

<p><b>Unit 5.1 – We are game developers</b></p> <p><b>Algorithm:</b> a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective</p> <p><b>Background:</b> scenery and other unchanging elements in a game</p> <p><b>Bug:</b> an error or mistake in a program or algorithm, causing the computer or robot to behave in a manner that was not originally intended</p> <p><b>Code:</b> instructions (or sometimes rules) that can be understood by a computer</p> <p><b>Debug:</b> correct mistakes in a computer program or algorithm</p> <p><b>Iterative development:</b> a trial and improvement approach in which each successive version builds on the previous one by the fixing of mistakes or the adding of features</p> <p><b>Logical reasoning:</b> a systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules</p> <p><b>Program:</b> an automated solution to a problem</p> <p><b>Scratch:</b> simple, block-based programming language in which programs for characters are built by snapping together code blocks</p> <p><b>Sprite:</b> a graphical character in a program that can be given its own sequence of instructions</p>
<p><b>Unit 5.2 – We are cryptographers</b></p> <p><b>Cipher:</b> an agreed scheme (algorithm) for encrypting or decrypting a message</p> <p><b>Codes:</b> ways of changing the way information is represented</p> <p><b>Cryptanalysis:</b> the process of decrypting an encrypted message without prior access to the encryption key</p> <p><b>Cryptography:</b> the science of keeping communication and information secret</p> <p><b>Decrypt:</b> to convert an encrypted message into readable text</p> <p><b>Encode:</b> to change the form of a message into an agreed code</p> <p><b>Encrypt:</b> to convert a readable message into an encrypted form so that it cannot be read by those without the key</p> <p><b>Message:</b> information to be transmitted from one person (or system) to another</p> <p><b>Morse code:</b> a simple code for converting letters and numbers into patterns of short and long electrical pulses</p> <p><b>Semaphore:</b> a simple code for converting letters and numbers into different positions of two flags, one held in each hand</p> <p><b>Transmit:</b> to communicate a message over a long distance</p>
<p><b>Unit 5.3 – We are architects</b></p> <p><b>Computer-aided design (CAD):</b> using computer software to help design real-world artefacts, from engineering components to buildings</p> <p><b>Creative Commons:</b> copyright licensing scheme where the creator of an original work allows others to use it without seeking further permission</p> <p><b>Photorealistic:</b> an image indistinguishable (or nearly indistinguishable) from a digital photograph</p> <p><b>Render:</b> to create a 2-D image from a 3-D virtual scene</p>
<p><b>Unit 5.4 – We are web developers</b></p> <p><b>Creative Commons:</b> copyright licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions</p> <p><b>Hyperlinks:</b> text or images that, when clicked, opens another page or moves to another part of the document</p> <p><b>Hypertext mark-up language (HTML):</b> predominant language for web pages</p> <p><b>Hypertext transfer protocol (HTTP):</b> standard protocol for the request and transmission of HTML web pages between browser and web server</p> <p><b>Internet:</b> global network connecting computers and local networks using automated switches, routers and fibre optic, copper wire and radio connections</p> <p><b>Internet Protocol (IP) addresses:</b> numeric addresses uniquely specifying computers directly connected to the Internet</p> <p><b>Network switch:</b> dedicated computer hardware that routes data packets to particular connections according to their IP address header</p> <p><b>Packets of data:</b> a small set of numbers that get transmitted together via the Internet, typically enough for 1000 or 1500 characters</p> <p><b>Protocol:</b> a set of agreed rules and procedures for communication</p> <p><b>Tag:</b> component of HTML to show the purpose of the following text, such as a link, paragraph text or image</p> <p><b>Uniform Resource Locator (URL):</b> a standard for specifying the location on the Internet of certain data files</p> <p><b>Web browser:</b> program running on a user's computer which requests and displays web pages using HTTP</p> <p><b>Web server:</b> computer connected to the Internet that stores web pages, transmitting these to web</p>

browsers as HTTP requests are received

**World Wide Web:** the HTML and other documents stored on individual web servers connected via the Internet and accessible via HTTP

**Unit 5.5 – We are adventure gamers**

**Abstraction:** a process of managing complexity by setting to the side irrelevant detail and concentrating on function rather than form

**Colour value:** the amount of red, green and blue light present in a pixel, each on a scale from 0 to 255

**Creative Commons:** copyright licensing scheme which permits some re-use of content without additional permission, subject to specified conditions

**Hyperlink:** text or images that, when clicked, opens another page or moves to another part of the document

**MP3:** compressed audio format, making it easy to store and transmit near-CD quality audio files

**Pixel:** picture element – one of the small squares that makes up a digital image

**Safe search:** automatic filtering of search results to remove most, if not all, adult and other inappropriate content

**Unit 5.6 – We are VR designers**

**Accelerometer:** hardware component providing data on changes in motion, typically in three directions

**Augmented reality (AR):** digital layer superimposed on a view of the real world

**Global positioning system (GPS):** this system allows a user to determine their exact location using a network of satellites

**Google Cardboard:** low-cost VR headset, typically made from cardboard and plastic lenses, which repurposes a smartphone as a VR display

**Photosphere:** spherical collection of photographs so that the image displayed matches the direction viewed

**QR code:** 2-D array of light and dark squares used to encode text in a way that can be read using a smartphone or tablet camera

**Share code:** CoSpaces shortcut to allow those with the software to view a scene created by another user

**Stereographic:** a pair of slightly different images created with a slight offset, and shown to left and right eyes to create the illusion of depth

**Virtual reality (VR):** simulated, immersive 3-D representation of a real or imagined scene