

Park Gate Primary - Computing Curriculum



The use of technology is completely embedded in our Park Gate curriculum; its use is carefully considered to enable the children to best fulfil the learning objective of the lesson. Teachers make learning opportunities relevant and purposeful, engaging children further and giving their work meaning. Imaginative teaching strategies, for example, using greenscreen technology when learning about Arizona, enables children not only to learn in exciting and inventive ways, but also develop key life skills such as communication, collaboration, problem-solving and resilience, ensuring that the children are secondary school ready. Our children develop a love for learning, enhanced by the use of technology across the curriculum, from the varied and stimulating experiences they are provided with. Not only has this had a significant positive impact on our results but more importantly, it has helped to create successful, happy learners with a thirst for knowledge, a determination to succeed and necessary skills to continue to flourish in secondary school and beyond.

Digital Literacy

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

This is separated into 8 key areas:

- Self-Image and Identity
- Online Relationships
- Online Reputation
- Online Bullying
- Managing Online Information
- Health, Well Being and Lifestyle
- Privacy and Security
- Copyright and Ownership

At Park Gate Primary School we follow a **SAFE** and **SMART** approach to being digitally literate.

Information Technology

Information Technology concerns the use of computer software to achieve a specific goal.

This should include...

- Word Processing
- Data Handling
- Presentations
- Animation
- Video Editing
- Photography and Digital Art
- Sound

At Park Gate Primary School this should include **MS Word, Excel and PowerPoint, MS Teams, Stop Motion Animation, MS Sway, Paint 3D, DoInk Animation and Greenscreen** apps

Computer Science + Networking

Computer Science is the study of how to manipulate, transform and encode information using digital devices

Networking involves the linking of computers to allow them to operate interactively.

This should include...

- Computational Thinking
- Coding/Programming
- Computer Networks,

At Park Gate Primary School this should include **Scratch** programming, **Crumble** computer control, **Bee-Bots, Blue Bots** and **Beard Man**.



Internet Safety

Speak to:

if you are worried about anything.

S **SPEAK**
to somebody if you need help.

A **ASK**
an adult before going online.

F **FRIENDS**
are real people we know.

E **ENJOY**
Play, have fun and stay safe.

Copyright 2017 www.esafety-adviser.com



S **SHARE RESPONSIBLY**
We all love to share photographs, fun things we're doing and much more.
Be careful what you share and always ask permission if somebody else is in the photo or video.

M **MANAGE**
your **PRIVACY**
If you're using apps that can communicate with others, turn on privacy.
Only let people you really know follow you unless you've asked permission from your parents.

A **ASK**
for **HELP**
Don't ever be worried about asking for help from someone you trust.
You will **NOT** be judged.

R **RESPECT**
OTHERS
Be kind.
Other people may have different opinions from you.
That's okay, but if they become abusive, take screenshots, block and report and tell an adult.

T **THINK CRITICALLY**
TRUST
your **INSTINCT**
Is it true?
Does that person really know me?
Has that really happened?
Always question!

If anything worries you, or if you need help with something, speak to:

Copyright 2017
esafety adviser
www.esafety-adviser.com

Here at Park Gate Primary School the **SAFE** and **SMART** approach to Internet Safety should underpin all areas of digital literacy.

In **Reception** children should be able to **identify trusted adults** that they can talk to should they feel worried about any aspect digital literacy. The children should always be encouraged to **tell trusted adults** about the content they are viewing using any digital device before they begin using them. Our pupils will understand that digital devices allow us to **view, share and contribute content to the internet** and that they should online interact with trusted people which they have **met in person**. Children should be encouraged to **enjoy using digital devices** whilst following the **SAFE** approach to internet safety.

In **Key Stage 1** our children will discuss the continued use of the **SAFE** approach to E-Safety through discussing issues such as **online bullying** and how our **online relationships** should emulate our real-life relationships. We learn that some information is **private** and should not be shared with others in person or online. The children begin to understand how all aspects of E-safety can affect our lives including our **health, well-being and lifestyle**.

In **Key Stage 2** the children will begin to follow the advanced **SMART** approach. This will include: learning about **self-image and identity**; **managing** their own **online information** and the **online reputation** they build for themselves; and personal privacy when using social media. Further to this, the children in Key Stage 2 will discuss **copyright and content ownership issues** and how all of the different aspects of E-safety can affect our lives including our **health, well-being and lifestyle**.



Park Gate Primary Long-Term Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
R	Year R follow a child-initiated curriculum which offers a variety of opportunities to incorporate computing skills. Our children will learn: to use iPads to record video and make their own shows; to use painting tools to create masterpieces; to programme simple algorithms into BeeBots; or to explore real-life computing through role-play.					
1	Introduce SAFE	Discrete Teach BlueBots programming linked to Fairy Land project	Keyword skills Logging onto school network	Research skills – Great Fire of London – adding favourites using QR codes Paint – drawing skills	Photography skills using Ipad Daisy Dinosaur/Beard Man programming	Word processing – Linked to 'I do like to be beside the seaside' project
2	Word processing skills Re-introduce SAFE	'Blue Bots' apply Year 1 learning during 'Habitat explorers' (pathways)	Scratch Junior Coding	Word Skills – Linked to Titanic Knowledge	Teach PowerPoint – adding text and photographs during New Zealand research	Using Programmes to display information – (Busy Things food pictograms) through ready, steady, shop project.
3	SMART – moving on from SAFE Word skills covered throughout the year along with saving/loading onto the network.	Powerpoint Presentations – Linked to the stone age.	'Boogie Bot' Discrete teach Word Processing Word Art linked to 'play the game' project	Scratch Programming – moving robot/bat discrete	'Stop Motion Animation' – Lead subject – laught	Excel Spreadsheet Lake District Temperatures across a year
4	SMART E-Safety Discrete crumble computer control spinners	Apply Word Skills – Leaplet for Land of Fire and Ice Saving on the school network. File Systems Open/Save/Save As	Discrete – Scratch – Talk bot – digestion quiz	Using Excel spreadsheets – Fareham Town study Teach Animation using DoInk Application to make 'live' show trailer	PowerPoint skills linked to 'Roman' project.	Scratch music makers supporting 'light and sound' project E-Safety – alongside PSE – Growing up
5	SMART Recap – mobile phones and gaming Email – safe use Teach - Scratch – teach cat and mouse	Excel Spreadsheets Planet fact files and using sort functions in Excel spreadsheets	Crumble Control Technology 'Lighthouses' PowerPoints – Invaders and Settlers – Who was the Greatest King of 450-1066CE?	Crumble Control Technology 'Lighthouses' Applied – Type up evacuee letters – friend or foe	Apply Scratch sound boards in 'Tour Guides wanted' Use green screen technology in photography Teach publisher to create '10 facts' about posters for Tour Guides Wanted	Lead Chemical Chaos – Movie Maker to produce science video
6	SMART Recap – mobile phone and gaming, social media Excel – 'Keep on pumping' project graphs	How Civilised! -SMART Research skills -PowerPoint – hyperlinking, video adding	Teach – scratch – 'lizard pop' during 'Holes' project	Brazil – Research	Crumble teach 'Fairground Ride'	

Objectives covered by each year group

Updated 4 th January 2022	Digital Literacy	Information Technology	Computer Science and Networking	Enrichment Ideas
Year R	<p><u>E-Safety</u> -Introduce SAFE approach to internet safety. This should be embedded in classroom practise Focus on... S is for 'Speak' A is for 'Ask'</p> <p><u>SCARF – Keeping Safe Online –</u> - I can talk about activities which are safe to do on electronic devices -I will know what to do, and who to talk to, if I feel unsafe online</p>	<p><u>Input devices</u> -I can use a mouse click. Touch pad and touch screen to navigate and select items - I can use keyboard entry to type my own name</p> <p><u>Word Processing – MS Word/Busy Things/iPads</u> -I can use a keyboard to type letters and numbers onto the computer screen</p> <p><u>Photography Skills</u> -I can use an iPad to take and view photos which I have taken</p>	<p><u>Bee-Bots</u> -programme the Bee-bot to move forward, backwards, turn left and turn right -begin to understand basic sequencing</p>	<p>*Easy Speak Microphones*</p> <p>*Active Primary Paint on IWB*</p> <p>*Recording sounds on laptops*</p> <p>*Busy Things*</p>
Year 1	<p><u>E-Safety</u> -Introduce SAFE approach to internet safety. This should be embedded in classroom practise Focus on... E is for 'Enjoy'</p> <p><u>SCARF – sharing pictures</u> - I can identify ways to stay safe online (tell an adult when using a computer, a range of safe applications/devices, do not share pictures online) - I can identify the adults who can keep me safe - I can identify who I can safely share content with online I can enter my login details to access the laptops in school</p>	<p><u>Word Processing – Busy Things – 'Tree Keys'</u> -I can begin to locate the keys on the QWERTY keyboard -I can type using one or more fingers on the keyboard</p> <p><u>Word Processing – MS Word</u> -Locate the 'CAPS LOCK' or shift method for capitalising your name, backspace for deleting letters or space bar for leaving a finger space -I can type my full name in MS Word, changing the font size, style and colour to make a name badge -I can type-up short sentences to improve my keyboard fluency -I can locate the full stop key and use it to mark my sentences</p> <p><u>Web Browsing</u> -I can use the favourites bar within a web browser to visit linked (safe) websites to watch content and gather information which my teacher has set up using QR codes</p>	<p><u>Blue-Bots</u> -programme the Blue-bot using an iPad to follow a short algorithm -use trial and error to solve bug in my algorithms -begin to understand basic debugging of algorithms to correct errors using simple logic</p> <p><u>Networking</u> -I can use my laptop login to access the school laptops and play an age-appropriate game</p>	<p>*Beard Man Code Disco*</p> <p>*Daisy Dinosaur – iPad Application*</p> <p>*Paint 3D*</p>
Year 2	<p><u>E-Safety</u> -Introduce SAFE approach to internet safety. This should be embedded in classroom practise Focus on... F is for 'Friends'</p> <p><u>SCARF – Playing Games</u> -I can identify information which is private/public -Discuss - Is everything we see on the internet true? -Make a list of risks and benefits of using the internet</p>	<p><u>Word Processing – MS Word</u> -I can use word art to create headings -I can locate and use the full stop, space, enter and delete keys when writing in MS Word</p> <p><u>Research Skills</u> -I can utilise SAFE searching when online and know how to keep myself safe when</p> <p><u>Data Handling</u> - I can talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. - I can make and save a chart or graph using the data I collect. - I can talk about the data that is shown in my chart or graph. - I am starting to understand a branching database.</p>	<p><u>Scratch Junior</u> -I can create my own sprites and stage backgrounds or load one from the given templates -I can select a command from within a wider range of options - I can plan for, and create, a longer algorithm with an end goal in mind - I can use simple logic to debug errors in someone else's algorithms</p> <p><u>Networking</u> -I can use my login details to access my MS Team account -I can save my Teams work to the 'cloud' -I can load a Word document from MS Teams</p>	<p>*Beard Man Adventures*</p>

		- I can tell you what kind of information I could use to help me investigate a question.		
Year 3	<p><u>E-Safety</u> -Introduce SMART approach to internet safety. This should be embedded in classroom practise</p> <p><u>SCARF</u> - Super Searcher/None of your business! -I can identify safe/trusted websites -I can identify strategies for SMART browsing online. - I can recognise appropriate/inappropriate online behaviour - I can identify what to do if something online doesn't feel right to me</p>	<p><u>Word Processing – MS Word</u> - I can insert a picture into MS Word using copy and paste from the internet. - I can add a variety of frames and styles to my picture</p> <p><u>Sway Presentations</u> -Revise Year 2 objectives</p> <p><u>Spreadsheets – MS Excel</u> -I can understand the terminology: cells, rows, columns and spreadsheets when using Excel</p>	<p><u>Scratch – Bat Animations</u> -I can change a sprites costume - I can use simple motion commands to enable my sprite to navigate around a stage background. (point to mouse, keyboard controls, space bar to start) - I can use the repeat command to program more efficiently. - I can use a simple forever loop to control more efficiently. - With support, I can use simple debugging skills to identify changes that I need to make to my algorithms.</p> <p><u>Networking</u> -I can save documents on the school network system with support -I can load documents from the school network with support</p>	<p>Stop Animation – Linked to 'The Day the Crayons Quit'</p> <p>Audiobook creation</p>
Year 4	<p><u>E-Safety</u> -Introduce SMART approach to internet safety. This should be embedded in classroom practise</p> <p><u>SCARF – Picture Wise</u> -I can understand what is meant by consent in regards to sharing information online - I can understand the implications of sharing information without consent - I can identify different forms of social media - I can identify who I can safely engage with online - I can describe the meaning of the term 'digital footprint'</p>	<p><u>Word Processing – MS Word</u> -I can use text boxes as an organisation device -I can insert pictures into MS Word using copy and paste -I can 'wrap' pictures to allow easy placement within my leaflet -I can add titles and subtitles by using increased font size, underlining, italics and bold select tools.</p> <p><u>Spreadsheets – MS Excel</u> -I can enter data into cells, making changes when necessary - I can add line borders and colour to cells to help improve the clarity of the information stored in my spreadsheet</p> <p><u>PowerPoint Presentations</u> -I can add text boxes in order to organise my information within a slide -I can use the online pictures available in PowerPoint to add a visual element to each of my slides -I can add and delete pages within my slideshow</p>	<p><u>Scratch</u> -I can confidently navigate the Scratch programming environment - With limited support, I can use simple debugging skills to identify changes that I need to make to my algorithms.</p> <p><u>Scratch – Sound Board</u> -I can add recorded sounds to a sprite to act as a 'button'</p> <p><u>Scratch – Talk Bot</u> - I can use conditional statements within my program to control the sprite(if, answer = yes, then _____ else, _____) -I can use a question and answer input to interact with an end user</p> <p><u>Crumble Control</u> -I can use computer control to create a spinning top -I can combine a series of complex instructions in crumble -I can safely handle electrical equipment -I can create a parallel circuit including: a battery pack, a crumble controller, a motor, 4 wires and a USB lead. -I can identify bugs in my coding and try out different solutions to debug the programmes which I have made</p>	<p>Do Ink Animation – Making Interactive Year 3/4 Show Flyers</p>
Year 5	<p><u>E-Safety</u> -Introduce SMART approach to internet safety. This should be embedded in classroom practise</p> <p><u>SCARF – Spot Bullying</u> -I can identify different features of online bullying -I can demonstrate strategies to support myself (and others) who are victims of online bullying</p> <p><u>SCARF – Communication</u></p>	<p>I can use the 'Snip and Sketch' application to create evidence my work and share this with others.</p> <p><u>Word Processing – MS Word</u> -I can use 'Align Left, Align Right and Align Centre' to correctly type a letter -I can use shortcut keys for copy (Ctrl+C), cut (Ctrl+X) paste (Ctrl+V), bold (Ctrl+B), and underline (Ctrl+U)</p> <p><u>Spreadsheets – MS Excel</u></p>	<p><u>Scratch – Cat and Mouse Games</u> -I can explore the 'if' command. (touching and distance from colour) -I can use coordinate planes to control the starting position of my sprites. - I can independently use simple debugging skills to identify changes that I need to make to my algorithms. - I can use simple debugging skills to identify changes that I need to make to my code.</p>	

	<p>- I can understand that online communication can be misinterpreted - I can accept that responsible and respectful behaviour is necessary when interacting online as well as face-to-face</p> <p><u>SCARF – Play, like, share</u> -social media platforms -your online profile/digital footprint -I can consider which information is safe to share online including my privacy settings -I can reflect on the consequences of sharing inappropriate content online - I can identify how to recognise disrespectful behaviour online and know how to deal with it</p> <p><u>SCARF – Is it true?</u> -I can understand that images and information seen online are not always true and accurate -I can recognise that things can be posted online that aren't always true or accurate</p>	<p>--I can use simple formulae within Excel. (e.g. SUM(G3:G10) to add the total number of moons in our Solar System)</p> <p>-I can use the data 'sort' function to organise my spreadsheet in different ways (size, order, alphabetical, number of moons)</p> <p><u>PowerPoint Presentations</u> -See Year 4 Objectives -I can use a range of PowerPoint slide animations to add interest to my presentations -I can use a voice recorder to narrate my slides in PowerPoint</p>	<p><u>Crumble Control</u> – Creating a computer-controlled light -I can use a computer coding to control a light -I can combine a series of instructions in crumble -I can safely handle electrical equipment -I can create a parallel circuit which includes a battery pack, crumble controller, wires, a bulb holder and a bulb, LEDs and an LDR -I can identify bugs in my coding and seek help to debug my programme if needed</p>	
<p>Year 6</p>	<p><u>E-Safety</u> -Introduce SMART approach to internet safety. This should be embedded in classroom practise</p> <p><u>SCARF – To share or not to share?</u> - I know that is illegal to create and share sexual images of children under 16 years old - I can explore the risks of sharing photos of themselves or others online - I know how to keep my information private online</p> <p><u>SCARF – Pressure Online</u> -I can understand the risks of sharing images online and how these are hard to control once shared -understand that people can feel pressured to act in certain ways online due to peer pressure</p> <p><u>SCARF – Fakebook Friends</u> -I know the legal age (and reasons) for having a social media account -I can understand why people don't always tell the truth online and they only post the 'good bits' online</p> <p><u>SCARF – Traffic Lights</u> -I can identify strategies for keeping personal information safe online -I can describe safe behaviours when using communication technology</p> <p><u>SCARF – Think before you click</u> - I can accept that responsible and respectful behaviour is necessary when interacting online as well as face-to-face - I can understand and describe the ease with which something posted online can spread</p> <p><u>SCARF – It's a puzzle</u></p>	<p><u>Word Processing – MS Word</u> -Continue to provide opportunities for children to consolidate previously learnt skills in MS Word</p> <p><u>Spreadsheets – MS Excel</u> --I can use create simple bar/line graphs from the data stored in my Excel spreadsheet</p> <p><u>PowerPoint Presentations</u> -See Year 4 and 5 objectives -I can insert hyperlinks and videos into my PowerPoint presentations -I can generate QR codes for other people to use</p>	<p><u>Scratch – Monkey Pop Game!</u> -I can use created variables, to add timers and scoring systems to my games -I can design my own game using different levels -I can use broadcast messages within my coding -I can evaluate the effectiveness of my own coding -I can provide a user with feedback on their performance within a game (e.g. scores, times, well done messages)</p> <p><u>Crumble Control – Fairground Rides</u> -I can use computer control to create a moving fairground ride -I can combine a series of complex instructions in crumble to address a given criteria -I can safely handle electrical equipment -I can create a parallel circuit including: a battery pack, a crumble controller, a motor, wires, a bulb, a bulb holder and a USB lead. -I can identify bugs in my own coding and try out different solutions to debug the programmes which I have made -I can incorporate an LED light into my fairground ride design</p>	<p>Stop Animation linked to fossils</p>

	<i>-Objectives recapped from Year 6</i>			
--	---	--	--	--