Burlington Infant & Nursery School

Computing curriculum map

Our curriculum aims to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever-changing digital world. We focus on a progression of skills in digital literacy, computer science, information technology and online safety, to ensure that children become competent in safely using, as well as understanding, technology. Creativity is encouraged through cross curricular learning to engage and inspire children and as a result efforts are valued, individuality is celebrated, confidence and resilience is developed and all children flourish in computing.

	Autumn	**Spring**	**Summer**	**Key Vocabulary**
Nursery	**Explore** various technology and how they work eg remote control cars during continuous provision to begin to understand forwards and backwards **Use** technology in roleplay eg answering the phone	**Explore** different types of technology e.g. computer, camera, remote controlled games, microwave, programmable toys, torches **Explore** using Beebots and pushing/pulling different vehicles ***Know*** *how to operate simple equipment eg keyboard, beebots, camera etc* ***Show*** *an interest in technological toys, real objects and touchscreen devices* *Shows an interest in making toys work by pressing parts or lifting flaps to achieve effects such as sounds, movements or new images* *Plays with a range of materials to learn cause and effect*	**Name** a real life dangers e.g.traffic and road safety,dangerous litter, stranger danger, sun safety **Discuss** importance of keeping safe around the school e.g. different coloured lanyards, playground safety ***Know*** *that photos can be retrieved from camera or ipad* ***Experiments*** *with a range of materials to learn cause and effect* ***Begins*** *to recognise danger and seeks the support and comfort of significant adults* ***Use*** *the mouse to click and drag*	push on off battery computer mouse keyboard forwards backwards
Reception	**Know** how technology in the helps us at home, in school and everyday uses **Explain** how technology can be used in different jobs **Name** something/someone that makes you feel safe/unsafe	**Use** ipad to take a photo **Know** how to switch on the computer and **control** a mouse with increasing control **Create** pictures and writing using 2Simple. **Complete** a simple program on 2 simple.	**Complete** a simple program e.g. BusyThings, 2Simple paint **Turn** computers on and shut down after use **Recall** how to keep safe around the school e.g. different coloured lanyards, playground safety	keys instruction screen shut down Log on program sequence double click right click open

	Discuss real life dangers e.g. traffic and road safety, dangerous litter, stranger danger, sun safety **Use** the IWB in the classroom e.g. 2simple	**Explore** changing font size and colour on 2Simple ***Click*** *on different icons to cause things to happen* **Explore** using Beebot/Codapillar and know how to code. **Explain** why a simple BusyThings program (Beebot, Codapillar) has not worked e.g. moved too far, not far enough, wrong turn **Press** buttons and keyboard to make technology/games move e.g. Beebot, Codapillar, **Know** different ways of communicating e.g. letters, postcards, emails **Name** different types of technology e.g. ipads, computers,programmable toys, torches	**Know** that the internet shouldn't be used without permission from an adult e.g. parents at home ***Use*** *the internet with an adult to find and retrieve information of interest to them* **Use** a keyboard to write name, using a capital with CAPS lock ***Understand*** *the different purpose of technology*	icon pictogram turtle type space bar turn left/right cut paste paint brush enter CAPS lock
Year 1	**Turn** a computer on and off and log on using LGFL password **Select** a program **Select** and **change** the font, style, size, shape, colours and tools on Paint **Undo/redo** actions **Use** the text tool from the tool bar **Create** a file and **name** it, showing who it belongs to ***Find*** *letters on the keyboard - or Spring term?* **Use** the shape tool to create a shape **Use** the backspace/delete, space bar and CAPS **Use** the arrow keys to move around the text **Discuss** the links between the offline and online world	**Explain** what an algorithm is **Review** and spot mistakes **Create** step-by-step instructions using pictures. *Create simple instructions using left and right* **Programme** and direct a Beebot to a toy using the arrow buttons. ***Record*** *their route.* **Explain** how Beebot buttons change direction and distance, predicting behaviour of Beebot. **Check** work for mistakes to debug a program and start again if needed **Evaluate** and improve a sequence **Experiment** to get JIT turtle to destinations. Respond to comment to change instruction. **Investigate** how a product changes when the instruction is changed **Suggest** appropriate changes to work **Use** enter and shift ***Follow*** *Burlington's SSO*	**Open** up a web browser and **select** and use safe search filters **Type** words to find an image online **Save** images on a computer **Reflect** when something online might not be safe **Explain** that some personal information can affect my personal safety e.g.personal address. ***Know*** *that personal information should not be shared online* ***Recognise*** *what an email address looks like* **Suggest** ways to use emails safely and explain what to do if emails received are from unknown people ***Know*** *that websites include pop-ups that can take them away from the main site.* ***Create*** *animation on JIT (or when does this happen?)* *Send a class email* ***Understand*** *the importance of keeping information safe, such as username and password*	algorithm code username password debug search engine retrieve store save re-save animation clockwise/anticlockwise file folder animation load image video audio text toolbar copyright save folder font style undo/redo straight line primary colours portrait

		Use the keyboard to write name using CAPS lock ***Understand*** *the importance of keeping information safe*	*Log onto a device using LGFL username and password*	information safety personal
Year 2	**Recreate** Art in eg Jit, Paint, powerpoint by arranging different shapes **Change** the colour and size of dots/paintbrush **Insert** lines that are different sizes into work. ***Use*** *shapes tools to draw* and **fill** areas with different colours **Rotate**, **resize** and **colour** shapes **Produce** lighter and darker shades and make 2 versions of a piece of art using different shades **Retrieve** a picture file and open it in a computer programme **Duplicate** an image and alter the colours to create a piece of pop art **Decide** whether a website is useful or not **Explain** likes/dislikes about a website, use clues to decide who a website is aimed at	**Name** an example of an algorithm. **Explain** and model how algorithms need to be precise to be successfully converted into code ***Use*** *repeat commands* **Design** simple programs using Turtle, Scratch and J2e. ***Use*** *right angle turns* ***Test*** *and amend a set of instructions. write a simple program and test it.* **Plan** an algorithm on JIT turtle for a route, test on computer, debug by reordering **Make** logical predictions on the behaviour of programs based on previous knowledge **Alter** work after discussion **Highlight** changes in sequences of instructions based on what has happened previously	**Know** what a digital footprint mean and how it contains information about a person. ***Know*** *that not everything on the internet is true.* ***Ask*** *if they find something they are unsure of online,* **Identify** which keywords will give me good results and use a website to search for information **Decide** unkind online behaviour and know what to do if someone is being unkind online **Identify** which websites are suitable for the children's age **Use** both hands on the keyboard, use a word bank to create a piece of writing and use colour and formatting ***Highlight*** *text to change its format eg* ***BIU*** **Uplevel** a piece of work **Enter** data onto a graph and talk about results *Word process a piece of text* ***Insert/Delete*** *a word using the mouse and arrow keys* ***Create*** *a simple slide show using text, pictures and animations*	frame duplicate retrieve email subject address communicate sender reliable Search filter alter trusted adult Digital footprint content social media post public appropriate cyber-bullying keywords