

Curriculum Overview

Year Group	Term	Unit of Work	Assessment Content	Vocabulary Mapping
7	1 & 2	<p>Unit Title - Introduction to ICT @ Seahaven In this unit students will:</p> <p>Know:</p> <ul style="list-style-type: none"> The rules and regulations of working in a specified ICT environment. Know how to use the different Office 365 applications to enhance their schoolwork and work in a digital fashion. <p>Understand:</p> <ul style="list-style-type: none"> How to create a strong and safe password and why this is important. How Office 365 allows collaboration and a wide variety of applications that are commonplace in the working world. <p>Be able to</p> <ul style="list-style-type: none"> Use research, design and PowerPoint skills to create a factual presentation. Select and use a range of applications with to their full functionality when completing work in and out of school. 	<ul style="list-style-type: none"> Competency skills test on the Introduction to ICT @ Seahaven unit. 	<p>Password - a secret word or phrase that must be used to gain admission to a place</p> <p>Office 365 - Microsoft 365 is a product family of productivity software, collaboration and cloud-based services owned by Microsoft.</p> <p>Online Safety - Internet safety, also known as online safety, refers to the processes that reduce the harms to people that are enabled by the (mis)use of information technology.</p>

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7	3 & 4	<p>Unit Title - Networks from Semaphores to the Internet In this unit students will:</p> <p>Know:</p> <ul style="list-style-type: none"> About the history of different communication methods, from Semaphores to the Internet. What a computer network is and explain how data is transmitted between computers across networks <p>Understand:</p> <ul style="list-style-type: none"> How data travels between computers across the internet How services are provided over the internet <p>Be able to:</p> <ul style="list-style-type: none"> Identify different greeting protocols and use a series of protocol commands List examples of the hardware necessary for connecting devices to networks Compare wired to wireless connections and list examples of specific technologies currently used to implement such connections 	<p>Competency skills test on the Networks from Semaphores to the Internet unit.</p>	<p>Protocols - All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called protocols.</p> <p>Hardware - the machines, wiring, and other physical components of a computer or other electronic system.</p> <p>Software - the programs and other operating information used by a computer.</p> <p>Bandwidth - the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second</p> <p>Buffering - Data is arriving at your device at a rate that is slower than it is being processed.</p> <p>Internet - A worldwide network of computers.</p> <p>Transmission Control Protocol - Splits the messages sent across the internet into smaller pieces called 'packets' and assembles the packets in the correct order at the receiver end.</p> <p>World Wide Web - A service provided on the internet. It is the websites, web pages, and links found on the internet.</p> <p>VoIP - is short for 'Voice over Internet Protocol'. This allows voice data to be sent in packets over the internet.</p> <p>Web browser - a piece of software (code) used to view information on the World Wide Web.</p>

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7	5 & 6	Clear messaging in digital media In this unit students will: Know: <ul style="list-style-type: none"> How to Identify key features of a good poster About a range of different digital tools to provide feedback on design choices Understand: <ul style="list-style-type: none"> How to combine text and graphics in a slide What the key features that will make a good poster look like Be able to: <ul style="list-style-type: none"> Create a styled set of slides based on a plan and continue with this style throughout the projects. Search for suitable text for slides Search for and add suitable images Plan how to deliver a presentation 	Competency skills test on the Clear messaging in digital media unit.	Screenshot - an image of the data displayed on the screen of a computer or mobile device Annotate - add notes to (a text or diagram) giving explanation or comment Landscape - format of printed matter or screen display that is wider than it is high Portrait - format of printed matter or screen display that is higher than it is wide Download - copy (data) from one computer system to another, typically over the internet Heading - a title at the head of a page or section of a book Subheading - heading given to a subsection of a piece of writing Body text - the main part of a printed text, excluding items such as headings and footnotes Brand - a type of product manufactured by a particular company under a particular name Logo - a symbol or other small design adopted by an organization to identify its products, uniform, vehicles, etc. Content - things that are held or included in something Licence - formal or official permission to do something
			End of Year assessment will be run during this term.	

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8	1 & 2	<p>Media - Vector Graphics In this unit students will:</p> <p>Know:</p> <ul style="list-style-type: none"> How to use Inkscape software to create vector graphics. How the importance of reading a design brief can affect a final outcome. How how z-order determines what is visible <p>Understand:</p> <ul style="list-style-type: none"> How to draw basic shapes (rectangle, ellipse, polygon, star) with different properties (fill and stroke, shape-specific attributes) How to choose a project from real-life design briefs and plan a design <p>Be able to:</p> <ul style="list-style-type: none"> Explain how grouping can be used to work with several objects at once Explain that vector graphics are made up of paths Develop their own vector graphic based on real-life scenarios that have been developed for differing ability levels. Combine multiple tools and techniques to create a vector graphic design 	Competency skills test on the Vector Graphics unit.	<p>Vector - a type of graphical representation using lines to construct the outlines of objects</p> <p>Vector graphics - a form of computer graphics in which visual images are created directly from geometric shapes, such as points, lines, curves and polygons.</p> <p>Fill - to cause a space to become full of colour or repeated pattern/ shape.</p> <p>Stroke - a movement of a pen tool to create a line or mark made by this movement.</p> <p>Rotate - to turn or cause something to turn in a circle, especially around a fixed point</p> <p>Reposition - to move something to a different place or <u>position</u></p> <p>z-order - the order of objects along the Z-axis</p> <p>Group - the task of combining a number of objects that are put together to create one singular object.</p> <p>Ungroup - the task of uncombining a singular, grouped object to create one multiple, original vector objects.</p> <p>Align - to put two or more things into a straight line, or to form a straight line</p> <p>Distribute - to spread objects evenly over an <u>area</u></p> <p>Node - a place where things such as lines or systems join</p> <p>Open source - software for which the original source code is made freely available and may be redistributed and modified.</p>

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8	3 & 4	<p>Online Safety In this unit students will:</p> <p>Know:</p> <ul style="list-style-type: none"> How services are provided over the internet How to define online reputation and discuss what it is made up of How examples of disinformation can be spread online <p>Understand</p> <ul style="list-style-type: none"> What a computer network is and explain how data is transmitted between computers across networks The ways in which one's online reputation might be under threat and how to defend it The term 'fake news' and discuss the quantity of fake news available online 	Competency skills test on the Online Safety unit.	<p>Censorship - the action of preventing part or the whole of a media piece or communication from being seen or made available to the public, because it is considered to be offensive or harmful.</p> <p>The Dark Web - parts of the internet that are encrypted (that use a secret code), that cannot be found using ordinary search engines, and that are sometimes used for criminal activity.</p> <p>Encryption - the process of changing electronic information or signals into a secret code</p> <p>Fake news - false stories that appear to be news, spread on the internet or using other media, usually created to influence political views or as a joke</p> <p>Malware - computer software that is designed to damage the way a computer works</p> <p>Phishing - an attempt to trick someone into giving information over the internet or by email that would allow someone else to take money from them, for example by taking money out of their bank account</p> <p>Virtual Private Network (VPN) - a private computer network within a larger network such as the internet</p> <p>Anonymous - made or done by someone whose name is not known or not made public</p> <p>Digital Footprint - The unique trail of data that a person or business creates while using the internet.</p> <p>Privacy Settings - The part of a social networking website, internet browser, piece of software, etc. That allows you to control who sees information about you.</p> <p>Hack - To get into someone else's computer system without their permission in order to find out information or to do something illegal.</p>

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8	5 & 6	Layers of Computing Systems In this unit students will: Know <ul style="list-style-type: none"> How the hardware components used in computing systems work together in order to execute programs How the function of the hardware components are used in computing systems Understand <ul style="list-style-type: none"> How the hardware components used in computing systems work together in order to execute programs That a program is a sequence of instructions that specify operations that are to be performed on data Be able to: <ul style="list-style-type: none"> Explain the difference between a general-purpose computing system and a purpose-built device Recall that all computing systems, regardless of form, have a similar structure ('architecture') Describe how hardware is built out of increasingly complex logic circuits Associate the use of artificial intelligence with moral dilemmas Explain the implications of sharing program code 	Competency skills test on the Layers of Computing Systems unit.	Computer - an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program. System - a set of things working together as parts of an interconnecting network Program - a series of coded software instructions to control the operation of a computer or other machine. Input Device - An input device is any hardware device that sends data to a computer, allowing you to interact with and control it. Output Device - An output device is a hardware component that translates processed data into a form that can be understood by humans or used by other devices. Data - facts and statistics collected together for reference or analysis Processor - a machine that processes something Storage - the process of keeping information, etc. on a computer; the way it is kept Memory - the part of a computer in which data or program instructions can be stored for retrieval Operating System - the low-level software that supports a computer's basic functions Logical Operators - a special symbol or word that connects two or more phrases of information. It is used to test whether a certain relationship between the phrases is true or false. Truth Values - a value indicating the relation of a proposition to truth, which in classical logic has only two possible values (true or false).
			End of Year Assessment will be run during this term.	

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9	1 & 2	IT and the World of Work In this unit students will: Know <ul style="list-style-type: none"> • How to Assess the functions and features of cloud computing • How to compare inclusivity and accessibility within traditional and modern teams • Examine traditional and modern team working • How to recognise methods of creating a network when mobile or remote working Understand <ul style="list-style-type: none"> • By examining modern technology tools that assist inclusivity and accessibility Be able to <ul style="list-style-type: none"> • Explore communication tools • Formulate a proposal that identifies essential skills for the modern workplace • Recognise methods of creating a network when mobile or remote working • Evaluate the impact of physical and mental well-being on individuals 	Competency skills test on the different components of Office 365.	<p>Stakeholders - anyone involved with an organisation, from the CEO to customers</p> <p>Organisations - any business, charity, provider etc.</p> <p>Accessibility - the quality of being easily reached, entered, or used by people who have a disability</p> <p>Inclusivity - the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded</p> <p>Netiquette - the correct or acceptable way of using the internet.</p> <p>Infrastructure - the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise</p> <p>Local software - Software applications that are installed on the user's machine</p> <p>Online software - Online software refers to computer programs stored on a remote server and run by its users via a Web Browser</p> <p>Device - a piece of portable electronic equipment that can connect to the internet, such as a smartphone, tablet, or laptop computer</p> <p>RAM - Random Access Memory</p> <p>PAN - Personal Area Network</p> <p>Remote working - also known as telecommuting or working from home, refers to work done outside of a traditional office environment</p> <p>Ergonomics - the study of people's efficiency in their working environment</p> <p>Mental and Physical Health - Mental is the health of the mind, whereas physical is the health of the body</p>

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9	3 & 4	<p>Creating Media - 3D Modelling In this unit students will:</p> <p>Know</p> <ul style="list-style-type: none"> • How to create a 3D model for a given purpose • How to identify that digital 3D objects can be modified <p>Understand</p> <ul style="list-style-type: none"> • How to view 3D shapes from different perspectives • How 2D objects and shapes can be combined in a 3D model <p>Be able to</p> <ul style="list-style-type: none"> • To recognise that you can work in three dimensions on a computer • To identify that digital 3D objects can be modified • To recognise that objects can be combined in a 3D model • To plan a range of 3D models • To create a digital 3D model 	Competency skills test on the Networks from Semaphores to the Internet unit.	<p>2D - a flat figure that has two dimensions—length and width.</p> <p>3D - a figure that has three dimensions - length, width and height.</p> <p>Shapes - a geometric figure such as a square, triangle, or rectangle.</p> <p>Select - mark (an option or section of text) on an electronic interface for a particular operation.</p> <p>Move - go in a specified direction or manner; change position.</p> <p>Perspective - the appearance of viewed objects with regard to their relative position, distance from the viewer, etc.</p> <p>View - the ability to see something or to be seen from a particular place.</p> <p>Handles - Parts of an object that allow for manipulation, either through measurement, rotation or location.</p> <p>Resize - alter the size of (something, especially a computer window or image).</p> <p>Lift - pick up and move to a higher position.</p> <p>Lower - pick up and move to a lower position.</p> <p>Recolour - colour again or differently.</p> <p>Rotate - move or cause to move in a circle round an axis or centre.</p> <p>Duplicate - exactly like something else, especially through having been copied.</p> <p>Group - When multiple singular objects are put in a group or groups.</p>

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9	5 & 6	Introduction to Cybersecurity In this unit students will: Know <ul style="list-style-type: none"> What happens to data entered online How a DDoS attack can impact users of online services How human errors pose security risks to data Understand <ul style="list-style-type: none"> By explaining the difference between data and information By explaining the need for the Computer Misuse Act By questioning how malicious bots can have an impact on societal issues Be able to <ul style="list-style-type: none"> Recognise how human errors pose security risks to data Compare security threats against probability and the potential impact to organisations Identify the most effective methods to prevent cyberattacks 	Competency skills test on the Clear messaging in digital media unit.	Data - facts and statistics collected together for reference or analysis. Information - facts provided or learned about something or someone. Cybersecurity - the state of being protected against the criminal or unauthorized use of electronic data, or the measures taken to achieve this. Cybercriminals - a person who engages in criminal activity by means of computers or the internet. Profiling - the recording and analysis of a person's online movements. User behaviour - the actions, decisions, and interactions that users take when using a product or service Privacy policy - a legal document that explains how a company or website collects, uses, and shares personal information. Data protection - legal control over access to and use of data stored in computers. Malware - software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system. Social engineering - the use of deception to manipulate individuals into divulging confidential or personal information that may be used for fraudulent purposes. Phishing - the practice of sending fraudulent communications that appear to come from a legitimate and reputable source, usually through email and text messaging. Blagging - the act of inventing a specific scenario to try and engage with the victim. Shouldering - is looking at someone's information over their shoulder, for example looking at someone enter their PIN in a shop or at a cashpoint. Name generator attack - a social engineering attack where a victim is asked to combine information or complete a quiz to generate a name in an app or social media post
			End of Year assessment will be run during this term.	