. 1.3 Pictograms I can discuss and illustrate data I can collect data I can create a simple pictogram to show my results 1.4 Lego Builders I can follow instructions correctly to achieve a good result

			I can explain what an algorithm is I can organise a set of instructions I can debug a set of instructions
Spring <u>Education for a Connected World</u> Online Reputation Online Bullying Managing Online Information <u>Purple Mash</u> Maze Explorers (3 weeks) Animated Story Books (5 weeks)	• 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. • use technology purposefully to create, organise, store, manipulate and retrieve digital content • understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • Create and debug simple programs	**Education for a Connected World** <u>Online Reputation</u> I know what happens when I put information online I know what information I should not put online <u>Online Bullying</u> I know how to behave online <u>Managing Online Information</u> I know how to use the internet to find out information I know where to find help I can use a simple search engine **Purple Mash** <u>1.5 Maze Explorers</u> I know the functionality of the basic direction keys I know how to use the direction keys I know how to create a simple algorithm I know how to debug an algorithm I know how to change and extend an algorithm I know how to challenge other children on 2Do <u>1.6 Animated Story</u>	**Education for a Connected World** <u>Online Reputation</u> I can recognise that information can stay online and could be copied I can describe what information I should not put online without asking a trusted adult first <u>Online Bullying</u> I can describe how to behave online in ways that do not upset others and can give examples <u>Managing Online Information</u> I can use the internet to find things out I can use simple keywords in search engines I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened. **Purple Mash** <u>1.5 Maze Explorers</u> I can use the direction keys in 2Go to move forwards backwards, left and right. I can undo my last move I can move a character back to the starting point I can create a longer algorithm I can try challenges created by other people <u>1.6 Animated Story</u> I can explain the difference between books and e-books

		I know the difference between books and e-books I know how to save the work I have created I know how to find a saved document I know how to create music and a voice recording I know how to edit my work	I can add text and images to a page and change the font, size and colour of the text I can open work that I have previously saved I can changes and overwrite a file. I can add different types of media to a file I can copy and paste
Summer Education for a Connected World Health, well-being and lifestyle Privacy and Security Copyright and Ownership Purple Mash Technology outside school (2 weeks) Coding (6 weeks) Spreadsheets (3 weeks)	● 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. ● Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions ● Create and debug simple programs ● Use logical reasoning to predict the behaviour of simple programs ● use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Education for a Connected Framework** Health, Well-Being and Lifestyle I know how to stay safe online Privacy and Security I know what personal information is I know why I should speak to a trusted adult before sharing information online I know why I need to keep my password secure Copyright and Ownership I know how to show my work belongs to me I know that work I create using technology belongs to me **Purple Mash** 1.7 Coding I know what coding means I know how to edit using Design mode I know how to create unambiguous instructions 1.8 Spreadsheets I know what a Spreadsheet looks like I know my way around a spreadsheet	**Education for a Connected Framework** Health, Well-Being and Lifestyle I can explain rules to keep us safe when we are using technology both in and beyond the home I can give examples of some of these rules Privacy and Security I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school) I can explain why I should always ask a trusted adult before I share any information about myself online I can explain how passwords can be used to protect information and devices. Copyright and Ownership I can explain why work I create using technology belongs to me I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it') I can save my work so that others know it belongs to me (e.g. filename, name on content). **Purple Mash** 1.7 Coding I can explain what a block of coding is I can read through combined blocks of code

	● Recognise common uses of information technology beyond school	I know what the 'move cell' and 'lock' tools do 1.9 Technology Outside School I know different examples of technology I know what technology means	I can build one-and two-step instructions I can write a code to make a character move I can explain what is happening with my code 1.8 Spreadsheets I can navigate around a spreadsheet I can use the correct vocabulary I can explain what columns and rows are I can save and open sheets I can insert images I can use 'speak' and 'count' to count items 1.9 Technology Outside School I can talk about different technology used in the local community

Computing Curriculum

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Coding (5 weeks) Spreadsheets (4 weeks)	● 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. ● Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions ● Create and debug simple programs ● Use logical reasoning to predict the behaviour of simple programs	**Education for a Connected World** Self-image and Identity I know about online issues that make me feel unhappy I know how I can get help if I feel sad, worried, uncomfortable or frightened Online relationships I know how to use the internet to communicate with others I don't know **Purple Mash** 2.2 Coding I know what an algorithm is I know how to program different objects I know what debugging means I know how to debug simple programs I know what different objects can do 2.3 Spreadsheets I know how to use vocabulary about spreadsheets I know how to use the tools I have already learnt I know how to copy and paste shortcuts I know how to explore the capabilities of a spreadsheet when costing items	**Education for a Connected World** Self-image and Identity I can explain how other people's identity online can be different to their identity in real life. I can describe ways in which people might make themselves look different online. I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened Online relationships I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country) I can give examples of how I might use technology to communicate with others I don't know well **Purple Mash** 2.2 Coding I can create a computer program using simple algorithms I can explain that an algorithm is a set of instructions I can use the repeat and timer command I can explain what debugging means I can debug a simple program I can explain why it is important to save my work I can create a computer program using different objects

		I know how to add and edit data on a spreadsheet I know how to use the data to create a block graph	I can predict what objects will do with a set of instructions I can plan and use algorithms in programs to achieve a desired result 2.3 Spreadsheets I can explain what rows and columns are I can open, save and edit a spreadsheet I can add images and allocate them a value I can add the count tool to add items automatically I can solve a simple puzzle I can copy and paste I can create a table and a block graph using data
Spring <u>Education for a Connected World</u> Online Reputation Online Bullying Managing Online Information <u>Purple Mash</u> Questioning (5 weeks) Effective Searching (2 weeks) Creating Pictures (5 weeks)	● 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. ● use technology purposefully to create, organise, store, manipulate and retrieve digital content	**Education for a Connected World** <u>Online Reputation</u> I know who to talk to if I think someone has made a mistake about putting something online <u>Online Bullying</u> I know what bullying online looks like I know how someone can feel when they are bullied online <u>Managing Online Information</u> I know where to find information that I need I know the difference between what is real and what is imaginary I know that some information I find is untrue **Purple Mash** <u>2.4 Questioning</u> I know what a pictogram is	**Education for a Connected World** <u>Online Reputation</u> I can explain how information put online about me can last for a long time <u>Online Bullying</u> I can give examples of bullying behaviour and how it could look online I understand how bullying can make someone feel I can talk about how someone can/would get help about being bullied online or offline <u>Managing Online Information</u> I can use keywords in search engines I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections) I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri)

| | | I know that the information on a pictogram cannot be used to answer more complicated questions
I know how to separate information
I know what a binary tree is
I know how to construct a binary tree
I know what a database is
I know how to use a database to answer simple and more complex search questions

2.5 Effective Searching
I know the terminology associated with searching
I know how to read a web search results page

2.6 Creating Pictures
I know how to edit the pen style
I know how to change the colour
I know how to undo a change if I make a mistake | I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'
I can explain why some information I find online may not be true.

Purple Mash
2.4 Questioning
I can explain the data a pictogram is showing me
I can use yes/no questions to separate information
I can design a binary tree to sort pictures
I can use a database to answer more complex search questions
I can use the search tool to find information

2.5 Effective Searching
I can recall the meaning of key internet terms
I can identify the basic parts of a web search engine
I can search for answers to a quiz on the internet
I can create a leaflet to help someone search for information on the internet

2.6 Creating Pictures
I can recreate work of artists
I can describe the main features of impressionist art
I can recreate a pointillist painting |
| **Summer**
Education for a Connected World
Health, well-being and lifestyle
Privacy and Security | ● Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about | **Education for a Connected Framework**
Health, Well-Being and Lifestyle
I know where to find guidance for using technology
I know how the guidance helps me
Privacy and Security
I know how online information can be seen | **Education for a Connected Framework**
Health, Well-Being and Lifestyle
I can explain simple guidance for using technology in different environments and settings
I can say how those rules/guides can help me
Privacy and Security |

Copyright and Ownership Purple Mash Creating Pictures continued(5 weeks) Making Music (3 weeks) Presenting Ideas (4 weeks)	content or contact on the internet or other online technologies. ● use technology purposefully to create, organise, store, manipulate and retrieve digital content	I know rules for how to keep my information private I know what passwords are and how to use them I know devices that connect to the internet Copyright and Ownership I know why a piece of work belongs to someone **Purple Mash** 2.6 Creating Pictures (continued) I know how to save my work, open it and edit it I know how to enhance my repeating patterns 2.7 Making music I know how to make music digitally I know how to combine sounds to create a tune I know what happens to a tune when the sounds are moved I know how to change a tune I have already created I know how to create music to express feelings I know how to record a sound and upload it to my tune 2.8 Presenting Ideas I know that digital content can be represented in different forms I know how to extract information	I can describe how online information about me could be seen by others I can describe and explain some rules for keeping my information private I can explain what passwords are and can use passwords for my accounts and devices I can explain how many devices in my home could be connected to the internet and can list some of those devices. Copyright and Ownership I can describe why other people's work belongs to them I can recognise that content on the internet may belong to other people **Purple Mash** 2.6 Creating Pictures (continued) I can use repeating patterns I can describe surrealist art I can combine drawing, pictures and stamps 2.7 Making music I can explore, edit and combine sounds I can create a tune I can speed up and slow down tunes I can add to a tune I have already created I can change the volume of background sounds I can upload a sound I can record my own sounds and upload them 2.8 Presenting Ideas I can create and use a mind map I can create a quiz

		I know that data can be structured in tables to make it useful I know how to use a variety of media to manipulate and present digital content and information	I can talk about my work and make improvements based on the feedback I receive I can create a fact file I can add a clip art and a photo I can make a presentation to the class I can collect, organise and present data and information in a digital content I can create digital content by combining software packages

Year 3

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Coding (6 weeks) Spreadsheets (3 weeks)	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ● design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	**Education for a Connected World** Self-image and Identity I know about my online identity I know how I can be represented online I know how I might change my identity Online relationships I know the difference between knowing someone online and someone in real life I know why I should be careful to trust people online I know some of the risks involved when communicating with someone online I know different ways used to communicate with people online I know how to stay safe when communicating with someone online	**Education for a Connected World** Self-image and Identity I can explain what is meant by the term 'identity' I can explain how I can represent myself in different ways online I can explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; using an avatar; social media). Online relationships I can describe ways people who have similar likes and interests can get together online I can give examples of technology- fault. specific forms of communication (e.g. emojis, acronyms, text speak) I can explain some risks of communicating online with others I don't know well

● use sequence, selection, and repetition in programs; work with variables and various forms of input and output ● use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Purple Mash** 3.1 Coding I know the vocabulary linked to coding I know how to predict what might happen with the coding I use I know how to write a code to demonstrate simulating physical systems I know what the grid is used for I know how the grid can help me with my coding I know what a variable is in programming and I can use it to improve my coding I know how to create a program with an object that repeats actions indefinitely I know the different methods when repeating blocks of code I know what debugging means I know why it is important to test and debug a program repeatedly I know the importance of saving my work periodically as part of the code development process 3.3 Spreadsheets I know how to find out how to automatically create graphs using data I know the vocabulary 'more than' 'less than' and 'equals' I know how to use the 'spin' tool to count through times tables I know how to describe cells using their coordinates	I can explain how my and other people's feelings can be hurt by what is said or written online I can explain why I should be careful who I trust online and what information I can trust them with I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life I can explain what is meant by 'trusting someone online' I can explain why this is different from 'liking someone online'. **Purple Mash** 3.1 Coding I can what these words mean: Object, Action, Output, Control, Event I can represent a sequential program design I can write a code for a program I can explain how my program simulates a physical system (my vehicles move at different speeds and angles) I can explain the X and Y properties I can create an 'if' statement in my program I can use a timer in my program I can explain what a variable is I can explain why variables need to be named I can create a variable in a program I can set/change variable values I can use a timer to make characters repeat actions

			I can explain the difference between a timer and the repeat command I can test and debug a program I can explain why it is important to save my work regularly 3.3 Spreadsheets I can add and edit data in a table I can use the 'more than' 'less than' and 'equals' tools to compare numbers and work out solutions to calculations I can use the 'spin' tool I can describe a cell location using the letter for the column and number for the row I can find specified locations in a spreadsheet
Spring Education for a Connected World Online Reputation Online Bullying Managing Online Information Purple Mash Touch Typing (4 weeks) Email (6 weeks)	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ● 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	**Education for a Connected World** Online Reputation I know who I should ask if I am not sure if I should put something online Online Bullying I know what it means to bully someone online Managing Online Information I know how to use a search engine I know how to use autocomplete I know how the internet can be used for buying and selling **Purple Mash** 3.4 Touch Typing I know the typing terminology I understand the correct way to sit at the keyboard	**Education for a Connected World** Online Reputation I can search for information about myself online I can recognise I need to be careful before I share anything about myself or others online Online Bullying I can explain what bullying is and can describe how people may bully others I can describe rules about how to behave online and how I follow them Managing Online Information I can explain how the internet can be used to sell and buy things I can explain the difference between a 'belief', an 'opinion' and a 'fact' I can explain what autocomplete is and how to choose the best suggestion I can use key phrases in search engines

		I know how to use the home, top and bottom row keys	**Purple Mash**
			3.4 Touch Typing
		3.5 Email	I can explain the names of the fingers
		I know the different ways to communicate	I can explain what is meant by the home, top and borrow row keys
		I know how to open and respond to an email	I can develop my ability to touch type
		I know how to use email safely	I can use two hands to type the letters on a keyboard
		I know the written rules about staying safe using email	I can touch type using my left hand
		I know the different scenarios that I may come across when using email in the future	I can touch type using my right hand
		I know how to add an attachment to an email	3.5 Email
		I know what CC means	I can list a range of different ways to communicate
		I know how to respond appropriately to a series of emails	I can highlight strengths and weaknesses of each method
		I know how to use email communication to explore ideas	I can open an email and respond to it
			I can write an email to someone from an address book
			I can send emails to other children in the class
			I can contribute to the rules about staying safe when using email
			I can explain the different scenarios that may happen when using email in the future
			I can attach work to an email
			I can use CC
Summer Education for a Connected World Health, well-being and lifestyle Privacy and Security Copyright and Ownership	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Education for a Connected Framework** Health, Well-Being and Lifestyle I know why I should not spend too much time using technology Privacy and Security I know why passwords are important I know how devices can collect information	**Education for a Connected Framework** Health, Well-Being and Lifestyle I can explain why spending too much time using technology can sometimes have a negative impact on me I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos)

Computing Curriculum

Purple Mash Branching Databases (4 weeks) Simulations (3 weeks) Graphing (3 weeks)	● 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 know why I should only share information with people I trust. I know who I can talk to if I have problems online Copyright and Ownership I know about the problems caused when copying someone else's work **Purple Mash** 3.6 Branching Databases I know how YES/NO questions are structured I know how to create a branching database I know how to use and debug my branching database 3.7 Simulations I know what a simulation is I know the purpose of a simulation I know a simulation can represent a real or imaginary situations I know how to use a simulation I know how to compare simulations and their effectiveness I know how to evaluate a simulation 3.8 Graphing I know how to enter data into graphs I know how to use graphs to answer questions I know how to share graphs that I have made I know how to solve an investigation using graphs	Privacy and Security I can give reasons why I should only share information with people I choose to and can trust I can explain that if I am not sure or I feel pressured, I should ask a trusted adult I can describe simple strategies for creating and keeping passwords private I can describe how connected devices can collect and share my information with others Copyright and Ownership I can explain why copying someone else's work from the internet without permission can cause problems I can give examples of what those problems might be **Purple Mash** 3.6 Branching Databases I can sort objects using YES/NO questions I can use YES/NO questions to play a simple game I can contribute to a class branching database I can complete my own branching database I can choose a suitable topic for a branching database I can select and save appropriate images I can explain how to use my branching database 3.7 Simulations I can give examples of simulations used for fun or work I can give suggestions of advantages and problems of simulations I can explore a simulation I can use a simulation to try out different options and test predictions I can evaluate simulations

		I know how to represent results in different graphical forms	I can recognise patterns within simulations and make and test predictions I can identify the relationship and rules on which the simulations are based I can evaluate a simulation to determine its usefulness for purpose 3.8 Graphing I can set up a graph with a given number of fields I can enter data for a graph I can produce and share graphs I can use graphs to solve an investigation I can represent results in a range of graphical formats

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Computing Curriculum

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Coding (6 weeks) Spreadsheets (6 weeks)	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ● design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts ● use sequence, selection, and repetition in programs; work with variables and various forms of input and output ● use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Education for a Connected World** Self-image and Identity I know about my online identity I know about the making the right decisions when I interact with others online Online relationships I know how to stay safe online I know how to show respect to people online **Purple Mash** 4.1 Coding I know the correct vocabulary for coding I know how to use a sketch or a storyboard to represent a program design and algorithm I know how to create a program using design mode I know what variable programming is I know how to create a variable I know how to create a program where a character repeats the actions I know how to use variables to make timers and counting machines I know how to create a control simulation I know what decomposition and abstraction are I know how to take a real-life situation, decompose it and thinking about the level of abstraction	**Education for a Connected World** Self-image and Identity I can explain how my online identity can be different to the identity I present in 'real life' Knowing this, I can describe the right decisions about how I interact with others and how others perceive me Online relationships I can describe strategies for safe and fun experiences in a range of online social environments I can give examples of how to be respectful to others online **Purple Mash** 4.1 Coding I can use sketching to design a program I can reflect upon my design I can create a code that conforms to my design I can create a variable I can create an 'if/else' statement I can set/change variable values appropriately I can interpret a flowchart that uses an 'if/else' statement I can use the 'Repeat until' command to make character repeat actions I can make a character respond to user keyboard input I can explain what a variable is

| | | I know how to design a decomposed feature of a real-life situation

4.3 Spreadsheets
I know how to explore how the numbers entered into cells can be set to either currency, decimal or fraction
I know the use of decimal places
I know how to add formulae to a cell
I know how to use the tools to make a number game
I know how to use the random number, timer and spin button tools
I know how to use the line graphing tool
I know how to interpret a line graph to estimate values
I know how to use the currency formatting tool
I know how to create a model of a real life situation
I know how to allocate value to images | I can create a timer
I can explain how I used my timer
I can create an algorithm modelling the sequence of an event
I can manipulate graphics
I can use an algorithm when making a simulation of an event
I can break down my aims for a coding task into small achievable steps
I can start coding at a basic level of abstraction to remove superfluous details

4.3 Spreadsheets
I can use the number formatting tool
I can add a formula to a cell
I can use the timer, random number and spin button tools
I can combine tools to make fun ways to explore number
I can use a series of data in a spreadsheet to create a line graph
I can use a line graph to find out information I can use a spreadsheet to help me plan actions
I can use the currency formatting
I can make a resource to teach place value
IO can allocate values to images and use these to explore place value
I can use a spreadsheet to check my mathematical understanding |

Computing Curriculum

Spring		Education for a Connected World	Education for a Connected World
Spring Education for a Connected World Online Reputation Online Bullying Managing Online Information Purple Mash Writing for Different Audiences (5 weeks) Logo (4 weeks)	● 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, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information ● design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts ● use sequence, selection, and repetition in programs; work with variables and various forms of input and output	**Education for a Connected World** Online Reputation I know how others can find information about me online I know that some of my online information could have been used by others Online Bullying I know where bullying might take place online I know how someone can be bullied online I know why I need to think carefully about the content that I post Managing Online Information I know how to analyse information on the internet I know how I can search for information on the internet I know how people might persuade me to buy things online **Purple Mash** 4.4 Writing for Different Audiences I know how font size and style can affect the impact of a text I know how to use a simulated scenario to produce a news report I know how to use a simulated scenario to produce a community campaign 4.5 Logo I know how to input simple instructions in Logo	**Education for a Connected World** Online Reputation I can describe how others can find out information about me by looking online I can explain ways that some of the information about me online could have been created, copied or shared by others Online Bullying I can identify some online technologies where bullying might take place I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat) I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation) Managing Online Information I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact' I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites) I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online I can explain that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people

	● use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	I know what the common instruction are in Logo and how to type them I know what the 'pu' and 'pd' commands do	I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true. **Purple Mash** 4.4 Writing for Different Audiences I can use text formatting to make a piece of writing fir for its audience and purpose I can interpret a variety of incoming information communications and use these to build up details of a story I can use incoming information to write a newspaper report I can mind map my ideas for a community campaign I can write a persuasive letter or poster I can assess my text using criteria to judge the suitability for the intended audience 4.5 Logo I can follow simple Logo instructions I can follow simple instructions to create shapes in Logo I can create instructions to draw patterns of increasing complexity I can write instructions for a word of four letters I can sue the repeat instruction to create shapes I can follow code to predict an outcome I can create shapes using the repeat function I can find the most efficient way to draw shapes

Computing Curriculum

Summer		Education for a Connected Framework	Education for a Connected Framework
Summer <u>Education for a Connected World</u> Health, well-being and lifestyle Privacy and Security Copyright and Ownership <u>Purple Mash</u> Animation (3 weeks) Effective Searching (3 weeks) Hardware Investigators (2 weeks)	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ● 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.	**Education for a Connected Framework** <u>Health, Well-Being and Lifestyle</u> I know when I need to limit the time I spend using technology I know how I can help myself to spend less time using technology <u>Privacy and Security</u> I know how to keep my information private I know how the internet can be monitored and what this means <u>Copyright and Ownership</u> I know why I need to consider who owns content when searching the internet **Purple Mash** <u>4.6 Animation</u> I know what makes a good animated film or cartoon I know how animations are created by hand I know about animation frames I know about onion skinning in animation I know how to add backgrounds and sounds to animations I know what 'stop motion' animation is and how it is created <u>4.7 Effective Searching</u> I know how to locate information on a search results page I know how to search to answer a series of questions I know how to assess whether an information source is true and reliable	**Education for a Connected Framework** <u>Health, Well-Being and Lifestyle</u> I can explain how using technology can distract me from other things I might do or should be doing I can identify times or situations when I might need to limit the amount of time I use technology I can suggest strategies to help me limit this time <u>Privacy and Security</u> I can explain what a strong password is I can describe strategies for keeping my personal information private, depending on context I can explain that others online can pretend to be me or other people, including my friends I can suggest reasons why they might do this I can explain how internet use can be monitored <u>Copyright and Ownership</u> I can explain why I need to consider who owns it and whether I have the right to reuse it I can give some simple examples. **Purple Mash** <u>4.6 Animation</u> I can put together a simple animation by creating a flick book I can make a simple animation I can use the onion skin tool to create an animated image I can use backgrounds and sounds to make more complex and imaginative animations I can share animation on the class display board and by blogging I can use 'stop motion' animation to create my own animation

		4.8 Hardware Investigators I know the different parts that make up a computer I know what the function of the different parts of a computer is	4.7 Effective Searching I can structure search queries to locate specific information I can use search effectively to find out information I can analyse the contents of a web page for clues about the credibility of the information 4.8 Hardware Investigators I can name the different parts of a desktop computer I can create a leaflet to show the functions of a computer

Computing Curriculum

Year 5

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Coding (6 weeks) Spreadsheets (6 weeks)	• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Understand computer networks, including the Internet; how they can	**Education for a Connected World** <u>Self-image and Identity</u> I know about my online identity I know about changing my online identity I know about the choices I make with my online identity <u>Online relationships</u> I know that not all people can be trusted online I know how I can work with others online **Purple Mash** <u>5.1 Coding</u> I know coding vocabulary I know how to use a sketch or storyboard to represent a program design and algorithm I know how to use the design to create a program I know how to design and write a program that simulates a physical system I know how to use the number variables I know how to use the text variables I know some ways that text variables can be used in coding I know how to create a playable competitive game	**Education for a Connected World** <u>Self-image and Identity</u> I can explain how identity online can be copied, modified or altered I can demonstrate responsible choices about my online identity, depending on context <u>Online relationships</u> I can explain that there are some people I communicate with online who may want to do me or my friends harm I can recognise that this is not my/our fault I can make positive contributions and be part of online communities I can describe some of the communities in which I am involved and describe how I collaborate with others positively **Purple Mash** <u>5.1 Coding</u> I can use sketching to design a program and reflect upon my design I can create code that conform to my design I can explain how my program simulates a physical system I can select the relevant features of a situation to incorporate into my simulation by using decomposition and abstraction I can reflect upon the effectiveness of my simulation

	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.	I know how to combine the use of variables, if/else statements and repeats to achieve a desired effect in code I know how to read code so that it can be adapted, personalised and improved I know how to launch command and use buttons within a program that launch other programs or open websites I know how to create a program to inform others 5.3 Spreadsheets I know how to use formulae within a spreadsheet to convert measurements of length and distance I know how to use the count tool to answer hypotheses about common letters in use I know how to use a spreadsheet to model a real-life problem	I can explain what variable programming is I can set/change the variable values appropriately I can create a game which has a timer and a score pad I can use variables to control the objects in the game I can create loops using the time and if/else statements I can include buttons and objects that launch windows to websites and programs I can code a program that informs others 5.3 Spreadsheets I can create a formula in a spreadsheet to convert m to cm I can apply this to creating a spreadsheet that converts miles to km and vice versa I can use a spreadsheet to work out which letters appear most often I can use the 'how many' tool I can use a spreadsheet to work out the area and perimeter of rectangles I can use these calculations to solve a real-life problem
Spring <u>Education for a Connected World</u> Online Reputation Online Bullying Managing Online Information <u>Purple Mash</u>	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	**Education for a Connected World** <u>Online Reputation</u> I know how to use information found online <u>Online Bullying</u> I know where to get help for someone that is being bullied online I know how to report people I know the services available to me if I need their help	**Education for a Connected World** <u>Online Reputation</u> I can search for information about an individual online and create a summary report of the information I find I can describe ways that information about people online can be used by others to make judgments about an individual <u>Online Bullying</u>

| Spreadsheets continued (6 weeks) Databases (4 weeks) Game Creator (5 weeks) | ● 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 | Managing Online Information
I know the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead).
I know what is meant by a 'hoax' and 'being sceptical'
I know why information on many website may be untrue

Purple Mash
5.3 Spreadsheets (continued)
I know how to use formulae to calculate area and perimeter of shape
I know how to create formulae that use text variables (calculate how many days in x amount of years)
I know how to use a spreadsheet to help plan a school cake sale

5.4 Databases
I know how to search for information in a database
I know the different ways to search a database
I know how to contribute to a class database
I know how to create a database around a chosen topic
I know what a database field is and can correctly add field information | I can recognise when someone is upset, hurt or angry online
I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone
I can explain how to block abusive users
I can explain how I would report online bullying on the apps and platforms that I use
I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline)
Managing Online Information
I can evaluate digital content and can explain how I make choices from search results
I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence
I can explain what is meant by 'being sceptical'. I can give examples of when and why it is important to be 'sceptical'
I can explain what is meant by a 'hoax'. I can explain why I need to think carefully before I forward anything online
I can explain why some information I find online may not be honest, accurate or legal
I can explain why information that is on a large number of sites may still be inaccurate or untrue
I can assess how this might happen (e.g. the sharing of misinformation either by accident or on purpose).

Purple Mash
5.3 Spreadsheets (continued) |

		I know how to word questions so that they can be effectively answered using a search of their database	I can create simple formulae that use different variables
			I can create a formula that will work out how many days there are in x number of weeks or years
			I can use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied
		5.5 Game Creator I know how to design a game environment I know how to design the game quest to make it a playable game	**5.4 Databases** I can search a database in order to answer questions correctly I can design an avatar for a class database I can successfully enter information into a class database I can create my own database on a chosen topic I can add records to my database **5.5 Game Creator** I can begin planning a game I can review and analyse a computer game I can describe some of the elements that make a successful game I can begin the process of designing my own game I can design the setting for my game so that it fits with the selected theme I can upload images or use the drawing tools to create the walls, floor and roof I can design characters for my game I can decide upon, and change, the animations and sounds that the characters make

Summer		Education for a Connected Framework	Education for a Connected Framework
Summer Education for a Connected World Health, well-being and lifestyle Privacy and Security Copyright and Ownership Purple Mash Game Creator continued (5 weeks) 3D Modelling (4 weeks) Concept Maps (4 weeks)	• 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, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	**Education for a Connected Framework** Health, Well-Being and Lifestyle I know how technology can affect my sleep I know how I can promote healthy sleep Privacy and Security I know what makes a strong password I know about free apps and how they can use my private information I know why some apps ask me to pay and who to ask before purchasing Copyright and Ownership I know when I can use the work of others I know when permission can be refused **Purple Mash** 5.5 Game Creator (continued) I know how to finish and share my game I know how to self and peer evaluate 5.6 3D Modelling I know what the 2Design and Make tool is for I know the different viewpoints in 2Design and Make whilst designing a building I know how to adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form I know how to edit the polygon 3D models to design a 3D model for a purpose I know how to refine and print a model I know about the possibilities of 3D printing 5.7 Concept Maps	**Education for a Connected Framework** Health, Well-Being and Lifestyle I can describe ways technology can affect healthy sleep and can describe some of the issues I can describe some strategies, tips or advice to promote healthy sleep with regards to technology Privacy and Security I can create and use strong and secure passwords I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others I can explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing. Copyright and Ownership I can assess and justify when it is acceptable to use the work of others I can give examples of content that is permitted to be reused. **Purple Mash** 5.5 Game Creator (continued) I can make my game more unique by selecting the appropriate options to maximise playability I can write informative instructions for my game so that other people can play it I can evaluate my own and peers' games to help improve my design for the future 5.6 3D Modelling

		I know about the need for visual representation when generating and discussing complex ideas I know and use the correct vocabulary when creating a concept map I know what is meant by 'concept maps', 'stage', 'nodes' and 'connections' I know how to create a concept map I know how a concept map can be used to retell stories and information I know how to create a collaborative concept map and present this to an audience	I can explore the effect of moving points when designing I can design a 3D model to fit certain criteria I can refine one of my designs to prepare it for printing I can print my design as a 2D net and then create a 3D model 5.7 Concept Maps I can make connections between thoughts and ideas I can see the importance of recording concept maps visually I can create a basic concept map I can use 2Connect Story Mode to create an informative text I can use 2Connect collaboratively to create a concept map I can use Presentation Mode to present my concept maps to an audience

Computing Curriculum

Term & Focus	National Curriculum Objectives	Knowledge	Skills
Autumn Education for a Connected World Self-image and identity Online relationships Purple Mash Coding (6 weeks) Spreadsheets (5 weeks)	• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	**Education for a Connected World** Self-image and Identity I know about gender online I know who I need to talk to if I need help online I know how to judge whether a message is inappropriate or not Online relationships I know how I can get help I know why I should ask if I need help I know how online problems are caused **Purple Mash** 6.1 Coding I know how to design programs using my choice of objects, attributing specific actions to each using my new programming knowledge I know how to use variables within a game to keep track of the properties of objects I know how to use functions and understand why they are useful in 2Code I know how to debug a program and organise the code into tabs I know how to organise code into functions and Call functions to eliminate surplus code in the program	**Education for a Connected World** Self-image and Identity I can describe ways in which media can shape ideas about gender I can identify messages about gender roles and make judgements based on them I can challenge and explain why it is important to reject inappropriate messages about gender online I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might get help, both on and offline I can explain why I should keep asking until I get the help I need Online relationships I can show I understand my responsibilities for the well-being of others in my online social group I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming) I can demonstrate how I would support others (including those who are having difficulties) online I can demonstrate ways of reporting problems online for both myself and my friends **Purple Mash** 6.1 Coding

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| | | I know the options for getting text input from the user in 2Code
I know how to include interactivity in programming
I know how to use flowcharts to test and debug a program
I know how to create a simulation of a room in which devices can be controlled
I know how 2Code can be used to make a text-based adventure game

6.3 Spreadsheets
I know how to use a spreadsheet to investigate the probability of the results of throwing many dice
I know how to use a spreadsheet to calculate the discount and final prices in a sale
I know how to create a formula to help work out the prices of items in the sale
I know how to use a spreadsheet to plan how to spend pocket money and the effect of saving money
I know how to use a spreadsheet to plan a school charity day to maximise the money donated to charity | I can plan a program before coding to anticipate the variables that will be required to achieve the desired effect
I can follow through plans to create the program
I can debug when things do not run as expected
I can explain what functions are and how they can be created and labelled in 2Code
I can explain how to move code from one tab to another in 2Code
I can explain how I organised code in a program into functions to make it easier to read
I can code programs that take text input from the user and use this in the program
I can attribute variables to user input
I can follow flowcharts to create and debug code
I can create flowcharts for algorithms using 2Chart
I can be creative with the way I code to generate novel visual effects
I can follow through the code of how a text adventure can be programmed in 2Code
I can adapt an existing text adventure to make it unique to my requirements.

6.3 Spreadsheets
I can create a spreadsheet to answer a mathematical question relating to probability
I can take copy and paste shortcuts
I can problem solve using the count tool
I can create a machine to help work out the price of different items in a sale
I can use the formula wizard to create formulae
I can use a spreadsheet to solve a problem |

			I can use a spreadsheet to model a real-life situation and come up with solutions I can make practical use of a spreadsheet to help plan actions I can use a spreadsheet to model a real-life situation and come up with solutions that can be applied to real life
Spring <u>Education for a Connected World</u> Online Reputation Online Bullying Managing Online Information <u>Purple Mash</u> Blogging (5 weeks) Text adventures (4 weeks)	• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • Understand computer networks, including the Internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including	**Education for a Connected World** <u>Online Reputation</u> I know how to develop a positive online reputation <u>Online Bullying</u> I know how to capture evidence of online bullying I know who to share my concerns with at home and at school <u>Managing Online Information</u> I know how to sue a search engine effectively I know examples of when online information is an opinion I know the terms' influence, manipulation and persuasion' I know how to report inappropriate content **Purple Mash** <u>6.4 Blogging</u> I know how a blog can be used as an informative text I know the key features of a blog I know how to plan the theme and content for a blog I know how to write a blog	**Education for a Connected World** <u>Online Reputation</u> I can explain how I am developing an online reputation which will allow other people to form an opinion of me I can describe some simple ways that help build a positive online reputation <u>Online Bullying</u> I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me I can identify a range of ways to report concerns both in school and at home about online bullying <u>Managing Online Information</u> I can use search technologies effectively I can demonstrate the strategies I would apply to be discerning in evaluating digital content I can explain how search engines work and how results are selected and ranked I can describe how some online information can be opinion and can offer examples I can explain how and why some people may present 'opinions' as 'facts' I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting')

	collecting, analysing, evaluating and presenting data and information ● use sequence, selection, and repetition in programs; work with variables and various forms of input and output ● use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	I know how to consider the effect upon the audience of changing the visual properties of the blog I know the importance of regularly updating the content of a blog I know how to contribute to an existing blog I know how and why blog posts are approved by the teacher I know the importance of commenting on blogs I know how to peer-assess blogs against the agreed success criteria 6.5 Text Adventures I know what a text adventure is I know how to make a story-based adventure I know about map-based text adventures I know how to code a map-based text adventure	I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important I can identify, flag and report inappropriate content **Purple Mash** 6.4 Blogging I can identify the purpose of writing a blog I can identify the features of successful blog writing I can work collaboratively to plan a blog I can create a blog with a specific purpose I can explain about the way in which information is presented has an impact upon the audience I can explain why blogs need to be updated regularly (to maintain the audience's interest and engagement) I can post comments and blog posts to an existing class blog I can explain the approval process that my posts go through I can demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying I can comment on and respond to other blogs I can assess the effectiveness and impact of a blog 6.5 Text Adventures I can plan a story adventure I can describe what a text adventure is I can map out a story-based text adventure I can use 2Connect to record my ideas I can use the full functionality of 2Create a Story Adventure mode to create, test and debug using my plan

			I can split my adventure-game design into appropriate sections to facilitate creating it I can map out an existing text adventure I can contrast a map-based game with a sequential story-based game I can create my own text-based adventure based upon a map I can use coding concepts of functions, two-way selection (if/else statements) and repetition in conjunction with one another to code my game I can make logical attempts to debug my code when it does not work correctly
Summer Education for a Connected World Health, well-being and lifestyle Privacy and Security Copyright and Ownership Purple Mash Networks (3 weeks) Quizzing (6 weeks) Binary (4 weeks)	● use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ● 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)	**Education for a Connected Framework** Health, Well-Being and Lifestyle I know about common systems including: PEGI, BBFC, parental warnings I know how to self-regulate my use of technology Privacy and Security I know what to do if my password is lost or stolen I know about app permissions I know how to increase my privacy settings I know and can explain about scams and phishing Copyright and Ownership I know how to use the search tool to find information online I know how to reference a source I have used **Purple Mash** 6.6 Networks	**Education for a Connected Framework** Health, Well-Being and Lifestyle I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise) I can explain the importance of self-regulating my use of technology I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents) Privacy and Security I can use different passwords for a range of online services I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories) I can explain what app permissions are and can give some examples from the technology or services I use

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 know the difference between the World Wide Web and the internet I know about my school network I know about Tim Berners-Lee I know about some of the major changes in technology which have taken place during my lifetime and the lifetime of my teacher/another adult 6.7 Quizzing I know how to create a picture-based quiz for young children I know how to use the question types within 2Quiz I know about what sort of questions are best suited to the different question types I know about grammar quizzes I know how to make a quiz that requires the player to search a database I know how to make a quiz to test my teachers or parents 6.8 Binary I know that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems) I know that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics	I can describe simple ways to increase privacy on apps and services that provide privacy settings I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing) Copyright and Ownership I can demonstrate the use of search tools to find and access online content which can be reused by others I can demonstrate how to make references to and acknowledge sources I have used from the internet **Purple Mash** 6.6 Networks I can explain what a LAN and a WAN are I can explain how we access the internet in school I can find out about the age of the internet I can explain what the future might hold 6.7 Quizzing I can consider the audience's ability level and interests when setting the quiz I can share my quiz and respond to feedback I can explain the different question types within 2Quiz I can use 2Quiz to make and share a science quiz I can collaborate on a quiz I can explain the different types of Text Toolkit grammar games I can chose an appropriate Text Toolkit tool to make my own grammar game I can use a 2Investigate quiz to answer quiz questions

| | | I know the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11
I know how to represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary
I know how to explore how division by two can be used as a technique to determine the binary representation of any whole number by collecting remainder terms
I know how to represent the state of an object in a game as active or inactive using the respective binary values of 1 or 0 | I can design my own quiz based on one of the 2Investigate example databases
I can use my knowledge of quiz types to create a quiz show quiz based on a curriculum area

6.8 Binary
I can explain how all data in a computer is saved in the computer memory in a binary format
I can explain that binary uses only the integers 0 and 1
I can relate 0 to an 'off' switch and 1 to and 'on' switch
I can count up from 0 in binary
I can relate bits to computer storage
I can convert numbers to binary using the division by two method
I can check my own answers using the converter tool
I can make use of a variable set to 0 or 1 to control game states |