**Sequence of knowledge over time to meet curriculum end points – ELT 2023 (Education for a Connected World version)**

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| Digital Literacy | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | | | **Year 5** | **Year 6** | |
| **Self-Image and Identity**Icon  Description automatically generated | I can recognise, online or offline, that anyone can say ‘no’ / ‘please stop’ / ‘I’ll tell’ / ‘I’ll ask’ to somebody who makes them feel sad, uncomfortable, embarrassed or upset. | I can recognise that there may be people online who could make someone feel sad, embarrassed or upset.  If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust and how they can help. | I can explain how other people may look and act differently online and offline.  I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. | I can explain what is meant by the term ‘identity’.  I can explain how people can represent themselves in different ways online.  I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an **avatar**; social media) and why. | I can explain how my online identity can be different to my offline identity.  I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.  I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this. | | | I can explain how identity online can be copied, modified or altered  I can demonstrate how to make responsible choices about having an online identity, depending on context. | I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.  I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline.  I can explain the importance of asking until I get the help needed. | |
| **Online Relationships**  **Icon  Description automatically generated** | I can recognise some ways in which the internet can be used to communicate.  I can give examples of how I (might) use technology to communicate with people I know. | I can give examples of when I should ask permission to do something online and explain why this is important.  I can use the internet with adult support to communicate with people I know (e.g. video call apps or services)  I can explain why it is important to be considerate and kind to people online and to respect their choices.  I can explain why things one person finds funny or sad online may not always be seen in the same way by others. | I can give examples of how someone might use technology to communicate with others they don’t also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country).  I can explain who I should ask before sharing things about myself or others online.  I can describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.  I can explain why I have a right to say ‘no’ or ‘I will have to ask someone’. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don’t want to do.  I can identify who can help me if something happens online without my consent.  I can explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online.  I can explain why I should always ask a trusted adult before clicking ‘yes’, ‘agree’ or ‘accept’ online. | I can describe ways people who have similar likes and interests can get together online.  I can explain what it means to ‘know someone’ online and why this might be different from knowing someone offline  I can explain what is meant by ‘trusting someone online’, why this is different from ‘liking someone online’, and why it is important to be careful about who to trust online including what information and content they are trusted with.  I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.  I can explain how someone’s feelings can be hurt by what is said or written online.  I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. | | I can describe strategies for safe and fun experiences in a range of online social environments (e.g. **livestreaming**, gaming platforms)  I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.  I can explain how content shared online may feel unimportant to one person but may be important to other people’s thoughts feelings and beliefs. | | I can give examples of technology- specific forms of communication (e.g. **emojis, memes and GIFs**).  I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my / our fault.  I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups).  I can explain how someone can get help if they are having problems and identify when to tell a trusted adult.  I can demonstrate how to support others (including those who are having difficulties) online. | | I can explain how sharing something online may have an impact either positively or negatively.  I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not.  I can describe how things shared privately online can have unintended consequences for others. e.g. **screen-grabs**.  I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. | |
| **Online Reputation**  Icon  Description automatically generated | I can identify ways that I can put information on the internet. | I can recognise that information can stay online and could be copied.  I can describe what information I should not put online without asking a trusted adult first. | I can explain how information put online about someone can last for a long time.  I can describe how anyone’s online information could be seen by others.  I know who to talk to if something has been put online without consent or if it is incorrect. | I can explain how to search for information about others online.  I can give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal.  I can explain who someone can ask if they are unsure about putting something online. | | I can describe how to find out information about others by searching online.  I can explain ways that some of the information about anyone online could have been created, copied or shared by others. | | I can search for information about an individual online and summarise the information found.  I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. | | I can explain the ways in which anyone can develop a positive online reputation.  I can explain strategies anyone can use to protect their ‘**digital personality**’ and online reputation, including degrees of **anonymity**. | |
| **Online Bullying**  Icon  Description automatically generated | I can describe ways that some people can be unkind online.  I can offer examples of how this can make others feel. | I can describe how to behave online in ways that do not upset others and can give examples. | I can explain what bullying is, how people may bully others and how bullying can make someone feel.  I can explain why anyone who experiences bullying is not to blame.  I can talk about how anyone experiencing bullying can get help. | I can describe appropriate ways to behave towards other people online and why this is important.  I can give examples of how bullying behaviour could appear online and how someone can get support. | | I can recognise when someone is upset, hurt or angry online.  I can describe ways people can be bullied through a range of media (e.g. image, video, text, **chat**)  I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). | | I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences.  I can describe how what one person perceives as playful joking and teasing (including **‘banter’**) might be experienced by others as bullying.  I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.  I can identify a range of ways to report concerns and access support both in school and at home about online bullying.  I can explain how to block abusive users.  I can describe the **helpline services** which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix). | | I can describe how to capture bullying content as evidence (e.g **screen-grab**, **URL**, **profile**) to share with others who can help me.  I can explain how someone would report online bullying in different contexts. | |
| **Managing Online InformationIcon  Description automatically generated** | I can talk about how to use the internet as a way of finding information online.  I can identify devices I could use to access information on the internet. | I can give simple examples of how to find information using digital technologies, e.g. **search engines**, **voice activated searching**).  I know / understand that we can encounter a range of things online including things we like and don’t like as well as things which are real or make believe / a joke.  I know how to get help from a **trusted adult** if we see content that makes us feel sad, uncomfortable worried or frightened. | I can use simple keywords in **search engines**.  I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).  I can explain what **voice activated searching** is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).  I can explain the difference between things that are imaginary, ‘made up’ or ‘make believe’ and things that are ‘true’ or ‘real’.  I can explain why some information I find online may not be real or true. | I can demonstrate how to use key phrases in search engines to gather accurate information online.  I can explain what **autocomplete** is and how to choose the best suggestion.  I can explain how the internet can be used to sell and buy things.  I can explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.  I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).  I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened. | | I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.  I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).  I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; **in-app purchases**, **pop-ups**) and can recognise some of these when they appear online.  I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.  I can explain that technology can be designed to act like or impersonate living things (e.g. **bots**) and describe what the benefits and the risks might be.  I can explain what is meant by **fake news** e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn’t. | | I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I aim presented with e.g. voice-activated searching giving one result.  I can explain what is meant by ‘being **sceptical**’; I can give examples of when and why it is important to be ‘sceptical’.  I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.  I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.  I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, **pop-ups**, targeted ads.  I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by **vloggers**, **content creators**, **influencers.**  I can explain what is meant by the term ‘stereotype’, how ‘stereotypes’ are amplified and reinforced online, and why accepting ‘stereotypes’ may influence how people think about others.  I can describe how **fake news** may affect someone’s emotions and behaviour, and explain why this may be harmful.  I can explain what is meant by a ‘**hoax**’. I can explain why someone would need to think carefully before they share. | | I can explain how search engines work and how results are selected and ranked  I can explain how to use search technologies effectively  I can describe how some online information can be opinion and can offer examples.  I can explain how and why some people may present ‘opinions’ as ‘facts’; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal.  I can define the terms ‘influence’, ‘manipulation’ and ‘persuasion’ and explain how someone might encounter these online (e.g. advertising and ‘**ad targeting**’ and targeting for **fake news**).  I understand the concept of **persuasive design** and how it can be used to influences peoples’ choices.  I can demonstrate how to analyse and evaluate the validity of ‘facts’ and information and I can explain why using these strategies are important.  I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this.  I can describe the difference between on- line **misinformation** and **dis-information.**  I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation or disinformation).  I can identify, flag and report inappropriate content. | |
| **Health, Wellbeing and lifestyle**  Icon  Description automatically generated | I can identify rules that help keep us safe and healthy in and beyond the home when using technology.  I can give some simple examples of these rules. | I can explain rules to keep myself safe when using technology both in and beyond the home. | I can explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment.  I can say how those rules / guides can help anyone accessing online technologies. | I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships; I can give some examples of both positive and negative activities  where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos).  I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). | | I can explain how using technology can be a distraction from other things, in both a positive and negative way.  I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time. | | I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively.  I can describe some strategies, tips or advice to promote health and well- being with regards to technology  I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals.  I can explain how and why some apps and games may request or take payment for additional content (e.g. **in-app purchases**, **lootboxes**) and explain the importance of seeking permission from a trusted adult before purchasing. | | I can describe common systems that regulate age-related content (e.g. **PEGI**, **BBFC**, parental warnings) and describe their purpose.  I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this.  I can recognise features of **persuasive design** and how they are used to keep users engaged (current and future use).  I can assess and action different strategies to limit the impact of technology on health (e.g. **night-shift mode**, regular breaks, correct posture, sleep, diet and exercise) | |
| **Privacy and SecurityIcon  Description automatically generated** | I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).  I can describe who would be trustworthy to share this information with; I can explain why they are trusted. | I can explain that passwords are used to protect information, accounts and devices.  I can recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names).  I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others. | I can explain how passwords can be used to protect information, accounts and devices.  I can explain and give examples of what is meant by ‘private’ and ‘keeping things private’.  I can describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).  I can explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions) | I can describe simple strategies for creating and keeping passwords private.  I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult.  I can describe how connected devices can collect and share anyone’s information with others. | | I can describe strategies for keeping personal information private, depending on context.  I can explain that internet use is never fully private and is monitored, e.g. adult supervision.  I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure.  I know what the **digital age of consent** is and the impact this has on online services asking for consent. | | I can explain what a **strong password** is and demonstrate how to create one.  I can explain how many free apps or services may read and share private information (e.g. friends, contacts, **likes**, images, videos, voice, messages, **geolocation**) with others.  I can explain what app permissions are and can give some examples | | I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser).  I can explain what to do if a password is shared, lost or stolen.  I can describe how and why people should keep their software and apps up to date, e.g. auto updates.  I can describe simple ways to increase privacy on apps and services that provide privacy settings.  I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. **scams**, **phishing**).  I know that online services have **terms and conditions** that govern their use. | |
| **Copyright and Ownership** | I know that work I create belongs to me.  I can name my work so that others know it belongs to me | I can explain why work I create using technology belongs to me.  I can say why it belongs to me (e.g. ‘I designed it’ or ‘I filmed it’’).  I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content).  I understand that work created by others does not belong to me even if I save a copy. | I can recognise that content on the internet may belong to other people.  I can describe why other people’s work belongs to them. | I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause. | | When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.  I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images. | | I can assess and justify when it is acceptable to use the work of others.  I can give examples of content that is permitted to be reused and know how this content can be found online. | | I can demonstrate the use of search tools to find and access online content which can be reused by others.  I can demonstrate how to make references to and acknowledge sources I have used from the internet. | |
| Information Technology | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | | | **Year 4** | **Year 5** | **Year 6** | |
| Mechanics  **Steering Wheel outline** | I can use a mouse, touchscreen, or appropriate access device to target and select options on screen I can turn on the music centre and select music.  I can use a touchscreen to open and close apps  I can ask an adult to help me with technology  I can take turns on a digital device  I can talk about different digital devices | I can log in confidently using my username and password.  I can start using a keyboard and develop my mouse skills.  I understand that they keyboard is in capital letters  I can understand what **cut, copy and paste** does.  I can open and save my own work.  I can use arrow keys to move the cursor. | I can learn to type without looking at the keyboard for the correct finger placement  I am able to move my typing hands  I can improve my **touch typing** | I know how to **save my files and retrieve** them in the next lesson independently. | | | To understand how email travels and how to retrieve it.  To send and reply to emails.  To attach a file/photo to an email. To understand the advantages of attaching files/photos to emails.  To use emails to communicate ideas. Using Microsoft word online and sharing the document with others via email. ​​​  To use keyboard shortcuts for **copy and paste ctrl c, v.** | I can add text to a web page  I can add images to a web page.  I can use **copy and paste** in a spreadsheet. | I can double click to copy, push/pull, and offset.  I can use different types of keyboard combination using **drag and drop** and two finger scrolling. | |
| Searching and Selecting Information  **Folder Search outline** | I can find the correct app to help me with different areas of the curriculum. | I can search the internet for suitable pictures on an iPad​​​​​​​.  I can use the internet with adult support to communicate with people I know.  I can use Google search to find images​​​​​​I can search the internet for suitable pictures on an iPad​​​​​​​ | I can find images from the internet to insert into an Image on separate layers | I can use search engines effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content  I can be discerning in evaluating digital content. I can select which search results I will click on to explore further.  I can assess the credibility of a source on the internet.  I can collect, analyse, evaluate and present data and information | | |  | I understand how hashtag searching works.  I can evaluate webpages and describe the key features of a webpage | I know how to apply for jobs and how to create a CV using a template. | |
| Digital Artifacts  **Server outline** | I can use different digital devices.  I can recognise a selection of digital devices  I can use a digital device to make pictures, videos and Music.  I can talk about what I am doing on the iPad  I can record my voice on a digital device | I can explain why work I create using technology belongs to me  I can use Google search to find images  I can explain why something belongs to me. ​​ to retrieve digital c  I can save images from the internet.  I can save work under a suitable title/name  I can create and rename folders  I understand that work created by others does not belong to me even if I save a copy.  I can rename files  I can send **(AirDrop)** files to each other and to the teacher.  I can present my images in a gallery | I can earn how to access and use a mobile word processor.  I know and use and save a word file  I can use different word processing apps and to compare the experience.  I can use different presentation apps and to compare the experience.  I know how to take a good photo. I can save and organise photos.  I can create a **Picollage** using edited photos.  I understand that photo editing is done in layers. I understand the concept of transparent in photo editing.​​​​​​​  I can add and edit layers.  I can use Copy and paste confidently.  I can change visibility of layers | I can research and record information on a given topic or subject. | | | I can create a word document and edit font – to know these terms- Create – File – Save – Save As – Open – Cut – Copy – Paste - Keyboard Shortcut – Copyright – Cite Information – Transition  I can open and edit word document. I can remember keyboard shortcuts (Cut, copy paste). I understand copyright and remember how to cite information  I can create a PowerPoint and edit font and design.  I can layer images on top of each other. To create image effects. To understand images can be changed or enhanced  I can understand the smart select function (Magic wand).  I can use the crop function.(Extension activity – upload name plate to pupils email signature) | I can create docs and collaborate using Microsoft Word (online). I can collaborate digitally on the same document using “Share”  I can use Microsoft Publisher/Apple Pages to create my own image  I can create an advert using Microsoft Publisher  I can still images to produce an animation​​​​​​  I can combine individual frames to perceive movement within a design programme  I can create custom-made and creative animations  I can create my own web page layout. | I can draw a 2D shape or line. I can manipulate 2D shapes into 3D shapes.​​​​​​  I can use the measure tool to draw shapes. I can use inference points to draw lines and shapes.  I can create a complex 3D model - I can select the tools I need for different features. I can use the main tools independently.  I can import models from the 3D warehouse. I can copy and manipulate 3D models.  I can select the tools I need for different features. I can use the main tools independently.  To understand that anything in an image can be digitally added, removed, or altered.  I can use iMovie to create a video. I can upload to OneDrive. I can use Windows Photos to add digital effects | |
| **Computing Contexts**  **Cloud Computing outline** | I can use technology to help me learn about the world  I can ask questions about different digital devices  I can answer questions about what I am doing with a  range of technology  I can talk about what might stop a device working | I can describe what an illustration is​​​​​​  I can plan an illustration for a book  I can create and save an illustration  I can edit an illustration  I can create an eBook  I can add illustrations to an eBook | I can transfer word processing skills to create a presentation.  I can complete a presentation with animations and transitions  I can use a photo edit app confidently for a desired purpose  I can present my photos. I am able to use a variety of sending techniques such as **AirDrop.** | I can study maps, atlases, globes and digital/computer mapping to locate countries and describe features studied​​​​​​ in my geography topic.  I can create and experience stories about my topic. I can use the websites or apps to explore and research about my subject | | | I can develop camera skills and manipulation to create a trailer.  I can create more complex video using a mixture of video and photo  I can use a variety of methods to create a news report with a replacement background. | I can create hyperlinks to my own webpage.  I can publish and share my own webpage. | I am able improve our work from Year 4 by creating a short video using green screen.  I can add digital effects to our videos using Windows Photos | |
|  | **Knowledge** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | | | **Year 4** | **Year 5** | **Year 6** | |
| **Algorithms and Programming**  **Programmer male outline** | I can follow a simple algorithm  I can put simple instructions in order  I can create a sequence of instructions  I can plan a route for a friend or robot  I can code a robot to go to a certain place  I can debug an algorithm or some code | I am beginning to know the term, **Algorithm**. I know the meaning of an Algorithm (a list of instructions) ​​​​​​  I can use directional instructions to create algorithms to solve puzzles.  I can solve problems by splitting them into smaller parts.  I know that **debugging** is fixing our code, so that it  works.​​​​​​​ | I can animate a sprite.  I can use a repeat block successfully.  I can make sprites appear and disappear.  I can control sprites actions.  I can change the size of the sprite.  I can use messaging to control a sprite.  I can sequencing in a program | I know how to create a list of instructions. I use of the term algorithm correctly (a list of instructions).  I can visualise an algorithm before running the code. I can fix any mistakes **(Debugging)**  I understand the concept of coding – **coding** tells computers what to do, **developers** write code to build their own apps and games.  I can describe and construct simple **sequences.**  I can build sequences and understand orders.  I can understand what a **loop** is in coding. I can write code with loops.  I can understand events and actions in coding.  I can understand basic conditions in code – if/then. | | | I understand and identify algorithms by building simple algorithms to solve puzzles while developing my sequencing skills.  I can identify bugs and know how to approach fixing them  I can write my own code to solve problems in a game.  I can make sure that made code is efficient and I can identifying loops. I understand **decomposition** to solve problems.  I understand **abstraction** to solve problems  I understand how functions can make coding efficient. I understand **conditional statements** for different contexts.  I am developing my knowledge about loops and how to use and identify **nested loop (Loops within loops)**  I can use a **repeat block** and “sensing” to send the sprite back to the start if they touch a wall in my game.  I can use an **“IF” condition** to create section of a wall to open and close when the button is touched​​​​​​​.  I can use the function hide and show. | I can describe, demonstrate and code using commands and sequences.  I can describe, demonstrate and debug with code  I can describe, demonstrate and code using functions and loops  I know how to use the Kodu tools to create a 3D environment. ​​​​​​ | I can describe, demonstrate and code using commands and sequences  I can describe, demonstrate and debug with code  I can describe, demonstrate and code using functions and loops  I can design programmes to solve challenges with functions and loops  I can describe, demonstrate and code using conditional code and logic | |
| **Data (use component knowledge to support understanding of data)**  **Morse Code with solid fill** | I can use a pictogram to help me answer questions  I can count, sort and group information on an iPad |  |  | I am understand about HTML coding. I know how phone/tablet apps are coded.  I can use HTML code to show how phone/tablet apps are coded. | | | I understand what a computer network is, and how they can provide multiple services, such as the world wide web, and opportunities for collaboration and communication.​​​​​  I understand the components of a computer network. To show how information is exchanged between devices.  I understand that the internet is the physical connection between computers and networks. I understand how data travels throughout a network.  I understand that devices on a network have a unique address. I can find Website IP addresses. | I canidentify the key elements of a spreadsheet (rows, columns and cells)  I can reference cells in a spreadsheet  I know that a spreadsheet is used to perform calculations  I can enter formulae into a spreadsheet  I know that when you change the numbers used in a spreadsheet the results of calculations are worked out again (recalculated)  I can enter labels and numbers into a spreadsheet  I know that spreadsheet models allow exploration of possible outcomes  I can change the data in a spreadsheet to answer ‘what if?...’ questions  I can use ‘SUM’ to calculate the total of a set of numbers in a range of cells  I can add cell borders and background colours to improve the legibility of a spreadsheet table  that mathematical problems can be explored using a spreadsheet | I can explain that web pages are written using HTML; use basic HTML tags; remix webpages using X-Ray Goggles  Understand that Python is the language that powers websites and apps  I know the difference between visual and scripted programming languages – introduction to Python, | |
| **Systems (input, output and process)**  **Processor outline** | I can investigate how toys work using buttons/switches | I can write and program a sprite  I can add sprites that move at different speeds.  I can make a sprite move and hide.  I can make my program repeat  I can change the background automatically.  I can earn how to use a repeat block to code a looped action  I can use sound and motion together. | I can create a game.  I can program a character to grow and shrink.  I can use instructions to make characters move at different speeds and distance.  I can use a repeat instruction to make a sequence of instructions run more than once, and then predict the behaviour.  I can create programs that play a recorded sound.  I can use speech in a program using the Broadcast code | I understand how to create simple movement with blocks, bounce on edge. I know how to make sprites to follow the mouse pointer.​​​​​  I understand the 2 axis of the workspace. I understand what minus numbers do to code. I can move the spite using directional code.  I can create a sprite that is computer controlled.  I can use the **IF** button to code the sprites to complete code when a criteria has been fulfilled.  I can use the wait function and the hide and show blocks. | | | I understand about variables, input and output.  I can design a user interface | I know howto create custom assets. How to save and import internet assets ​​​​​​  I can code all sprites (assets) correctly, so they make a working game.​​​​​​  I can create a score system and lives system. I know how to tell the game to stop when all lives are gone.  I can create a countdown timer. I can test the game and debug any problems. I can make the game harder if need by adding more aliens.  I can create a music file and use in my game. I can export the music file into my game  I can create a title screen and a game over screen.  I know how to create and control sprites in this game world - control with input or automatically  I know how to create scenery such as trees, factories, clouds, and lakes. Change the scenery settings | I can create my own app using the skills I have learned previously – secondary school information app.  I can design the process for my app building project – by choosing buttons, titles, and changing colours.  I understand how to use the insert and resize feature.  I know how to create buttons with website links.  I know how to create different screens in the app and how to link to them.  I know how to test and debug my app build in real time.  I know how to upload the created app to a cloud location | |