High View Primary Learning Centre

Computing Curriculum

Intent

Computing High View Primary Learning Centre intends to develop 'thinkers of the future' through a modern, ambitious and relevant education in computing. We want to equip pupils to use computational thinking and creativity that will enable them to become active participants in the digital world. It is important to us that the children understand how to use the ever-changing technology to express themselves, as tools for learning and as a means to drive their generation forward into the future. Whilst ensuring they understand the advantages and disadvantages associated with online experiences, we want children to develop as respectful, responsible and confident users of technology, aware of measures that can be taken to keep themselves and others safe online. Our aim is to provide a computing curriculum that is designed to balance acquiring a broad and deep knowledge alongside opportunities to apply skills in various digital contexts. Beyond teaching computing discreetly, we will give pupils the opportunity to apply and develop what they have learnt across wider learning in the curriculum.

Implementation

Our scheme of work for Computing is delivered on through the use of NCCE Curriculum and covers all aspects of the National Curriculum. This scheme was chosen as it has been created by subject experts and based on the latest pedagogical research. It provides an innovative progression framework where computing content (concepts, knowledge, skills and objectives) has been organised into interconnected networks called learning graphs. The curriculum aims to equip young people with the knowledge, skills and understanding they need to thrive in the digital world of today and the future. The curriculum can be broken down into 3 strands: computer science, information technology and digital literacy, with the aims of the curriculum reflecting this distinction.

The national curriculum for computing aims to ensure all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation (Computer science)

- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems (Computer science)

- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems (Information technology)

- are responsible, competent, confident and creative users of information and communication technology. (Digital literacy)

Digital Literacy is the ability and skill to find, evaluate, utilise, share, and create content using information technologies and the Internet

Computer science is the study of computers and computational systems.

Information technology is the study or use of systems (especially computers and telecommunications) for storing, retrieving, and sending information.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Overview of Topics			

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Digital Literacy **Computational thinking** Super space 'Awesome Autumn'	1. Computing Systems & Networks – Technology around us. 2. Digital Painting (links to artists/Art Cross Curricular)	1. Computing Systems & Networks – IT around 2. Digital Photography	1. Computing Systems & Networks – Connecting Computers. 2. Creating Media – Stop Frame Animation.	1. Computing Systems & Networks – The Internet 2. Creating Media – audio production	1. Computing Systems & Networks – Systems and searching 2. Creating media – Video production	1. Computing Systems & Networks – Communication and collaboration. 2. Creating Media – webpage creation.
Spring	Computer Science **Computational thinking** 'Winter warmers' 'Boats ahoy'	3. Programming A – Moving a Robot. 4. Data & Information – **Grouping Data**	3. Programming A – Moving a Robot. 4. Data & Information – **Pictograms**	3. Programming A – Sequencing Sounds 4. Data & Information – **Branching databases**	3. Programming A – Repetition in shapes. 4. Data & Information – **Data Logging**	3. Programming A – Selection in physical computer. 4. Data & Information – **Flat file databases**	3. Programming A – Variables in games. 4. Data & Information – **Introduction to spreadsheets.**
Summer	Information Technology **Computational thinking** Springtime Summer fun	5. Creating Media (digital writing 6. Programming B – Programming animations	5. Creating Media – digital music 6. Programming B – Programming Quizzes	5. Creating Media – Desktop Publishing 6. Programming B – Events and actions in programs	5. Creating Media – Photo editing. 6. Programming B – Repetition in games.	5. Creating Media – Introduction to Vectographics 6. Programming B – Selection in quizzes.	5. Creating Media – 3D Modellings 6. Programming B – Sensing Movement.

Progression of knowledge breakdown of 3 pillars of computing

		NC Objective	Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology	1) Computing systems and networks.	**Key stage 1** Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses of information technology beyond school **Key stage 2** 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	Understanding the World To know how to operate simple equipment To show an interest in technological toys with knobs and pulleys, or real objects To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images To know that information can be retrieved from computers To interact with age-appropriate computer software To recognise that a range of technology is used in places such as homes and schools To select and use technology for particular purposes	**Technology around us** To know how to identify technology that comes in different forms- computers, mobile phones, cars, bikes. To know how to identify a computer and its main parts – screen, mouse, tower, keyboard. To know how to use a mouse in different ways – click and drag, left button to select and twice quickly to open files and programs. Right click to give us options. Holding the left button down allows us to drag things. To know how to use a keyboard to type To know how to use the keyboard to edit text To know how to create rules for using technology responsibly.	**Information technology around us** To know how to recognise the uses and features of information – What information technology means. Features of information provide details and provide a use. To know how to identify information technology in the home – Internet, games consoles, cooking appliances. To know how to identify technology beyond school. This would include traffic lights, tills and scanners within summer markets, use of communication i.e email. To know how to explain how information technology benefits us. To make things quick and easier i.e with self scanners in the supermarket. Help us stay safe – traffic lights. Communicate – emails, texts and social media apps. To know how to show how to use information technology safely. The key rules to focus on are: -Ensuring games and apps are age appropriate. -Always sit when using a device to ensure it isn't broken.	**Connecting computers** To know how to explain how digital devices function – to know that they have an input, process and output. To know how to identify input and output devices – Input is something that sends a message to a device. Output is something that is sent out by the device To know how to recognise how digital devices can change the way we work – allowing us to send and share information quickly and easily. To know how to explain how a computer network can be used to share information – using the internet and data. To know how to explore how digital devices can be connected – through fixed cables, data, wifi or and internal intranet. To recognise the physical components of a network – network , switch, server, wireless bn access point.	**The Internet** To know how to describe how networks physically connect to other networks – using a router which connects all different devices together. To know how to recognise how networked devices make up the internet - the internet is a network of networks that are all connected together. To know how to outline how websites can be shared via the World Wide Web – found using a web address to lead to web pages which then shares further information. To know how to describe how the content of the WWW is created by people – the information is called content. It belongs to people or companies. To know how to evaluate the consequences of unreliable content – expressing that this maybe due to people misunderstanding or lying.	**Sharing information** To know how to explain that computers can be connected together to form systems To know how to recognise the role of computer systems in our lives – house hold appliances, entertainment and safety. To know how to recognise how information is transferred over the internet through the use of IP addresses, protcols and packets. All of which contain information. To know how to explain how sharing information online lets people in different places work together To know how to contribute to a shared project online knowing this is called collaboration. How working as a team is important and taking responsibilities of different roles. To know how to evaluate different ways of working together online- the use of the internet to complete this and how. Using a chat function to share	**Communication** To know how to identify how to use a search engine – that this is a webpage where key words will be typed into the search bar. To know how to describe how search engines, select results – to know this uses a program which is called crawler. This uses the key words that have been typed into the search bar. To know how to explain how search results are ranked – results are ranked by using algorithms which then gives a score to each page. This is all linked to the key words and specifics typed into the search bar. To know how to recognise why the order of results is important, and to whom – the order is important to ensure key information is shared with a wide range of people. It is important to users for them to gain information quickly and webpage designers to ensure returns of users. To know how to recognise how we communicate using technology – completed through public and private communication ie with all or some people.

			-Don't use devices at social times. i.e meal times. -stick to technology at agreed times. To know how to recognise the choices are made when using information technology. Choosing what is interacted with ie websites and apps. That can be used for good but also can have negative effects if choices or negative.			information in real time. Cloud spaces to store and share information with easy access.	One way communication where information is just given (youtube) or two way (zoom and skype). To know how to evaluate different methods of online communication – this needs to be done based on what you are needing to communicate and why, how safe you can communicate this information and how private the information can be shared i.e encrypted or secure emails.
Computing systems and network Vocabulary	On, off, technology. Press, lift, push, pull, mouse, screen, keyboard, camera, QR codes	Technology, Man-made, digital, screen, mouse, keyboard, program, click/drag, cursor	Information Technology, computer, device, barcode, scanner, communication, entertainment, appliances, signal, e-safety	Digital device, Input, process, output, connection, network, network switch, server, WAP, E-safety	Network, internet, world wide web, Router, Security, website, webpage, browser, domain, reliable	System, Input, process, output, protocol, ipput address, packet, reuse, explore, collaboration	Internet, world wide web, search engine, browser, keyword, google, Tim Berners-Lee, Ranking, crawlers, Algorithm

Information Technology	2)Data and Information	Key Stage 1	Delivery of same content shown in table above.	Grouping data	Pictograms	Branching databases	Data logging	Flat- file database	Spreadsheets
		use technology purposefully to create, organise, store, manipulate and retrieve digital content Key stage 2 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		To know how to be able to label objects either with their name or describing their properties. To know how to identify that objects can be counted. That computers can count amounts in each group. To know how to describe objects in different ways, what are there properties/ features. To know how to count objects with the same properties, what makes them similar i.e colour, shape, amount. To know how to compare groups of objects . Being able to compare if things are similar or different. To know how to answer questions about groups of objects. Using groups to compare the data i.e round and not round.	To know how to recognise that we can count and compare objects using tally charts. To know how to recognise that objects can be represented as pictures To know how to create a pictograms, using the correct symbols. To know how to select objects by attribute and make comparisons To know how to recognise that people can be described by attributes and what this means. To know how to explain that we can present information using a computer and that this can be presented in different ways.	know how to To know how to identify the object attributes needed to collect relevant data. Knowing what is in similar and what is different. To know how to create a branching database To know how to identify objects using a branching database To know how to explain why it is helpful for a database to be well structured. To know that for it to be effective the questions being asked will help separate the different data based on their attributes. To know how to compare the information shown in a pictogram with a branching database.	To know how to explain that data gathered over time can be used to answer questions To know how to use a digital device to collect data automatically To know how to explain that a data logger collects 'data points' from sensors over time To know how to use data collected over a longer durations to find information. To develop the knowledge that this can provide a more detailed picture of information they want to gain. To know how to identify the data needed to answer questions. To recognise the question they want to answer and how does the data help you do this.	To know how to use a form to record information To know how to compare paper and computer-based databases To know how to outline how grouping and then sorting data allows us to answer questions. Related to categories i.e colour, age. This then filters out unrelated data to the question. To know how to explain that tools can be used to select specific data – search, filter and sort functions buttons or options on mouse menu. To know how to explain that computer programs can be used to compare data visually. To know this can be presented in graphs or charts to help find answers quickly and easily. To know how to apply my knowledge of a database to ask and answer real-world questions. Relating this to how they are used currently in different environments. Linking this to school registers.	To know how to identify questions which can be answered using data To know how to explain that objects can be described using data To know how to explain that formula can be used to produce calculated data To know how to apply formulas to data, including duplicating. Developing a knowledge of the symbols which relate to mathematical operations. How it can help support calculate large amounts of data and create multiple copies of this using short cut keys. To know how to create a spreadsheet to plan an event. Using it to compare resources and costings to explore expenditure. To know how to choose suitable ways to present data to allow ease of reading and presentation.

		Data and Information vocabulary	Delivery of same content shown in table above.	Information, data, search, label, group, describe, program, properties, similar, different	Information, data, pictogram, group, tally, tally chart, program, properties, present, problem	Information, data, attributes, group, branching, database, multiple, classify, structure, present	Information, data, collection, sensor, logging, analysis, data logger, software, interpret, conclusion	Information, data, collection, database, search, sort, filter, software, fields, records	Information, data, spreadsheet, format, formula, accounting, filter, software, tax, business

		NC Objective	Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	1) Programming A	**Key stage 1** understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **Key stage 2** 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		**Moving a robot** To explain what a given command will do. Knowing a command is the instruction they are asking the robot to complete. To act out a given word related to programming. Recognising forward, backwards, left and right to be able to relate this to when the robot moves. To combine forwards and backwards commands to make a sequence To plan a simple program To find more than one solution to a problem. Knowing that programming will only follow what has been inputted and this may require changing to overcome obstacles.	**Robot Algorithms** To describe a series of instructions as a sequence To explain what happens when we change the order of instructions. How this will effect the performance and it will only the process that has been inputted. To use logical reasoning to predict the outcome of a program (series of commands) To explain that programming projects can have code and artwork To design an algorithm. To know that there is a set amount of information to input and to follow a process of steps to complete this. To create and debug a program that I have written. Using knowledge of what debugging means and how to follow the process of creation.	**Sequence in music** To explore a new programming environment through the use of scratch. Developing knowledge of what the different functions are and what it is used for. To identify that each sprite is controlled by the commands I choose To explain that a program has a start and how they know it has started, with what will happen and be seen. To recognise that a sequence of commands can have an order To change the appearance of my project. This will be done by using various tools and options within the program. To create a project from a task description. This will mean they can follow a process from start to finish using the correct algorithms and adapt	**Repetition in shapes** To identify that accuracy in programming is important, what happens if this isn't the case by exploring mistakes. To create a program in a text-based language, mean that the program is where commands are typed and converted into drawings. To explain what 'repeat' means. Knowing this means that the action or request will happen again. To modify a count-controlled loop to produce a given outcome. Using knowledge that they can request something happens a certain number of times to help get to the end result. To decompose a program into parts. Developing their understanding that this means breaking it down into smaller elements which when	**Selection in physical computing** To control a simple circuit connected to a computer To write a program that includes count-controlled loops To explain that a loop can stop when a condition is met a number of times To conclude that a loop can be used to repeatedly check whether a condition has been met To design a physical project that includes selection To create a controllable system that includes selection	**Variables in games** To define a variable as something that is changeable To explain why a variable is used in a program, what its purpose is and why this is needed. To choose how to improve a game by using variables. Being able to explain why it requires improvement, and how does it make it better. To design a project that builds on a given example. Being able to use prior knowledge to recognise things can always be improved. To use my design to create a project based on a given brief to be able to work within given parameters to aid focus. To evaluate my project, recognising positives and areas for improvement.

					and change to overcome barriers.	put together creates the end outcome.		
	Programming A Vocabulary		Programmed, robot, algorithm, button, direction, forward, backward, left, right, route	Program, robot, algorithm, direction, route, obstacle, design, error, chunking, debugging.	Programming, scratch, blocks, commands, code, sprite, stage, costume, backdrop, debugging.	Programming, logo, turtle, commands, code, cursor, algorithm, pattern, sequence, debugging.	Programming, circuit, electricity, microcontroller, code, LED, Algorithm, Motor, modify, debugging.	Programming, variable, scratch, events, code, LED, algorithm, motor, modify, debugging

| Computer Science | 2)Programming B | Key stage 1
understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

Key stage 2
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 | | Introduction to animation
To choose a command for a given purpose. Being able to pick a function that they would like to occur and complete this task using the correct tool or button.

To show that a series of commands can be joined together

To identify the effect of changing a value. Developing knowledge that the value relates to the amount of times or how many commands this will complete.

To explain that each sprite has its own instructions for which the animation will follow.

To design the parts of a project following the process of commands.

To use my algorithm to create a program | Introduction to quizzes
To explain that a sequence of commands has a start

To explain that a sequence of commands has an outcome

To create a program using a given design

To change a given design

To create a program using my own design

To decide how my project can be improved. | Events and actions
To explain how a sprite moves in an existing project

To create a program to move a sprite in four directions

To adapt a program to a new context. Knowing that the same format can not be used if the desired outcome is different. This will result in it requiring a change of input to get a different output.

To develop my program by adding features. Knowing that a feature will allow the program to perform a different action. This will then change the process the program will follow.

To identify and fix bugs in a program. Whilst understanding a bug is a problem within the program and how to overcome this.

To design and crate a maze-based challenge | Repetition in games
To develop the use of count-controlled loops in a different programming environment

To explain that in programming there are infinite loops and count controlled loops. That an infinite loop will mean it continues until a human stops it compared to a count controlled loop that they will place a value into the program to complete X amount of times.

To develop a design which includes two or more loops which run at the same time

To modify an infinite loop in a given program. Knowing that input is required to end the loop.

To design a project that includes repetition, using a thought process of the actions that can be used within this.

To create a project that includes repetition of a certain action. | Selection in games
To explain how selection is used in computer programs. Knowing that different conditions can create different outcomes based on the different actions and commands.

To relate that a conditional statement connects a condition to an outcome

To explain how selection directs the flow of a program. The selection of a command or an action then directs the outcome that will happen during the program.

To design a program which uses selection

To create a program which uses selection

To evaluate my program, expressing what went well and what is required to be improved. | Sensing
To create a program to run a controllable device, meaning that this can be done externally by a remote control using a control pad and a receiving sensor. I.e TV remote

To explain that selection can control the flow of a program

To update a variable with a user input

To use an conditional statement to compare a variable to a value. The conditional statement will give the variable parameters of which it can work to allow a degree of flexibility whilst being in control.

To design a project that uses inputs and outputs on a controllable device

To develop a program to use inputs and outputs on a controllable device. |
| | | **Programming B vocabulary** | | Programming, scratch jr, sprite, home, command, block, stage, background, algorithm, app | Programming, scratch jr, sprite, quiz, command, block, debugging, sequence, algorithm, outcome | Programming, scratch, blocks, commands, code, events, motion, sequence, trialling, debugging. | Programming, scratch, blocks, commands, code, events, motion, sequence, trialling, debugging. | Programming, scratch, logical, commands, algorithm, condition, selection, sequence, trialling, debugging. | Programming, mirco bit, LED, sensor, random, condition, accelerometer, sequence, emulator, motion. |

	NC Objective	Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy	**Key stage 1** Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Recognise common uses of information technology beyond school **Key stage 2** 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 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		**Digital painting** To describe what difference freehand tools do. Freehand meaning what they use practically during everyday experiences – paintbrush, pen or pencil. To use the shape tool and the line tools and recognise the buttons that replicate these. To make careful choices when painting a digital picture. Choices will include colour, mouse control and how to use different tools to create different effects. To explain why I chose the tools I used, being able to say what effect it has on the picture. To use a computer on my own to a paint a picture.	**Digital Photography** To know what devices can be used to take photographs- camera's, phones, tablets To use a digital device to take a photograph, to point the camera in the correct direction and know the object of the picture is within the frame. To describe what makes a good photograph – Is it blurry or can you see what is in the picture, is it too dark or light, is the photo real? To decide how photographs can be improved – what is it that's wrong with the photo that needs to be changed. To use tools to change an image – recognising that these tools help improve the image. Each tool has a different role to play and to recognise what this role is. i.e lightening the picture, removing red eye. To recognise that images can be changed using the different tools available.	**Desktop publishing** To recognise how text and images convey information. Through different uses – posters, flyers and booklets sharing information through writing and images of the topic. To recognise that text and layout can be edited to show the appearance of the document can change and prioritise the information you need to share. To choose appropriate page settings – colour, images used to support text. That this will need to change depending on the audience it is aimed at. To add content to a desktop publishing publication – images, text boxes, interviews, quotes. To consider how different layouts can suit different purposes. To consider the benefits of desktop publishing- does it make it easier?	**Audio editing** To identify that sound can be digitally recorded – what these means in terms of being recorded onto a device. To use a digital device to record sound – what is the device smartphone, tablet or computer. To explain that a digital recording is stored as a file. That a file means an area that store specific information. To explain that audio can be changed through editing. Editing can make it sound better, worse or different to the original. To show that different types of audio can be combined and played together also known as mixing. To evaluate editing choices made, giving reasons why it was changed.	**Vector Drawing** To identify that drawing tools can be used to produce different outcomes. To create a vector drawing by combining shapes, stating what these shapes are and how to combine them. To use tools to achieve a desired effect – snip, paint, gradient. To recognise that vector drawings consist of layers To group objects to make them easier to work with. To evaluate my vector drawing – what is good and what could be improved.	**Web Page creation** To review an existing website and consider its structure. What is is made up from – text boxes, images, layout, title. To plan the feature of a web page – knowing that a feature is what the web page is about. The focus of the page – shopping, technology. To consider the ownership and use of images (copyright). Knowing that copyright means it belongs to a person or a company and using this for your own work is breaking the law. To recognise the need to preview pages – this will allow to check for things that will need changing and improving. To outline the need for a navigation path. Also known as a breadcrumb trail. This is provided by hyperlinks to connect different pages, this leads to easy navigation and lets people see where they have been. To recognise the implications of linking to content owned by other people – other content belongs to other people so you have no control over this. This could work positively or negatively.
	Digital Literacy Vocabulary		Paint program, tool, paintbrush, erase, fill, undo, click, drag, save, icon	Photography, editing, software, digital, portrait, landscape, scene, subject, lighting, colour	Animation, frame, illusion, sequence, onion skinning, playback, storyboard, audio, consistency, text	Audio, input, output, microphone, speaker, podcast, waveform, jingle, track, presenter.	Video, audio, themes, message, dialogue, plot, props, zoom, angle, pan/tilt	Web page, website, domain, hypertext, purpose/ audience, browser, copyright, homepage, navigation pathways

	Key stage 1		Digital Writing	Making Music	Stop-frame Animation	Photo Editing	Video Editing	3D Modelling
	use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. recognise common uses of information technology beyond school **Key stage 2** 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 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		To use a computer to write, using a keyboard and exploring where hands should be placed on the keyboard. To add and remove text on a computer- using the delete and cursor tools. To identify that the look of text can be changed on a computer – this text increase and decrease in size button, colour, font type. To make careful choices when changing text- taking into account how easy it is to read in relation to size and font type. To explain why I used the tools that I chose – what improvements did it make. To compare writing on a computer with writing on paper. How it looks different and why.	To say how music can make us feel – happy, sad, energetic. To identify that there are patterns in music – repeating notes or sounds. This could increase or decrease in pattern. To describe how music can be used in different ways – advertising, parties, radio. To show how music is made from a series of notes. These notes are individual and collectively put together to make a piece of music. To create music for a purpose – link this to the emotions it makes you feel. What is the music used for – advert, game. To review and refine our computer work. Self reflection and the positives and improvements that can be made.	To explain that animation is a sequence of drawings or photographs. To relate animated movement with a sequence of images. To plan an animation with a purpose, stating what it will show and how. To identify the need to work consistently and carefully, how this will then effect work. To review and improve an animation – reflecting on why this is the case. To evaluate the impact of adding other media to an animation. Stating if it improves the animation, how it improves it and what they have added to improve it – i.e more images, change of story line.	To explain that digital images can be changed- this is using software and can make pictures look better or fake. To change the composition of an image. That the composition is how the picture first looks in terms of brightness, contrast. This can be changed with tools to change the appearance i.e - black and white To describe how images can be changed for different uses – positive reasons to show things clearer and promote a message. To recognise that not all images are real – why is this and how can we tell. To evaluate how changes can improve an image.	To recognise video as moving pictures, which can include audio. To identify digital devices that can record video – tablets, phones, camcorders. To capture video using a digital device – how to do this correctly to gain all information needed for the purpose of the video. To recognise the features of an effective video – the information it contains, how the picture looks and if it is in the frame for people to see. To identify that video can be improved through reshooting and editing – this is done through editing software and there are specific tools to help with this. To consider the impact of the choices made when making and sharing a video	To use a computer to create and manipulate three dimensional (3D) digital objects To compare working digitally with 2D and 3D graphics – how they look different and present on the screen. To construct a digital 3D model of a physical object using the correct tools. To identify that physical objects can be broken down into a collection of 3D shapes To design a digital model by combining 3D objects To develop and improve a digital 3D model.
	Digital Literacy Vocabulary		Text, word processor, font, keyboard, text cursor, enter, spacebar, toolbar, font, icon	Music, emotions, pulse, rhythm, patterns, pitch, tempo, instrument, sound, note	Publishing, text, images, font, templates, orientation, placeholders, software, purpose, audience.	Photography, editing, software, crop, rotate/flip, copy, brightness, contrast, enlarge, reduce.	Vector, object, handles, rotate, enlarge, reduce, layering, gradient, zoom, alignment, grouping	Modelling, three dimensional, workspace, faces, vertices, edges, handles, duplicate, holes