WHIMPLE PRIMARY SCHOOL - COMPUTING CURRICULUM OVERVIEW

EXPLORE DISCOVER SUCCEED

"What a computer is to me is the most remarkable tool that we have ever come up with. It's the equivalent of a bicycle for our minds." **Steve Jobs**	**VISION** We want our children to be fluent with a range of tools to best express their understanding so that children have the independence and confidence to choose the best tool to fulfil the task, effectively preparing children for life in the twenty-first century.

Computing Systems and Networks **Creating Media** **Data & information** **Programming** **Online Safety**

Elm Rec	**EYFS R**	Show resilience and perseverance in the face of a challenge. PSED know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time' PSED Develop their small motor skills so that they can use a range of tools competently, safely and confidently. PD Explore, use and refine a variety of artistic effects to express their ideas and feelings. EA&D					
	EYFS ELG	Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. PSED Explain the reasons for rules, know right from wrong and try to behave accordingly. PSED Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. EA&D					
Year 1		**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Elm/ AshY1	**Unit Overview**	**Computing systems and networks:** Technology Around Us Children identify computers and their main parts. They begin to use a mouse/ keyboard to edit text. Children learn to log on.	**Data and Information:** Grouping Data This unit introduces pupils to data and information. They will learn to sort objects into groups. *Labelling, grouping and describing linked to literacy, maths and science.*	**Creating Media**: Digital Painting Children use a variety of tools to paint a digital picture using a Paint Program. *Revisit parts of a computer, brush tool and cursor.*	**Programming:** Moving a Robot Children will use directional commands to make a sequence and plan a simple program.	**Creating Media:** Digital Writing Children learn to type and edit text, using text boxes, and justify their choices. *Revisit parts of a computer, text tool and spacebar.*	**Programming:** Introduction to Animation Children will begin to understand how programming and instructions can control a sprite.
	National Curriculum Links	d) Use technology purposefully to create, organise, store, manipulate, and retrieve digital content e) Recognise common uses of information technology beyond school	d) Use technology purposefully to create, organise, store, manipulate and retrieve digital content f) Use technology safely and respectfully	d) Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	a) Understand what algorithms are; b) Create and debug simple programs c) Use logical reasoning to predict the behaviour of simple programs e) Recognise common uses of IT	d)Use technology purposefully to create, organise, store, manipulate and retrieve digital content f) Use technology safely and respectfully	a) Understand what algorithms are, b) Create and debug simple programs c) Use logical reasoning to predict the behaviour of simple programs
	Vocabulary	**technology, screen, keyboard, mouse, trackpad, base unit, computer, tools, cursor**	**label, object, match, group, describe, data, property, size, compare, more than, most, less than, least (fewest)**	**paint program, tool, brush tool, erase, fill, undo, drag, shape tool, line tool, horizontal, vertical**	**Beebot, buttons, instruction, direction, program, command, route, forward, backward, left, right**	**Word processor, keyboard, keys, text, Google docs, spacebar, cursor, backspace, enter, toolbar, font, edit**	**command, sprite, programming blocks, value, design, debugging, sequence, instruction, algorithm**
	Learning Focus	• To identify technology. • To name the parts of a computer. • To use a mouse/trackpad and keyboard. • To create rules for using technology responsibly.	• To identify, label and count objects. • To describe, sort, group and compare objects. • To answer questions about groups of objects.	• To describe what different freehand tools do. • To use the shape and line tools. • To make and explain my tool choice. • To use a computer to paint a picture and compare it to one on paper.	• To explain what a given command will do. • To combine forward, backward, left/ right commands to make sequences. • To plan a simple program. • To find more than one solution to a problem.	• To recognise the keys on a keyboard. • To add and remove text and identify that the look of the text can be changed. • To explain the tools and choices I made to change the text. • To compare typing on a computer to writing on paper.	• To choose a command for a given purpose and understand that these commands can be joined together. • To add commands, including values, for more than one sprite. • To design a project using Scratch. • To use an algorithm to create a program.
	Key Knowledge	Explain how technology can help us Identify examples of technology Explain why rules are needed when using technology Name the main parts of a computer Describe how to use technology safely	Know that objects can be counted Recognise that information can be presented	List which commands can be given on a device Explain what a given command does Match a command to an outcome	Explain what different freehand tools do Recognise tools can be adjusted to suit need Decide when it's appropriate to use each tool Explain impact of choices made	Know the function of a keyboard and how different keys enter different characters Recognise that text can be changed Know the purpose of the backspace key	List commands that can be used on a given device Explain what a given command does Understand that a program is a set of commands a computer can run
	Key Skills	Choose a piece of technology to do a job Recognise that technology can be used in different ways Use a mouse in different ways Use a keyboard to type and edit text	Identify attributes of an object Collect simple data and show it can be counted Describe properties of an object Choose an attribute to sort by Group objects to answer a question Explain how objects can be grouped	Predict the outcome of a command on a device Run a command on a robot Choose a command for a given purpose	Create a picture using freehand tools Use shape, line and fill tools Use a range of paint colours Use the undo button to correct a mistake Combine a range of tools to create a piece of art	Select text Change appearance of text Use undo and backspace to remove text Consider the impact of choices made	Predict the outcome of a command on a device Choose a command for a given purpose Build a sequence of commands in steps

Year 2		Autumn 1	Autumn	Spring 1	Spring 2	Summer 1	Summer 2
Class 2 Y2	Unit Overview	**Computing systems and networks:** IT Around Us Children identify information technology at school/beyond, and how it improves our world. Children learn how to use technology responsibly.	**Data and Information**: Pictograms Children learn to represent data in tally charts, tables and pictograms.	**Creating Media:** Digital Photography Children will take digital photographs and begin to use software to make edits. *Landscape/portrait link to art.*	**Programming:** Robot Algorithms Children will explore further instructions and programming and begin to use algorithms. *Revisit BeeBot command buttons and use of an algorithm.*	**Creating Media**: Digital Music Children use Chrome Music Lab to notate rhythms and series of notes to make music.	**Programming:** An Introduction to Quizzes Children use sequences of commands to create programs of their own design. *Revisit Scratch commands and creating an algorithm.*
	National Curriculum Links	e) Recognise common uses of information technology beyond school	d) Use technology purposefully to create, organise, store, manipulate, and retrieve digital content f) Use technology safely and respectfully	d) Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	a) Understand what algorithms are; b) Create and debug simple programs c) Use logical reasoning to predict the behaviour of simple programs f) Use technology safely/respectfully	d) Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	a) Understand what algorithms are; b) Create and debug simple programs c) Use logical reasoning to predict the behaviour of simple programs
	Vocabulary	**Information technology, device, permission, safety, online, rules**	**compare, tally, tally chart, data, pictogram, property, attribute, block diagram**	**device, camera, portrait, landscape, position, frame, focus, light level, effect, image**	**instruction, order, algorithm, program, command, sequence, prediction, route, debug, code, outcome**	**pulse, rhythm, pattern, pitch, duration, tempo, sequence, notes, compose**	**outcome, sprite, programming blocks, sequence, algorithm, animation, design, debugging, evaluate, program**
	Learning Focus	● To recognise the uses and features of information technology. ● To identify the uses of information technology and how it helps us. ● To explain how to use information technology safely. ● To recognise that choices are made when using information technology.	● To recognise that objects can be counted and compared using tally charts. ● To recognise that objects can be described by attributes and represented by pictures to produce a pictogram/block graph. ● To collect data and present the information for others to answer questions about it. ● To answer questions from information presented in a pictogram or block graph.	● To use a digital device to take a photograph. ● To make informed choices about taking a photograph landscape or portrait. ● To describe what makes a good photograph and how light can affect it. ● To use tools to change an image and recognise that photos can be changed.	● To describe a series of instructions (algorithms) as a sequence and what happens when the order is changed. ● To follow, compare and predict the outcome of a series of commands (program). ● To design a mat and test routes around it. ● To plan, test and debug algorithms within a program.	● To listen to music and identify patterns and instruments within it. ● To make a musical sequence of notes using a computer. ● To create music for a purpose and explain choices. ● To review and refine my work.	● To explain that a sequence of commands has a start and an outcome. ● To create a program using a given design, including the blocks and actions required for the sprites. ● To change designs, including backgrounds and characters. ● To debug a program and improve it by adding features.
	Key Knowledge	Explain how information technology can help us Identify examples of information technology Recognise that choices are made when using technology Explain why rules are needed when using technology Describe how to use technology safely	Know what a tally chart is Know what a pictogram is Explain what an attribute is	Recognise what makes a good photo Make choices about composition and lighting Recognise that photos can be change after they have been taken	Describe that a series of instructions is a sequence Explain what happens when we change the order of instructions **R**ecognise that you can predict the outcome of a program	Identify that computer can be used to play sounds of different instruments Identify that the same pattern can be represented in different ways Compare playing music on instruments with making music on a computer	Describe a series of instructions as a sequence Explain what happens when changing the order of instructions
	Key Skills	Choose a piece of information technology to do a job Recognise that information technology can be used in different ways	Collect data, record/ organise/ compare in a tally chart Create pictograms from tally charts Create pictograms to arrange objects by attribute Ask/answer questions about data Draw conclusions from data	Capture an imagine in landscape or portrait View photographs on a digital device Use zoom, composition and lighting Edit photos using filters	Choose a series of instructions that can be run as a program Run a program on a device Debug a program that I have written	Experiment with different sounds on a computer Use a computer to compose a rhythm and a melody on a given theme Evaluate a musical composition	Choose a series of commands that can be run as a program Use logical reasoning to make predictions Create and debug programs

OAK		Autumn 1	Autumn	Spring 1	Spring 2	Summer 1	Summer 2
Oak Class	Unit Overview	Computing systems and networks: Connecting Computers Children learn about digital devices, including inputs, processes, and outputs. They are introduced to computer networks.	Creating Media: Animation Children learn to create stop frame animations using sequences of images.	Creating Media: Desktop Publishing (Google Docs templates) Children consider how page layout and presentation affect their work.	Data and Information: Branching Databases Children use, create and sort using branching databases.	Programming: Sequencing Sounds Children use Scratch to create their own programs, featuring sequences.	Programming: Events and Actions in Programs Children program sprites and create maze-based challenges.
	National Curriculum Links	b) use sequence, selection, and repetition in programs; d) understand computer networks including the internet; f) select, use and combine a variety of software	f) select, use and combine a variety of software g) use technology safely, respectfully and responsibly;	e) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content f) select, use and combine a variety of software	f) select, use and combine a variety of software g) use technology safely, respectfully and responsibly;	a) design, write, debug programs that accomplish specific goals; controlling or simulating physical systems; b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work; detect/ correct errors in algorithms/ programs f) select, use and combine a variety of software	a) design, write, debug programs that accomplish specific goals; controlling or simulating physical systems; b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work; detect/ correct errors in algorithms/ programs f) select, use and combine a variety of software
	Vocabulary	**digital device, input device, output device, process, system, parts, network**	**sequence, capture, media, movement, project, consistent, stop-frame, animation**	**landscape, portrait, orientation, resize, purpose, layout, placeholder, rotate, text, image, copy, paste**	**retrieve, attributes, database, open question, closed question, subgroups, branching, structure, apply**	**command, process, outcome, costume, code, stage, sprite, programming, design**	**motion, event, algorithm, block, debugging, error, action**
	Learning Focus	• To explain how digital devices function and recognise input and output devices. • To recognise how digital devices can change the way that we work and know some differences between using digital devices and using non-digital tools. • To explain how a computer network can be used to share information and how devices support this to work. • To recognise the physical components of a network and identify the devices within it.	• To explain that animation is a sequence of drawings or photographs with little changes for each frame. • To plan an animation using a storyboard. • To review and improve an animation by looking through the frames and explaining ways to make it better. • To evaluate the impact of adding other media to an animation.	• To recognise how text and images provide information in different ways. • To recognise that text and layout can be edited, including by choosing appropriate page settings. • To add content including text and images appreciating the layout needs to suit the purpose. • To compare work made on desktop publishing to work created by hand and consider the benefits of both.	• To create and investigate questions with yes/no answers so objects can be separated by one attribute. • To identify the object attributes needed to create a branching database. • To explain why it is helpful for a database (and its questions) to be ordered carefully and to use one to identify objects. • To compare the information shown in a pictogram with a branching database and how both can be used to answer questions.	• To identify objects/attributes in Scratch including sprites, backgrounds and blocks. • To produce a number of commands and join them in a sequence. • To develop and explore sequence implementation and whether order is important. To use motion, sound, costumes and backdrops in a designed sequence. • To create, test and debug a musical algorithm.	• To explain how a sprite moves in an existing project and program to move it in all four directions. • To adapt a program to a new context (using Pen extension) and to develop it by adding features including features and sequences of commands. • To identify and fix bugs in a program including matching a piece of code to outcome and modifying the program linked to the design. • To design, create, implement and evaluate a maze-based challenge.
	Key Knowledge	Understand how digital devices work. Understand how computers are connected.	Explain what an animation is Recognise that smaller movements create smoother animation Explain impact of adding extra media	Outline an approach to complete a task Choose a specific layout and explain why it is most suited Name different formats, including size, colour and font	Give examples of yes/no questions Describe what a branching database is, and its purpose	Describe the purpose of the project, for example, to create sounds when keys are pressed Explain what sequence means and demonstrate it in an algorithm Explain why the code is in that particular sequence	Explain what a sequence is Identify that a programme includes sequences or commands Identify what a process is Explain that the order of commands can affect a program's output
	Key Skills	Identify the processes of a digital device. *Revise if required, add Yr4 Internet content if applicable.*	Capture an image Move a subject between captures Review and edit captured sequence of frames Add media to enhance an animation Review a completed product	Use placeholders to divide the page Add text and images Format some of the text Evaluate and suggest improvements	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	Choose a name that describes the action of the sprite Choose relevant backdrops and costumes Create an algorithm for each sprite Adapt their code for additional named sprites Run their code and identify if it meets the requirements of the task Evaluate how successful they were in meeting the task requirements *Adapted project for Yr4 linked to another subject/topic.*	Build a sequence of commands Combine commands in a program Order commands in a program Create a sequence of commands to produce a given outcome

BEECH		Autumn 1		Spring 1	Spring 2	Summer 1	Summer 2
Beech Class Y4/5	**Unit Overview**	**Computing systems and networks:** The Internet Children will explore how the Internet is used, at home and in school, and how it can help us. *Add in lessons from Y5 unit sharing information if knowledge is good.*	**Creating Media:** Introduction to Vector Graphics Children create vectors by combing shapes. They group these to make images and evaluate their work. *Adapt to produce a different outcome linked to another subject/topic for Yr5 in Beech last year.*	**Data and Information**: Flat-File Databases Children learn how flat-file databases can be used to organise data in records. They will use database tools to order and answer questions about data.	**Programming**: Repetition in Games Children create a program that uses count-controlled loops to produce a given outcome. *Adapt to produce a different outcome linked to another subject/topic for Yr5 in Beech last year.*	**Creating Media:** Photo Editing (Ipads) Children explore how photos can be edited by changing their composition and adding effects. *Revisit from Digital Photography in Y2.* *Use slides to demo/explain - use Ipads to manipulate photos. Photos linked to another relevant subject/topic.*	**Programming**: Selection in Quizzes Children design, create and evaluate programs which use selection. *Adapt to produce a different outcome linked to another subject/topic for Yr5 in Beech last year.*
	National Curriculum Links	a) design, write, and debug programs that accomplish specific goals, d) understand computer networks including the internet; e) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content f) select, use and combine a variety of software	f) select, use and combine a variety of software	e) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content f) select, use and combine a variety of software	a) design, write, and debug programs that accomplish specific goals, b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs f) select, use and combine a variety of software	f) select, use and combine a variety of software g) use technology safely, respectfully and responsibly;	a) design, write, and debug programs that accomplish specific goals b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs f) select, use and combine a variety of software
	Vocabulary	**computer network, network switch, router, route, internet, World Wide Web, website, web browser, content, fake news**	**select, fit, alignment, canvas, rotate, border, layers, ordering, manipulate, group, zoom**	**database, record, field, data type, chart, axis, compare, filter, search, criteria, value, graph, presentation**	**Programming, blocks, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, event block, duplicate, modify**	**image, edit, digital, crop, rotate, undo, adjustments, effects, hue, saturation, sepia, clone, retouch**	**Selection, condition, count-controlled loop, conditional statement, implement, operator**
	Learning Focus	• To describe the internet as a network of networks that physically connect to each other. • To recognise how networked devices make up the internet which provides many services. • To understand the World Wide Web. To describe and explain how websites can be accessed, stored and created. • To understand and evaluate content on the internet and appreciate the consequences of unreliable content.	• To identify that drawing tools can be used to produce different outcomes. • To create a vector drawing by combining shapes. • To recognise that vector drawings consist of layers. • To group objects to make them easier to work with.	• To search for information in a database in a variety of ways to answer questions. • To contribute and enter information into a class database. • To create a database around a chosen topic, including adding fields and field information into records.	• To develop the use of count-controlled loops in a programming environment. • To develop a design that includes two or more loops that run at the same time. • To modify an infinite loop in a given program. • To design and create a project that includes repetition.	• To explain that digital images can be changed and why this is sometimes done. • To recognise and use a number of tools to alter an image. • To recognise that not all images are real and help identify them. • To understand how changes can improve an image and evaluate the impact of this.	• To explain how selection is used in computer programs. • To understand that a conditional statement connects a condition to an outcome. • To explain how selection directs the flow of a program. • To design, create and evaluate a program that uses selection.
	Key Knowledge	Describe how networks connect Explain what the World Wide Web is Give reasons for the importance of online safety Describe the benefits and risks of the WWW	Know that a vector drawing comprises separate objects Recognise that each object in a drawing is in its own layer Recognise that objects can be modified in groups Explain how alignment and size guides can help create a more consistent drawing	How flat file databases are used to organise records Know that a database consists of records and each record contains field. Navigate a flat-file database.	Explain what repeat means Identify everyday tasks that include repetition as part of a sequence Explain what a loop command is Identify patterns in sequence Identify a loop within a program Explain the difference between count controlled and infinite loops Explain the importance of instruction order in a loop	Recognise that images can be manipulated Understand and use the terms crops, rotate, reflect and clone Explain what changes have been made to an image	Explain that a condition can only be true or false To relate and compare count-controlled loops Explain that selection can be used to branch the flow Explain that loop can be used to repeatedly check if a condition has been met
	Key Skills	Access the World Wide Web Use search engines and websites	Add and delete objects in vector drawings duplicate objects using copy and paste Modify and reposition objects Combine options to achieve a desired effect	Use tools within a database to order and answer questions about data Create graphs and charts from their data to help solve problems. Use a real-life database.	Use an indefinite loop to produce a given outcome Use a count-controlled loop to produce a given outcome Create two or more sequences that run concurrently	Use an application to change a digital image Crop an image Adjust the colours of an image Apply filters and effects to an image Use clone, copy, and paste to change the composition of a digital image	Choose a condition to use in a program Use a condition in an 'If.. then..' statement Use selection to switch program flow Use 'If.. then…. else..' to switch program flow

WILLOW		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Willow Class Y5/6	**Unit Overview**	**Computing systems and networks:** Communication and Collaboration Children recognise how we communicate using technology. They use search engines safely. *Add in lessons from Y5 unit sharing information if knowledge is good.*	**Creating Media:** 3D Modelling Children design digital models, using collections of 3D shapes. Adapt to produce a different outcome linked to another subject/topic for Yr6 in Willow last year.	**Creating Media**: Web Page Creation Children produce their own webpages using hyperlinks and information. They consider copyright. Adapt to produce a different outcome linked to another subject/topic for Yr6 in Willow last year.	**Data and Information**: Introduction to Spreadsheets Children discover how formulae can be used in spreadsheets. They use this to plan an event. Adapt to produce a different outcome linked to another subject for Yr6 in Willow last year.	**Programming**: Variables in Games Children explore the concept of variables in programming through games in Scratch.	**Programming:** Sensing Children use variables and conditional statements to design projects with inputs and outputs.
	National Curriculum Links	d) understand computer networks including the internet; f) select, use and combine a variety of software use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour. g) use technology safely, respectfully and responsibly;	f) select, use and combine a variety of software use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour. g) use technology safely, respectfully and responsibly;	e) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content f) select, use and combine a variety of software use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.	f) select, use and combine a variety of software use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.	a) design, write, and debug programs that accomplish specific goals, including controlling/simulating physical systems; b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work; detect and correct errors in algorithms and programs f) select, use and combine a variety of software use technology safely,	a) design, write, and debug programs that accomplish specific goals, including controlling/simulating physical systems; b) use sequence, selection, and repetition in programs; c) use logical reasoning to explain how some simple algorithms work; detect and correct errors in algorithms and programs f) select, use and combine a variety of software use technology safely,
	Vocabulary	**communicate, protocol, header, IP address, destination, chat, Domain Server Address, web server, data packets, data payload, packets, electronic communication, public, private, blog,**	**3D, model, modify, tinker, analyse, combine, placeholders, components**	**website, web page, browser, header, hyperlink, fair use, media, home page, copyright,**	**record, data, formula, calculation, chart, graph, representation, spreadsheet, collection**	**variable, change, value, set, design, event, evaluate, assign, test, code**	**Micro-bit, input process, selection, condition, variable, random, sensing, navigation**
	Learning Focus	• To learn to use a search engine and describe how they select results. • To explain how search results are ranked and why the order of the results is important. • To recognise how technology is used to communicate and to be able to choose a method to suit a particular purpose. • To understand and evaluate the different methods of online communication, knowing when to share (or not) and that it may not be private.	• Use a computer to create and manipulate 3D objects. • To construct a digital 3D model of a physical object. • To design a digital model by combining 3D objects. • To develop and improve a digital 3D model.	• To review an existing website and consider its structure. • To plan the features of a web page. • To recognise the need to preview pages and the need for a navigation path. • To think about ownership and the implications of linking content owned by other people.	• To identify questions that can be answered using data. • Apply formulas to produce calculated data. • To choose suitable ways to present data. • To use spreadsheets and data to present specific information.	• To define a variable as something that is changeable. • To explain why a variable is used in a program. • To design a project and improve a game using variables. To use own design to create and evaluate own project	• To create a program to run on a controllable device. • To update a variable with a user input. • To use a conditional statement to compare a variable to a value. • To design and develop a project that uses inputs and outputs on a controllable device.
	Key Knowledge	To recognise that data is transferred across networks using agreed protocols(methods) To recognise connections between computers allows access to shared stored files To explain that data is transferred in packets To recognise computers connected to the internet allow people in different places to work together To explain that communicating and collaboration using the internet can be public or private	Know that you can work in 3D on computers Identify that 3D shapes can be modified Describe ways in which a 3D object can be changed	Name features of a website Know what a website is in terms of hyperlinked pages Understand ownership and use of images Explain why navigations and previews are needed	Identify questions which can be answered using a spreadsheet Outline different software tools Explain how data type determines how a spreadsheet processes data Explain what formula is	Define a variable and give examples Recognise that a variable can have a name and a value Describe ways that variables can be changed or set as constant	Define a variable Identify examples of information that is variable Explain that a variable has a name and a value, and the value can be used and updated by a program Recognise that variables can be set as constant
	Key Skills	To outline methods of communicating and collaborating using the internet To choose methods of internet communication and collaboration for given purposes To evaluate different methods of online communication and collaboration	Accurately size 3D objects Show that placeholders can create holes in 3D objects Combine a number of 3D objects Analyse a 3D model	Review and evaluate an existing website Design and create a new website Add text and embed media Preview and edit work Use hyperlinks in different ways	Calculate data using a formula Use functions to create new data Choose suitable ways to present data	Identify and experiment with variables Use variables in different places Use variables within conditional statements	Identify a variable in an existing program Experiment with the value of a variable Choose names that identify role of variable Decide where to set a variable Use a variable in a conditional statement