BINGHAM PRIMARY SCHOOL CURRICULUM

Subject: Computing

Key Stage: 2

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.
Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming.
Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content.
Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

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

At Key stage 2 Pupils should be taught to:

♣ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
♣ use sequence, selection, and repetition in programs; work with variables and various forms of input and output
♣ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
♣ understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
♣ use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
♣ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
♣ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Year 3

	Autumn Term		Spring Term		Summer Term	
Weeks	1 **Connecting computers**	2 **Stop-frame animation**	1 **Sequence in Music**	2 **Branching databases**	1 **Desktop Publishing**	2 **Events and actions**
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	**To explain that animation is a sequence of drawings or photographs** - I can create an effective flip book-style animation - I can draw a sequence of pictures - I can explain how an animation/flip book works	**To explore a new programming environment** - I can explain that objects in Scratch have attributes (linked to) - I can identify the objects in a Scratch project (sprites, backdrops) - I can recognise that commands in Scratch are represented as blocks	**To create questions with yes/no answers** - I can create two groups of objects separated by one attribute - I can investigate questions with yes/no answers - I can make up a yes/no question about a collection of objects	**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 messages clearly	**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
2	**To identify input and output devices** - I can classify input and output devices - I can design a digital device - I can model a simple process	**To relate animated movement with a sequence of images** - I can create an effective stop frame animation - I can explain why little changes are needed for each frame - I can predict what an animation will look like	**I can identify that each sprite is controlled by the commands I choose** - I can choose a word which describes an on-screen action for my design - I can create a program following a design - I can identify that each sprite is controlled by the commands I choose	**To identify the object attributes needed to collect relevant data** - 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	**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 explain that text can be changed to communicate more clearly	**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
3	**To identify input and output devices** - I can explain how I use digital devices for different activities - I can recognise similarities between using digital devices and non-digital tools - I can suggest differences between using digital devices and non-digital tools	**To plan an animation** - I can break down a story into settings, characters and events - I can create a storyboard - I can describe an animation that is achievable on screen	**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 start a program in different ways	**To create a branching database** - I can group objects using my own yes/no questions - I can prove my branching database works - I can select objects to arrange in a branching database	**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	**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
4	**To explain how a computer network can be used to share information**	**To identify the need to work consistently and carefully**	**To recognise that a sequence of commands can have an order**	**To identify objects using a branching database**	**To add content to a desktop publishing publication**	**To develop my program by adding features**

	- I can discuss why we need a network switch - I can explain how messages are passed through multiple connections - I can recognise different connections	- 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 help me make small changes between frames	- I can combine sound commands - I can explain what a sequence is - I can order notes into a sequence	- I can create questions and apply them to a tree structure - I can select a theme and choose a variety of objects - I can use my branching database to answer questions	- I can choose the best locations for my content - I can make changes to content after I've added it - I can paste text and images to create a magazine cover	- I can build more sequences of commands to make my design work - I can choose suitable keys to turn on additional features - I can identify additional features (from a given set of blocks)
5	**To explore how digital devices can be connected** - I can demonstrate how information can be passed between devices - I can explain the role of a switch, server, and wireless access point in a network - I can recognise that a computer network is made up of a number of devices	**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	**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	**To explain why it is helpful for a database to be well structured** - I can compare two branching database structures - I can create yes/no questions using given attributes - I can explain that questions need to be ordered carefully to split objects into similarly sized groups	**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	**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 test a program against a given design
6	**To recognise the physical components of a network** - I can identify how devices in a network are connected with one another - I can identify networked devices around me - I can identify the benefits of computer networks	**To evaluate the impact of adding other media to an animation** - I can add other media to my animation - I can evaluate my final film - I can explain why I added other media to my animation	**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	**To compare the information shown in a pictogram with a branching database** - I can compare two ways of presenting information - I can explain what a branching database tells me - I can explain what a pictogram tells me	**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	**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

Year 4

	Autumn Term		Spring Term		Summer Term	
Weeks	1 **The Internet**	2 **Audio editing**	1 **Repetition in shapes**	2 **Data logging**	1 **Photo editing**	2 **Repetition in Games**
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 needs protecting	**To identify that sound can be digitally recorded:** - I can identify digital devices that can record sound and play it back - I can identify the inputs and outputs required to play audio or record sound - I can recognise the range of sounds that can be recorded	**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	**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 suggest questions that can be answered using a given data set	**To explain that digital images can be changed** - I can explain the effect that editing can have on an image - I can explore how images can be changed in real life - I can identify changes that we can make to an image	**To develop the use of count-controlled loops in a different programming environment** - I can list an everyday task as a set of instructions including repetition - I can modify a snippet of code to create a given outcome - I can predict the outcome of a snippet of code
2	**To recognise how networked devices make up the internet** - I can describe the different networked devices and how they connect - I can explain how the internet allows us to view the World Wide Web - I can recognise that the World Wide Web is the part of the internet that contains websites and web pages	**To use a digital device to record sound:** - I can discuss what other people include when recording sound for a podcast - I can suggest how to improve my recording - I can use a device to record audio and play back sound	**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 write an algorithm to produce a given outcome	**To use a digital device to collect data automatically** - I can explain that sensors are input devices - I can identify that data from sensors can be recorded - I can use data from a sensor to answer a given question	**To change the composition of an image** - I can change the composition of an image by selecting parts of it - I can consider why someone might want to change the composition of an image - I can explain what has changed in an edited image	**To explain that in programming there are infinite loops and count controlled loops** - I can choose when to use a count-controlled and an infinite loop - I can modify loops to produce a given outcome - I can recognise that some programming languages enable more than one process to be run at once
3	**To outline how websites can be shared via the World Wide Web** - I can describe how to access websites on the WWW - I can describe where websites are stored when uploaded to the WWW - I can explain the types of media that can be shared on the World Wide Web (WWW)	**To explain that a digital recording is stored as a file:** - I can discuss why it is useful to be able to save digital recordings - I can plan and write the content for a podcast - I can save a digital recording as a file	**To explain what 'repeat' means** - I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves - I can identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step' - I can use a count-controlled loop to produce a given outcome	**To explain that a data logger collects 'data points' from sensors over time** - I can identify a suitable place to collect data - I can identify the intervals used to collect data - I can talk about the data that I have captured	**To describe how images can be changed for different uses** - I can choose effects to make my image fit a scenario - I can explain why my choices fit a scenario - I can talk about changes made to images	**To develop a design which includes two or more loops which run at the same time** - I can choose which action will be repeated for each object - I can evaluate the effectiveness of the repeated sequences used in my program - I can explain what the outcome of the repeated action should be

4	**To describe how content can be added and accessed on the World Wide Web** - I can create media which can be found on websites - I can explain that new content can be created online - I can recognise that I can add content to the WWW	**To explain that audio can be changed through editing:** - I can discuss ways in which audio recordings can be altered - I can edit sections of of an audio recording - I can open a digital recording from a file	**To modify a count-controlled loop to produce a given outcome** - I can choose which values to change in a loop - I can identify the effect of changing the number of times a task is repeated - I can predict the outcome of a program containing a count-controlled loop	**To use data collected over a long duration to find information** - I can import a data set - I can use a computer program to sort data - I can use a computer to view data in different ways	**To make good choices when selecting different tools** - I can choose appropriate tools to retouch an image - I can give examples of positive and negative effects that retouching can have on an image - I can identify how an image has been retouched	**To modify an infinite loop in a given program** - I can explain the effect of my changes - I can identify which parts of a loop can be changed - I can re-use existing code snippets on new sprites
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 suggest who owns the content on websites	**To show that different types of audio can be combined and played together:** - I can choose suitable sounds to include in a podcast - I can discuss sounds that other people combine - I can use editing tools to arrange sections of audio	**To decompose a program into parts** - 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	**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	**To recognise that not all images are real** - I can combine parts of images to create new images - I can sort images into 'fake' or 'real' and explain my choices - I can talk about fake images around me	**To design a project that includes repetition** - I can develop my own design explaining what my project will do - I can evaluate the use of repetition in a project - I can select key parts of a given project to use in my own design
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, accurate, or legal.	**To evaluate editing choices made:** - I can discuss the features of a digital recording I like - I can explain that digital recordings need to be exported to share them - I can suggest improvements to a digital recording	**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	**To use collected data 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	**To evaluate how changes can improve an image** - I can compare the original image with my completed publication - I can consider the effect of adding other elements to my work - I can evaluate the impact of my publication on others through feedback	**To create a project that includes repetition** - I can build a program that follows my design - I can evaluate the steps I followed when building my project - I can refine the algorithm in my design

Year 5

	Autumn Term		Spring Term		Summer Term	
Weeks	1 **Sharing information**	2 **Video editing**	1 **Selection in physical computing**	2 **Flat-file data bases**	1 **Vector drawing**	2 **Selection in quizzes**
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	**To recognise video as moving pictures, which can include audio** - I can explain that a video can include both visual and audio media - I can explain the benefits of adding audio to a video - I can plan a video project using a storyboard	**To control a simple circuit connected to a computer** - I can build a simple circuit to connect a microcontroller to a computer - I can explain why I used an infinite loop - I can program a microcontroller to light an LED	**To use a form to record information** - I can create multiple questions about the same field - I can explain how information can be recorded - I can order, sort, and group my data cards	**To identify that drawing tools can be used to produce different outcomes** - I can discuss how a vector drawing is different from paper-based drawings - I can identify the main drawing tools - I can recognise that vector drawings are made using shapes	**To explain how selection is used in computer programs** I can identify conditions in a program - I can modify a condition in a program - I can recall how conditions are used in selection
2	**To recognise the role of computer systems in our lives** - I can explain the benefits of a given computer system - I can identify tasks that are managed by computer systems - I can identify the human elements of a computer system	**To identify digital devices that can record video** - I can choose the most suitable digital device for recording my project - I can identify and name digital devices that can record video and sound - I can locate and identify the working features of a digital device that can record video	**To write a program that includes count-controlled loops** - I can connect more than one output device to a microcontroller - I can decide which output devices I control with a count-controlled loop - I can design sequences for given output devices	**To compare paper and computer-based databases** - I can choose which field to sort data by to answer a given question - I can explain what a 'field' and a 'record' is in a database - I can navigate a flat-file database to compare different views of information	**To create a vector drawing by combining shapes** - I can explain that each element added to a vector drawing is an object - I can identify the shapes used to make a vector drawing - I can move, resize, and rotate objects I have duplicated	**To relate that a conditional statement connects a condition to an outcome** - I can create a program with different outcomes using selection - I can identify the condition and outcomes in an if..then… else statement - I can use selection in an infinite loop to check a condition
3	**To recognise how information is transferred over the internet** - I can explain that data is transferred over networks in packets - I can explain that networked digital devices have unique addresses - I can recognise that data is transferred using agreed methods	**To capture video using a digital device** - I can demonstrate suitable methods of using a digital device to capture my video - I can demonstrate the safe use and handling of devices - I can select a suitable device and software to capture my video	**To explain that a loop can stop when a condition is met, eg number of times** - I can experiment with a 'do until' loop - I can explain that a condition is something that can either be true or false (eg whether a value is more than 10, or whether a button has been pressed) - I can program a	**To outline how grouping and then sorting data allows us to answer questions** - I can combine grouping and sorting to answer more specific questions - I can explain how information can be grouped - I can group information to answer questions	**To use tools to achieve a desired effect** - I can explain how alignment grids and resize handles can be used to improve consistency - I can modify objects to create different effects - I can use the zoom tool to help me add detail to my drawings	**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

			microcontroller to respond to an input			
4	**To explain how sharing information online lets people in different places work together** - I can explain that the internet allows different media to be shared - I can recognise that connected digital devices can allow us to access shared files stored online - I can send information over the internet in different ways	**To recognise the features of an effective video** - I can explain why lighting and angle are important in creating an effective video - I can list some of the features of an effective video - I can record a video that demonstrates some of the features of an effective video	**To conclude 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 'if… then…' statement) to direct the flow of a program	**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 'OR' can be used to refine data selection	**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 identify which objects are in the front layer or in the back layer of a drawing	**To design a program which uses selection** - I can identify the outcome of user input in an algorithm - I can outline a given task - I can use a design format to outline my project
5	**To contribute to a shared project online** - I can compare working online with working offline - I can make thoughtful suggestions on my group's work - I can suggest strategies to ensure successful group work	**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	**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 (the task) - I can identify a condition to start an action (real world)	**To explain that computer programs can be used to compare data visually** - I can explain the benefits of using a computer to create graphs - I can refine a chart by selecting a particular filter - I can select an appropriate chart to visually compare data	**To group objects to make them easier to work with** - I can copy part of a drawing by duplicating several objects - I can group to create a single object - I can reuse a group of objects to further develop my vector drawing	**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 test my program
6	**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	**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	**To create a controllable system that includes selection** - I can test and debug my project - I can use selection to produce an intended outcome - I can write an algorithm to control lights and a motor	**To apply my knowledge of a database to ask and answer real-world 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	**To evaluate my vector drawing** - I can apply what I have learned about vector drawings - I can suggest improvements to a vector drawing - I create alternatives to vector drawings	**To evaluate my program** - I can extend my program further - I can identify ways the program could be improved - I can identify what setup code my project needs

Year 6

	Autumn Term		Spring Term		Summer Term	
Weeks	1 **Communication**	2 **Web page creation**	1 **Variables in games**	2 **Introduction to spreadsheets**	1 **3D modelling**	2 **Sensing**
1	**To identify how to use a search engine** - I can compare results from different search engines - I can complete a web search to find specific information - I can refine my search	**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	**To define a 'variable' as something that is changeable** - I can explain that the way that 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	**To identify questions which can be answered using data** - I can answer questions from an existing data set - I can ask simple relevant questions which can be answered using data - I can explain the relevance of data headings	**To use a computer to create and manipulate three-dimensional (3D) digital objects** - I can discuss the similarities and differences between 2D and 3D shapes - I can explain why we might represent 3D objects on a computer - I can select, move, and delete a digital 3D shape	**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 emulator - I can transfer my program to a controllable device
2	**To describe how search engines select results** - I can explain why we need tools to find things online - I can recognise the role of web crawlers in creating an index - I can relate a search term to the search engine's index	**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 suggest media to include on my page	**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	**To explain that objects can be described using data** - I can apply an appropriate number format to a cell - I can build a data set in a spreadsheet application - I can explain what an item of data is	**To compare working digitally with 2D and 3D graphics** - I can change the colour of a 3D object - I can identify how graphical objects can be modified - I can resize a 3D object	**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
3	**To explain how search results are ranked** - I can explain that a search engine follows rules to rank relevant pages - I can explain that search results are ordered - I can suggest some of the criteria that a search engine checks to decide on the order of results	**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 say why I should use copyright-free images	**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 can be used by a program	**To explain that formula can be used to produce calculated data** - I can construct a formula in a spreadsheet - I can explain the relevance of a cell's data type - I can identify that changing inputs changes outputs	**To construct a digital 3D model of a physical object** - I can position 3D objects in relation to each other - I can rotate a 3D object - I can select and duplicate multiple 3D objects	**To update a variable with a user input** - I can experiment with different physical inputs - I can explain that if you read a variable, the value remains - I can use a condition to change a variable
4	**To recognise why the order of results is important, and to whom** - I can describe some of the ways that search results can	**To recognise the need to preview pages** - I can add content to my own web page - I can evaluate what my	**To design a project that builds on a given example** - I can choose the artwork for my project - I can create algorithms for	**To apply formulas to data, including duplicating** - I can apply a formula to multiple cells by duplicating it	**To identify that physical objects can be broken down into a collection of 3D shapes**	**To use an conditional statement to compare a variable to a value** - I can explain the importance of the order of

	be influenced - I can explain how search engines make money - I can recognise some of the limitations of search engines	web page looks like on different devices and suggest/make edits. - I can preview what my web page looks like	my project - I can explain my design choices	- I can create a formula which includes a range of cells - I can recognise that data can be calculated using different operations	- I can create digital 3D objects of an appropriate size - I can group a digital 3D shape and a placeholder to create a hole in an object - I can identify the 3D shapes needed to create a model of a real-world object	conditions in else if statements - I can modify a program to achieve a different outcome - I can use an operand (e.g. <>=) in an if… then… statement
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 of communicating over the internet	**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	**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 test the code that I have written	**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 spreadsheet to answer questions	**To design a digital model by combining 3D objects** - I can choose which 3D objects I need to construct my model - I can modify multiple 3D objects - I can plan my 3D model	**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 design the algorithm for my project - I can design the program flow for my project
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 - I can explain that communication on the internet may not be private	**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	**To evaluate my project** - I can extend my game further using more variables - I can identify ways that my game could be improved - I can share my game with others	**To choose suitable ways to present data** - I can produce a graph - I can suggest when to use a table or graph - I can use a graph to show the answer to questions	**To develop and improve a digital 3D model** - I can decide how my model can be improved - I can evaluate my model against a given criterion - I can modify my model to improve it	**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