



St Bartholomew's Computing - Long Term Plan - Year B

Year B	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6																																						
Apple Reception	<p>Technology in the Early Years will mean:</p> <ul style="list-style-type: none"> taking a photograph with a camera or tablet searching for information on the internet playing games on the interactive whiteboard exploring an old typewriter or other mechanical/electronic toys controlling toys using a remote control using a Beebot watching a video clip listening to music reading ebooks using the apps on the ipads (suggested apps only) use paint and writing apps to develop skills in other areas of the curriculum using sound buttons to access provision and challenges 																																											
Apple Reception Termly Focus	Online Safety	Online Safety and Technology at home	Online Safety and Technology in school	Online Safety and Technology in school	Online Safety and Technology in school	Online Safety and Programmable toys																																						
Apple Y1	<p><u>Technology around us</u></p> <p>Recognising technology in school and using it responsibly.</p> <p>(Computer systems and networks)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 20%;">Learning Intention</th> <th style="width: 80%;">Success Criteria</th> </tr> </thead> <tbody> <tr> <td style="background-color: #4a7ebb; color: white;">Lesson 1 To know how to identify technology</td> <td>I can explain technology as something that helps us I can locate examples of technology in the classroom I can explain how these technology examples help us</td> </tr> <tr> <td style="background-color: #4a7ebb; color: white;">Lesson 2 To know how to identify a computer and its main parts</td> <td>I can name the main parts of a computer I can switch on and log into a computer I can use a mouse to click and drag</td> </tr> </tbody> </table>	Learning Intention	Success Criteria	Lesson 1 To know how to identify technology	I can explain technology as something that helps us I can locate examples of technology in the classroom I can explain how these technology examples help us	Lesson 2 To know how to identify a computer and its main parts	I can name the main parts of a computer I can switch on and log into a computer I can use a mouse to click and drag	<p><u>Grouping data</u></p> <p>Exploring object labels, then using them to sort and group objects by properties.</p> <p>(Data and information)</p> <table border="1" style="width: 100%; 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Lesson 3 To know how to use a mouse in different ways	I can use a mouse to open a program I can click and drag to make objects on a screen I can use a mouse to create a picture
Lesson 4 To know how to use a keyboard to type on a computer	I can say what a keyboard is for I can type my name on a computer I can save my work to a file
Lesson 5 To know how to use the keyboard to edit text	I can open my work from a file I can use the arrow keys to move the cursor I can delete letters
Lesson 6 To know how to create rules for using technology responsibly	I can identify rules to keep us safe and healthy when we are using technology in and beyond the home I can give examples of some of these rules I can discuss how we benefit from these rules

Lesson 4 To know how to count objects with the same properties	I can group similar objects I can group objects in more than one way I can count how many objects share a property
Lesson 5 To know how to compare groups of objects	I can choose how to group objects I can describe groups of objects I can record how many objects are in a group
Lesson 6 To know how to answer questions about groups of objects	I can decide how to group objects to answer a question I can compare groups of objects I can record and share what I have found

Lesson 3 To know how to combine 'forwards' and 'backwards' commands to make a sequence	I can compare forward and backward movements I can start a sequence from the same place I can predict the outcome of a sequence involving 'forwards' and 'backwards' commands
Lesson 4 To know how to combine four direction commands to make sequences	I can compare left and right turns I can experiment with 'turn' and 'move' commands to move a robot I can predict the outcome of a sequence involving up to four commands
Lesson 5 To know how to plan a simple program	I can explain what my program should do I can choose the order of commands in a sequence I can debug my program
Lesson 6 To know how to find more than one solution to a problem	I can identify several possible solutions I can plan two programs I can use two different programs to get to the same place

	recreate the work of an artist
Lesson 3 To know how to make careful choices when painting a digital picture	I can choose appropriate shapes I can make appropriate colour choices I can create a picture in the style of an artist
Lesson 4 To know how to explain why I chose the tools I used	I can explain that different paint tools do different jobs I can choose appropriate paint tools and colours to recreate the work of an artist I can say which tools were helpful and why
Lesson 5 To know how to use a computer on my own to paint a picture	I can make dots of colour on the page I can change the colour and brush sizes I can use dots of colour to create a picture in the style of an artist on my own
Lesson 6 To know how to compare painting a picture on a computer and on paper	I can explain that pictures can be made in lots of different ways I can spot the differences between painting on a computer and on paper I can say whether I prefer painting using a computer or using paper

	landscape format
Lesson 3 To know what makes a good photograph	I can identify what is wrong with a photograph I can discuss how to take a good photograph I can improve a photograph by retaking it
Lesson 4 To know how photographs can be improved	I can explore the effect that light has on a photo I can experiment with different light sources I can explain why a picture may be unclear
Lesson 5 To know how to use tools to change an image	I can recognise that images can be changed I can use a tool to achieve a desired effect I can explain my choices
Lesson 6 To know that photos can be changed	I can apply a range of photography skills to capture a photo I can recognise which photos have been changed I can identify which photos are real and which have been changed

	outcomes between two sequences that consist of the same instructions
Lesson 3 To know how to use logical reasoning to predict the outcome of a program	I can follow a sequence I can predict the outcome of a sequence I can compare my prediction to the program outcome
Lesson 4 To know how to explain that programming projects can have code and artwork	I can explain the choices that I made for my mat design I can identify different routes around my mat I can test my mat to make sure that it is usable
Lesson 5 To know how to design an algorithm	I can explain what my algorithm should achieve I can create an algorithm to meet my goal I can use my algorithm to create a program
Lesson 6 To know how to create and debug a program that I have written	I can test and debug each part of the program I can plan algorithms for different parts of a task I can put together the different parts of my program

Palm Y2/3

Pictograms

Collecting data in tally charts and using attributes to organise and present data on a computer.

(Data and Information)

Learning Intention	Success Criteria
Lesson 1 To know that we can count and compare objects using tally charts	I can record data in a tally chart I can represent a tally count as a total I can compare totals in a tally chart

Digital writing

Using a computer to create and format text, before comparing to writing non-digitally

(Creating Media)

Learning Intention	Success Criteria
Lesson 1 To know how to use a computer to write	I can open a word processor I can recognise keys on a keyboard I can identify and find keys on a keyboard

Programming animations

Designing and programming the movement of a character on screen to tell stories.

(Programming)

Learning Intention	Success Criteria
Lesson 1 To know how to choose a command for a given purpose	I can find the commands to move a sprite I can use commands to move a sprite I can compare different programming tools

Branching databases

Building and using branching databases to group objects using yes/no questions.

(Data and information)

Learning Intention	Success Criteria
Lesson 1 To know how to create questions with yes/no answers	I can investigate questions with yes/no answers I can make up a yes/no question about a

Programming quizzes

Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.

(Programming B)

Learning Intention	Success Criteria
Lesson 1 To know how to explain that a sequence of commands has a start	I can identify the start of a sequence I can identify that a program

Desktop publishing

Creating documents by modifying text, images, and page layouts for a specified purpose.

(Creating Media)

Learning Intention	Success Criteria
Lesson 1 To know how to recognise how text and images convey information	I can explain the difference between text and images I can recognise that text and images can communicate messages clearly I can identify the advantages and disadvantages

Lesson 2 To know that objects can be represented as pictures	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 about objects
Lesson 3 To know how to create a pictogram	I can organise data in a tally chart I can use a tally chart to create a pictogram I can explain what the pictogram shows
Lesson 4 To know how to select objects by attribute and make comparisons	I can tally objects using a common attribute I can create a pictogram to arrange objects by an attribute I can answer 'more than'/'less than' and 'most/least' questions about an attribute
Lesson 5 To know that people can be described by attributes	I can choose a suitable attribute to compare people I can collect the data I need I can create a pictogram and draw conclusions from it
Lesson 6 To know that we can present information using a computer	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 simple examples of why information should not be shared

Lesson 2 To know how to add and remove text on a computer	I can enter text into a computer I can use letter, number, and Space keys I can use Backspace to remove text
Lesson 3 To know how to identify that the look of text can be changed on a computer	I can type capital letters I can explain what the keys that I have already learnt about do I can identify the toolbar and use bold, italic, and underline
Lesson 4 To know how to make careful choices when changing text	I can select a word by double-clicking I can select all of the text by clicking and dragging I can change the font
Lesson 5 To know how to explain why I used the tools that I chose	I can say what tool I used to change the text I can decide if my changes have improved my writing I can use 'Undo' to remove changes
Lesson 6 To know how to compare typing on a computer to writing on paper	I can make changes to text on a computer I can explain the differences between typing and writing I can say why I prefer typing or writing

Lesson 2 To know that a series of commands can be joined together	I can use more than one block by joining them together I can use a Start block in a program I can run my program
Lesson 3 To know how to identify the effect of changing a value	I can find blocks that have numbers I can change the value I can say what happens when I change a value
Lesson 4 To know that each sprite has its own instructions	I can show that a project can include more than one sprite I can delete a sprite I can add blocks to each of my sprites
Lesson 5 To know how to design the parts of a project	I can choose appropriate artwork for my project I can decide how each sprite will move I can create an algorithm for each sprite
Lesson 6 To know how to use my algorithm to create a program	I can use sprites that match my design I can add programming blocks based on my algorithm I can test the programs I have created

	collection of objects I can create two groups of objects separated by one attribute
Lesson 2 To know how to identify the attributes needed to collect data about an object	I can select an attribute to separate objects into groups I can create a group of objects within an existing group I can arrange objects into a tree structure
Lesson 3 To know how to create a branching database	I can select objects to arrange in a branching database I can group objects using my own yes/no questions I can test my branching database to see if it works
Lesson 4 To know how to explain why it is helpful for a database to be well structured	I can create yes/no questions using given attributes I can compare two branching database structures I can explain that questions need to be ordered carefully to split objects into similarly sized groups
Lesson 5 To know how to plan the structure of a branching database	I can independently create questions to use in a branching database I can create questions that will enable objects to be uniquely identified I can create a physical version of a branching database
Lesson 6 To know how to independently create an identification tool	I can create a branching database that reflects my plan I can work with a partner to test my identification tool I can suggest real-world uses for branching databases

	needs to be started I can show how to run my program
Lesson 2 To know how to explain that a sequence of commands has an outcome	I can predict the outcome of a sequence of commands I can match two sequences with the same outcome I can change the outcome of a sequence of commands
Lesson 3 To know how to create a program using a given design	I can work out the actions of a sprite in an algorithm I can decide which blocks to use to meet the design I can build the sequences of blocks I need
Lesson 4 To know how to change a given design	I can choose backgrounds for the design I can choose characters for the design I can create a program based on the new design
Lesson 5 To know how to create a program using my own design	I can choose the images for my own design I can create an algorithm I can build sequences of blocks to match my design
Lesson 6 To know how my project can be improved	I can compare my project to my design I can improve my project by adding features I can debug my program

	of using text and images
Lesson 2 To know how 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
Lesson 3 To know how to choose appropriate page settings	I can explain what 'page orientation' means I can recognise placeholders and say why they are important I can create a template for a particular purpose
Lesson 4 To know how to add content to a desktop publishing publication	I can choose the best locations for my content I can paste text and images to create a magazine cover I can make changes to content after I've added it
Lesson 5 To know how different layouts can suit different purposes	I can identify different layouts I can match a layout to a purpose I can choose a suitable layout for a given purpose
Lesson 6 To know the benefits of desktop publishing	I can identify the uses of desktop publishing in the real world I can say why desktop publishing might be helpful I can compare work made on desktop publishing to work created by hand

Sequencing sounds

Creating sequences in a block-based programming

Events and actions in programs

Writing algorithms and programs that use a range of events

language to make music.

(Programming A)

Learning Intention	Success Criteria
Lesson 1 To know how to explore a new programming environment	I can identify the objects in a Scratch project (sprites, backdrops) I can explain that objects in Scratch have attributes (linked to) I can recognise that commands in Scratch are represented as blocks
Lesson 2 To know that commands have an outcome	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 plan I can create a program following a design
Lesson 3 To know that a program has a start	I can start a program in different ways I can create a sequence of connected commands I can explain that the objects in my project will respond exactly to the code
Lesson 4 To know that that a sequence of commands can have an order	I can explain what a sequence is I can combine sound commands I can order notes into a sequence
Lesson 5 To know how 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
Lesson 6 To know how to create a project from a task description	I can identify and name the objects I will need for a project I can relate a task description to a design I can implement my algorithm as code

to trigger sequences of actions.

(Programming B)

Learning Intention	Success Criteria
Lesson 1 To know how a sprite moves in an existing project	I can explain the relationship between an event and an action I can choose which keys to use for actions and explain my choices I can identify a way to improve a program
Lesson 2 To know how 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
Lesson 3 To know how to adapt a program to a new context	I can use a programming extension I can consider the real world when making design choices I can choose blocks to set up my program
Lesson 4 To know how to develop my program by adding features	I can identify additional features (from a given set of blocks) I can choose suitable keys to turn on additional features I can build more sequences of commands to make my design work
Lesson 5 To know how to identify and fix bugs in a program	I can test a program against a given design I can match a piece of code to an outcome I can modify a program using a design
Lesson 6 To know how to design and create a maze-based challenge	I can make design choices and justify them I can implement my design I can evaluate my project

Oak Y4/5

[Connecting computers](#)

[Repetition in shapes](#)

[Vector drawing](#)

Creating images in a drawing

[Selection in physical computing](#)

[The internet](#)

Recognising the internet as a

[Audio production](#)

Capturing and editing audio to

Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.

(Computer systems and networks)

Learning Intention	Success Criteria
Lesson 1 To know 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
Lesson 2 To know how to identify input and output devices	I can classify input and output devices I can describe a simple process I can design a digital device
Lesson 3 To know how digital devices can change the way that we work	I can explain how I use digital devices for different activities I can recognise similarities between using digital devices and using non-digital tools I can suggest differences between using digital devices and using non-digital tools
Lesson 4 To know how a computer network can be used to share information	I can recognise different connections I can explain how messages are passed through multiple connections I can discuss why we need a network switch
Lesson 5 To know how digital devices can be connected	I can recognise that a computer network is made up of a number of devices 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
Lesson 6 To know how the physical components of a network	I can identify how devices in a network are connected together I can identify networked devices around me

Using a text-based programming language to explore count-controlled loops when drawing shapes.

(Programming A)

Learning Intention	Success Criteria
Lesson 1 To know that accuracy in programming is important	I can program a computer by typing commands I can explain the effect of changing a value of a command I can create a code snippet for a given purpose
Lesson 2 To know how to create a program in a text-based language	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 test my algorithm in a text-based language
Lesson 3 To know what 'repeat' means	I can identify repetition in everyday tasks I can identify patterns in a sequence I can use a count-controlled loop to produce a given outcome
Lesson 4 To know how to modify a count-controlled loop to produce a given outcome	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 I can choose which values to change in a loop
Lesson 5 To know how to decompose a task into small steps	I can identify 'chunks' of actions in the real world I can use a procedure in a program I can explain that a computer can repeatedly

program by using layers and groups of objects.

(Creating media)

Learning Intention	Success Criteria
Lesson 1 To know how to identify that drawing tools can be used to produce different outcomes	I can recognise that vector drawings are made using shapes I can experiment with the shape and line tools I can discuss how vector drawings are different from paper-based drawings
Lesson 2 To know how to create a vector drawing by combining shapes	I can identify the shapes used to make a vector drawing I can explain that each element added to a vector drawing is an object I can move, resize, and rotate objects I have duplicated
Lesson 3 To know how to use tools to achieve a desired effect	I can use the zoom tool to help me add detail to my drawings I can explain how alignment grids and resize handles can be used to improve consistency I can modify objects to create a new image
Lesson 4 To know that vector drawings consist of layers	I can identify that each added object creates a new layer in the drawing I can change the order of layers in a vector drawing I can use layering to create an image
Lesson 5 To know how to group objects to make them easier to work with	I can copy part of a drawing by duplicating several objects I can recognise when I need to group and ungroup objects I can reuse a group of objects to further develop my vector drawing
Lesson 6 To know how to apply what I have learned about vector drawings	I can create a vector drawing for a specific purpose I can reflect on the skills I have used and why I have used them I can compare vector drawings to freehand paint drawings

Exploring conditions and selection using a programmable microcontroller.

(Programming A)

Learning Intention	Success Criteria
Lesson 1 To know how to control a simple circuit connected to a computer	I can create a simple circuit and connect it to a microcontroller I can program a microcontroller to make an LED switch on I can explain what an infinite loop does
Lesson 2 To know how to write a program that includes count-controlled loops	I can connect more than one output component to a microcontroller I can use a count-controlled loop to control outputs I can design sequences that use count-controlled loops
Lesson 3 To know that a loop can stop when a condition is met	I can explain that a condition is either true or false I can design a conditional loop I can program a microcontroller to respond to an input
Lesson 4 To know 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
Lesson 5 To know how to design a physical project that includes selection	I can identify a real-world example of a condition starting an action I can describe what my project will do I can create a detailed drawing of my project
Lesson 6 To know how to create a program that controls a physical computing project	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

network of networks including the WWW, and why we should evaluate online content.

(Computer systems and networks)

Learning Intention	Success Criteria
Lesson 1 To know how networks physically connect to other networks	I can describe the internet as a network of networks I can demonstrate how information is shared across the internet I can discuss why a network needs protecting
Lesson 2 To know how networked devices make up the internet	I can describe networked devices and how they connect I can explain that the internet is used to provide many services I can recognise that the World Wide Web contains websites and web pages
Lesson 3 To know how websites can be shared via the World Wide Web (WWW)	I can explain the types of media that can be shared on the WWW I can describe where websites are stored when uploaded to the WWW I can describe how to access websites on the WWW
Lesson 4 To know how content can be added and accessed on the World Wide Web (WWW)	I can explain what media can be found on websites I can recognise that I can add content to the WWW I can explain that internet services can be used to create content online
Lesson 5 To know how the content of the WWW is created by people	I can explain that websites and their content are created by people I can suggest who owns the content on websites I can explain that there are rules to protect content

produce a podcast, ensuring that copyright is considered.

(Creating media)

Learning Intention	Success Criteria
Lesson 1 To know that sound can be recorded	I can identify the input and output devices used to record and play sound I can use a computer to record audio I can explain that the person who records the sound can say who is allowed to use it
Lesson 2 To know that audio recordings can be edited	I can re-record my voice to improve my recording I can inspect the soundwave view to know where to trim my recording I can discuss what sounds can be added to a podcast
Lesson 3 To know how to recognise the different parts of creating a podcast project	I can explain how sounds can be combined to make a podcast more engaging I can save my project so the different parts remain editable I can plan appropriate content for a podcast
Lesson 4 To know how to apply audio editing skills independently	I can record content following my plan I can review the quality of my recordings I can improve my voice recordings
Lesson 5 To know how to combine audio to enhance my podcast project	I can open my project to continue working on it I can arrange multiple sounds to create the effect I want I can explain the difference between saving a project and exporting an audio file
Lesson 6 To know how to evaluate the effective use of audio	I can listen to an audio recording to identify its strengths I can suggest improvements to an audio recording I can choose appropriate edits to improve my podcast

Willow Y6

I can identify the benefits of computer networks
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call a procedure	
Lesson 6 To know how 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 make use of my design to write a program I can develop my program by debugging it

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Lesson 6 To know how to evaluate the consequences of unreliable content	I can explain that not everything on the World Wide Web is true I can explain why some information I find online may not be honest, accurate, or legal I can explain why I need to think carefully before I share or reshare content
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Communication and collaboration

Identifying and exploring how data is transferred and information is shared online.
(Computer systems and networks)

Learning Intention	Success Criteria
Lesson 1 To know the importance of internet addresses	I can recognise that data is transferred using agreed methods I can explain that internet devices have addresses I can describe how computers use addresses to access websites
Lesson 2 To know how data is transferred across the internet	I can identify and explain the main parts of a data packet I can explain that data is transferred over networks in packets I can explain that all data transferred over the internet is in packets
Lesson 3 To know how sharing information online can help people to work together	I can recognise how to access shared files stored online I can send information over the internet in different ways I can explain that the internet allows different media to be shared
Lesson 4 To know how to evaluate different ways of working together online	I can identify different ways of working together online I can recognise that working together on the internet can be public or private I can explain how the internet enables effective collaboration

Webpage creation

Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.
(Creating media)

Learning Intention	Success Criteria
Lesson 1 To know how to review an existing website and consider its structure	I can explore a website I can discuss the different types of media used on websites I know that websites are written in HTML
Lesson 2 To know how to plan the features of a web page	I can recognise the common features of a web page I can suggest media to include on my page I can draw a web page layout that suits my purpose
Lesson 3 To know how to consider the ownership and use of images (copyright)	I can say why I should use copyright-free images I can find copyright-free images I can describe what is meant by the term 'fair use'
Lesson 4 To know how to recognise the need to preview pages	I can add content to my own web page I can preview what my web page looks like I can evaluate what my web page looks like on different devices and suggest/make edits.

Variables in games

Exploring variables when designing and coding a game.
(Programming A)

Learning Intention	Success Criteria
Lesson 1 To know how to define a 'variable' as something that is changeable	I can identify examples of information that is variable I can explain that the way a variable changes can be defined I can identify that variables can hold numbers or letters
Lesson 2 To know why a variable is used in a program	I can identify a program variable as a placeholder in memory for a single value I can explain that a variable has a name and a value I can recognise that the value of a variable can be changed
Lesson 3 To know 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

Introduction to spreadsheets

Answering questions by using spreadsheets to organise and calculate data.
(Data and information)

Learning Intention	Success Criteria
Lesson 1 To know how to create a data set in a spreadsheet	I can collect data I can suggest how to structure my data I can enter data into a spreadsheet
Lesson 2 To know how to build a data set in a spreadsheet	I can explain what an item of data is I can choose an appropriate format for a cell I can apply an appropriate format to a cell
Lesson 3 To know how to explain that formulas can be used to produce calculated data	I can explain which data types can be used in calculations I can construct a formula in a spreadsheet I can identify that changing inputs changes outputs
Lesson 4 To know how to apply formulas to data	I can calculate data using different operations I can create a formula which includes a range of cells I can apply a formula to multiple cells by duplicating it

Sensing

Designing and coding a project that captures inputs from a physical device.
(Programming B)

Learning Intention	Success Criteria
Lesson 1 To know how 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
Lesson 2 To know how to explain that selection can control the flow of a program	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 determine the flow of a program using selection
Lesson 3 To know how to update a variable with a user input	I can use a condition to change a variable I can experiment with different physical inputs I can explain that checking a variable doesn't change its value
Lesson 4 To know how to use a conditional statement to compare a variable to a value	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

3D modelling

Planning, developing, and evaluating 3D computer models of physical objects.
(Creating media)

Learning Intention	Success Criteria
Lesson 1 To know that you can work in three dimensions on a computer	I can add 3D shapes to a project I can view 3D shapes from different perspectives I can move 3D shapes relative to one another
Lesson 2 To know that digital 3D objects can be modified	I can resize an object in three dimensions I can lift/lower 3D objects I can recolour a 3D object
Lesson 3 To know that objects can be combined in a 3D model	I can rotate objects in three dimensions I can duplicate 3D objects I can group 3D objects
Lesson 4 To know how to create a 3D model for a given purpose	I can accurately size 3D objects I can show that placeholders can create holes in 3D objects I can combine a number of 3D objects
Lesson 5 To know how to plan my own 3D model	I can analyse a 3D model I can choose objects to use in a 3D model I can combine objects in a design

<p>Lesson 5 To know how we communicate using technology</p>	<p>I can explain the different ways in which people communicate I can identify that there are a variety of ways to communicate over the internet I can choose methods of communication to suit particular purposes</p>	<p>Lesson 5 To know the outline the need for a navigation path</p>	<p>I can explain what a navigation path is I can describe why navigation paths are useful I can make multiple web pages and link them using hyperlinks</p>	<p>Lesson 4 To know how to design a project that builds on a given example</p>	<p>I can choose the artwork for my project I can create algorithms for my project I can explain my design choices</p>	<p>Lesson 5 To know how to create a spreadsheet to plan an event</p>	<p>I can use a spreadsheet to answer questions I can explain why data should be organised I can apply a formula to calculate the data I need to answer questions</p>	<p>Lesson 5 To know how to design a project that uses inputs and outputs on a controllable device</p>	<p>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</p>	<p>Lesson 6 To know how to create my own digital 3D model</p>	<p>I can construct a 3D model based on a design I can explain how my 3D model could be improved I can modify my 3D model to improve it</p>
<p>Lesson 6 To know how to evaluate different methods of online communication</p>	<p>I can compare different methods of communicating on the internet I can decide when I should and should not share information online I can explain that communication on the internet may not be private</p>	<p>Lesson 6 To know the implications of linking to content owned by other people</p>	<p>I can explain the implication of linking to content owned by others I can create hyperlinks to link to other people's work I can evaluate the user experience of a website</p>	<p>Lesson 5 To know how to use my design to create a project</p>	<p>I can create the artwork for my project I can choose a name that identifies the role of a variable I can test the code that I have written</p>	<p>Lesson 6 To know how to choose suitable ways to present data</p>	<p>I can produce a chart I can use a chart to show the answer to a question I can suggest when to use a table or chart</p>	<p>Lesson 6 To know how to develop a program to use inputs and outputs on a controllable device</p>	<p>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</p>		
				<p>Lesson 6 To know how to evaluate my project</p>	<p>I can identify ways that my game could be improved I can use variables to extend my game I can share my game with others</p>						



St Bartholomew's Computing - Long Term Plan - Year A

Year A	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Apple YR/Y1	<p><u>Technology around us</u></p> <p>Recognising technology in school and using it responsibly.</p> <p>(Computer systems and networks)</p>	<p><u>Grouping data</u></p> <p>Exploring object labels, then using them to sort and group objects by properties.</p> <p>(Data and information)</p>	<p><u>Moving a robot</u></p> <p>Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> <p>(Programming A)</p>	<p><u>Digital painting</u></p> <p>Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally</p> <p>(Creating Media)</p>	<p><u>Digital photography</u></p> <p>Capturing and changing digital photographs for different purposes.</p> <p>(Creating Media)</p>	<p><u>Robot algorithms</u></p> <p>Creating and debugging programs, and using logical reasoning to make predictions.</p> <p>(Programming A)</p>
Palm Y2/Y3	<p><u>Using the internet</u></p> <p>This unit introduces children to using the Internet safely and with a purpose. Children are shown how to search the Internet using one word; how to make sense of the returned results; how to use "for kids" to return more suitable results; how to follow links and return to the search results.</p>	<p><u>Making music</u></p> <p>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p> <p>(Creating media)</p>	<p><u>Preparing for turtle logo</u></p> <p>This unit has two main aims, to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo.</p>	<p><u>Internet Research and Communication</u></p> <p>This unit focuses on how to effectively search using keywords and how to safely communicate online.</p>	<p><u>Online safety</u></p> <p>Children are introduced to email and other forms of online communication. They will look at how to write and send emails, as well as how to decide if an email is safe to open. They will build on their existing knowledge of cyberbullying and how to deal with unkind behaviour online.</p>	<p><u>Stop-frame animation</u></p> <p>Capturing and editing digital still images to produce a stop-frame animation that tells a story.</p> <p>(Creating Media)</p>
Oak Y4/Y5	<p><u>Sharing Information</u></p> <p>In this unit, learners will develop their understanding of</p>	<p><u>Flat-file databases</u></p> <p>Using a database to order data and create charts</p>	<p><u>Repetition in games</u></p> <p>Using a block-based programming language to</p>	<p><u>Video production</u></p> <p>Planning, capturing, and editing video to</p>	<p><u>Photo editing</u></p> <p>Manipulating digital images, and reflecting on the impact of changes and</p>	<p><u>Selection in quizzes</u></p> <p>Exploring selection in programming to design and code</p>

	<p>computer systems and how information is transferred between systems and devices. Learners will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems. Learners will also take part in a collaborative online project with other class members and develop their skills in working together online.</p> <p>(Computer systems and networks)</p>	<p>to answer questions.</p> <p>(Data and information)</p>	<p>explore count-controlled and infinite loops when creating a game.</p> <p>(Programming B)</p>	<p>produce a short film.</p> <p>(Creating media)</p>	<p>whether the required purpose is fulfilled.</p> <p>(Creating Media)</p>	<p>an interactive quiz.</p> <p>(Programming B)</p>
Willow Y6	<p><u>Communication and collaboration</u></p> <p>Identifying and exploring how data is transferred and information is shared online.</p> <p>(Computer systems and networks)</p>	<p><u>Webpage creation</u></p> <p>Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.</p> <p>(Creating media)</p>	<p><u>Variables in games</u></p> <p>Exploring variables when designing and coding a game.</p> <p>(Programming A)</p>	<p><u>Introduction to spreadsheets</u></p> <p>Answering questions by using spreadsheets to organise and calculate data.</p> <p>(Data and information)</p>	<p><u>Sensing</u></p> <p>Designing and coding a project that captures inputs from a physical device.</p> <p>(Programming B)</p>	<p><u>3D modelling</u></p> <p>Planning, developing, and evaluating 3D computer models of physical objects.</p> <p>(Creating media)</p>