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Computer Systems and Networks						
Reception ELG's	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
I can use a keybopard to type my name on a computer	I can switch on and log into a computer I can use a mouse to click and drag and to open a program I can use a keybopard to type my name on a computer I can use the keyboard to edit text I can use the arrow keys to move the cursor	I can explain technology as something that helps us I can use a mouse to open a program and to create a picture I can open my work from a file I can use the arrow keys to move the cursor	I can follow a process I can describe a simple process I can design a digital device I can discuss why we need a network switch I can demonstrate how information can be passed between devices	I can describe the internet as a network of networks I can explain the types of media that can be shared on the WWW I can recognise that I can add content to the WWW I can explain that not everything on the World Wide Web is true	I can describe the input, process, and output of a digital system I can explain that computer systems communicate with other devices I can make use of a web search to find specific information I can refine my web search I can explain why we need tools to find things online I can describe some of the ways that search results can be influenced I can recognise some of the limitations of search engines	I can describe how computers use addresses to access websites I can explain that data is transferred over networks in packets I can send information over the internet in different ways I can compare different methods of communicating on the internet I can decide when I should and should not share information online

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Creating Media

Reception	Y1	Y2	Y3	Y4	Y5	Y6
I can use letter, number, and Space keys I can make careful choices when painting a digital picture I can make dots of colour on the page	I can add and remove text on a computer I can use letter, number, and Space keys I can type capital letters I can identify the toolbar and use bold, italic, and underline I can select a word by double-clicking I can select all of the text by clicking and dragging I can change the font I can use 'Undo' to remove changes I can make careful choices when painting a digital picture	I can talk about how to take a photograph. I can explain what I did to capture a digital photo I can recognise that images can be changed I can use a tool to achieve a desired effect I can explain my choices I can identify which photos are real and which have been changed I can connect images with sounds I can use a computer to experiment with pitch	I can explain the difference between text and images I can change font style, size, and colours for a given purpose I can edit text I can create a template for a particular purpose I can paste text and images to create a magazine cover I can choose a suitable layout for a given purpose I can create an effective flip book—style animation I can create an effective stop-frame animation I can describe an animation that is achievable on screen	I can use a computer to record audio I can inspect the soundwave view to know where to trim my recording I can save my project so the different parts remain editable I can record content following my plan I can review the quality of my recordings I can arrange multiple sounds to create the effect I want I can use photo editing software to crop an image I can experiment with different colour effects I can add to the composition of an image by cloning I can remove parts of an image using cloning	I can recognise that vector drawings are made using shapes I can experiment with the shape and line tools I can move, resize, and rotate objects I have duplicated I can use the zoom tool to help me add detail to my drawings I can modify objects to create a new image I can use layering to create an image I can change the order of layers in a vector drawing I can copy part of a drawing by duplicating several objects I can create a vector drawing for a specific purpose	I can add 3D shapes to a project I can move 3D shapes relative to one another I can resize an object in three dimensions I can lift/lower 3D objects I can recolour a 3D object I can rotate objects in three dimensions I can group 3D objects I can show that placeholders can create holes in 3D objects I can combine objects in a design I can explain how my 3D model could be improved I can discuss the different types of

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	I can make dots of colour on the page I can change the colour and brush sizes	I can refine my musical pattern on a computer	I can create a storyboard I can use onion skinning to help me make small changes between frames I can review a sequence of frames to check my work I can add other media to my animation	I can use a range of tools to copy between images I can create a project that is a combination of other images I can combine text and my image to complete the project	I can experiment with different camera angles I can make use of a microphone I can capture video using a range of filming techniques I can create a storyboard for a video I can create and save video content I can store, retrieve, and export my recording to a computer I can select the correct tools to make edits to my video	media used on websites I can suggest media to include on my page I can draw a web page layout that suits my purpose I can find copyright-free images I can add content to my own web page I can preview what my web page looks like I can explain what a navigation path is I can make multiple web pages and link them using hyperlinks I can create hyperlinks to link to other people's work

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Data and Information						
Reception	Y1	Y2	Y3	Y4	Y5	Y6
I can count a group of objects I can find objects with similar properties	I can describe objects using labels I can count a group of objects I can describe a property of an object I can find objects with similar properties I can group objects in more than one way I can decide how to group objects to answer a question I can record and share what I have found	I can enter data onto a computer I can use a computer to view data in a different format I can use pictograms to answer simple questions I can tally objects using a common attribute I can create a pictogram to arrange objects by an attribute I can use a computer program to present information in different ways I can share what I have found out using a computer I can give examples of why information shouldn't be shared	I can make up a yes/no question about a collection of objects I can arrange objects into a tree structure I can select objects to arrange in a branching database I can independently create questions to use in a branching database	I can choose a data set to answer a given question I can use data from a sensor to answer a given question I can identify the intervals used to collect data I can sort data to find information I can use a data logger to collect data	I can create a database using cards 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 I can choose which field to sort data by to answer a given question I can group information using a database I can outline how 'AND' and 'OR' can be used to refine data selection I can choose multiple criteria to answer a given question I can select an appropriate chart to visually compare data I can refine a chart by selecting a particular filter	I can enter data into a spreadsheet I can explain what an item of data is I can apply an appropriate format to a cell I can explain which data types can be used in calculations I can calculate data using different operations I can create a formula which includes a range of cells I can use a spreadsheet to answer questions I can use a chart to show the answer to a question

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Programming						
Reception	Y1	Y2	Y3	Y4	Y5	Y6
I can give directions. I can follow an instruction.	I can match a command to an outcome. I can give directions. I can follow an instruction. I can compare forward and backward movements. I can compare left and right turn. I can explain what my program should do. I can choose the order of commands in a sequence. I can use commands to move a sprite I can use more than one block by joining them together I can use a **Start** block in a program	I can follow a sequence. I can predict the outcome of a sequence. I can use an algorithm to program a sequence on a floor robot. I can explain the choices that I made for my mat design. I can create an algorithm to meet my goal. I can use my algorithm to create a program. I can test and debug each part of the program. I can plan algorithms for different parts of a task. I can identify the start of a sequence. I can identify that a program needs to be started .	I can recognise that commands in Scratch are represented as blocks. I can identify that each sprite is controlled by the commands I choose. I can create a program following a design. I can start a program in different ways. I can create a sequence of connected commands. I can explain what a sequence is. I can order notes into a sequence. I can build a sequence of commands. I can decide the actions for each sprite in a program.	I can program a computer by typing commands I can create a code snippet for a given purpose I can use a template to draw what I want my program to do I can write an algorithm to produce a given outcome I can use a count-controlled loop to produce a given outcome I can predict the outcome of a program containing a count-controlled loop I can choose which values to change in a loop I can use a procedure in a program	I can create a simple circuit and connect it to a microcontroller I can program a microcontroller to switch an LED on I can use a count-controlled loop to control outputs I can connect more than one output component to a microcontroller I can design a conditional loop I can program a microcontroller to respond to an input 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 identify examples of information that is variable I can explain that a variable has a name and a value I can make use of an event in a program to set a variable I can create the artwork for my project I can create algorithms for my project I can choose a name that identifies the role of a variable I can test the code that I have written I can identify ways that my game could be improved I can use variables to extend my game

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	I can run my program I can show that a project can include more than one sprite I can delete a sprite I can decide how each sprite will move I can create an algorithm for each sprite I can add programming blocks based on my algorithm I can test the programs I have created	I can show how to run my program. I can match two sequences with the same outcome. I can change the outcome of a sequence of commands. I can work out the actions of a sprite in an algorithm. I can decide which blocks to use for my design. I can build the sequences of blocks I need. I can choose backgrounds for the design. I can choose characters for the design. I can improve my project by adding features. I can debug my program.	I can implement my algorithm as code. I can choose which keys to use for actions and explain my choices. I can choose a suitable size for a character in a maze. I can program movement. I can use a programming extension. I can build more sequences of commands to make my design work I can match a piece of code to an outcome.	I can design a program that includes count-controlled loops I can develop my program by debugging it I can modify a snippet of code to create a given outcome I can modify loops to produce a given outcome I can choose when to use a count-controlled and an infinite loop I can identify which parts of a loop can be changed I can re-use existing code snippets on new sprites I can select key parts of a given project to use in my own design I can create a project that includes repetition	I can write an algorithm that describes what my model will do I can use selection to produce an intended outcome I can test and debug my project I can identify conditions in a program I can modify a condition in a program I can use selection in an infinite loop to check a condition I can design the flow of a program that contains 'if… then… else…' I can show that a condition can direct program flow in one of two ways I can use a design format to outline my project I can identify the outcome of user input in an algorithm I can implement my algorithm to create the	I can test my program on an emulator I can transfer my program to a controllable device 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 I can use a condition to change a variable I can experiment with different physical inputs I can use an operand (e.g. <>=) in an if, then statement I can explain the importance of the order of conditions in else, if statements I can modify a program to achieve a different outcome I can decide what variables to include in a project

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					first section of my program I can identify the setup code I need in my program	I can design the algorithm for my project I can design the program flow for my project I can use a range of approaches to find and fix bugs