COMPUTING

Oldbrook First School
Living and Learning Together

COMPUTING INTENT STATEMENT

At Oldbrook First School, our aim is to provide a high-quality computing education which is fully inclusive and accessible to all. We aim to equip the children to become digitally literate in order to participate in the rapidly changing world where work and leisure are increasingly transformed by technology. We recognise that the world of technology is fast changing. Therefore, computing education needs to progress appropriately, in order that children move forward with the skills and knowledge necessary to be active participants in today's, and the future's, digital world. At Oldbrook First School we aim for pupils to have a foundational understanding of computing to include algorithms, simple programs, logical reasoning and prediction. We also aim for pupils to purposefully and creatively store, manipulate and retrieve digital content as well as recognising how technology is used across the wider world. Our intention is that pupils will also be able to use their computing skills across the curriculum and to inform and enhance life-long learning.

We recognise that our pupils need a strong, but age-appropriate, understanding of how to keep safe when using technology and the internet. This will then allow them to have the right skills to protect themselves by being well-informed and able to self-regulate when using technology and the internet.

COMPUTING IMPLEMENTATION

The Computing curriculum will raise the profile of computing within the school to ensure that all children are able to articulate using computing vocabulary. This will be evident within the classroom through tier three, subject specific visual and spoken vocabulary within computing lessons, as modelled by the teacher. Lessons will be clearly structured with children able to gain an excellent understanding of all areas of computing which includes digital literacy, information technology and computer science. Children will be regularly exposed to a variety of computing resources and confidently use these, not only within computing lessons, but across the curriculum, understanding and appreciating their value within the classroom plus home and school environments. This will include but not be limited to laptops, Ipads, interactive whiteboards, cameras and various hardware which children can program, stimulate and code. It is crucial that children are able to engage with a variety of enriching activities as well as experiencing external visitors and parent workshops to showcase their computing skills. Furthermore, teachers will have a clear understanding of the subject matter for their year group as well as how it progresses throughout school and they will be able to deliver this within lessons, using appropriate resources, vocabulary and modelling to ensure children receive quality first teaching. Frequent assessment will take place within lessons to allow the teacher to scaffold and extend learning appropriately.

COMPUTING IMPACT

Pupils at Oldbrook First School will gain a greater knowledge of the skills needed throughout the computing curriculum and have access to vocabulary within this subject, showing a confident and articulate understanding of the subject matter. Children should be able to talk about the three strands of computing and show the differences between them, knowing what they have learnt and how this has progressed throughout their teaching of computing in school. Pupils should be able to talk at length about their computing lessons, noting how staff help them progress through modelling, scaffolding and revisiting of learning to embed knowledge and skills. Furthermore, children will understand the vital role computing plays within society and how it is used for everyday life, having importance across the curriculum, in school and at home. They will know how the skills used within school can be implemented within a variety of the technologies they will come across in life. Finally, parents will have a good understanding of the skills being taught within computing, enhancing the positive values placed on the subject.

COMPUTING OVERVIEW

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Nursery		Explore mark making in different forms including some text	Have discussions about how to keep safe and why we need to keep safe online	Use a range of equipment to experiment making sounds and changing sounds		Use iPads to support learning selecting APPs for a purpose
Reception	Use tools to create digital images Have discussions about how to keep safe and why we need to keep safe online	Use iPads to support learning selecting APPs for a purpose	Have discussions about how to keep safe and why we need to keep safe online	Codapillar and bee bots Investigate how to use buttons to make them move with some purpose	Use iPads to support learning selecting APPs for a purpose	Explore websites and how we use them to find information
Year 1	Awareness of technology using and becoming familiar with a range of devices in the world around them	Creating an e-book 2 create a story	Paint- using a range of styles	Bee bots Kodable Lightbot	Scratch	Animate Puppet pals APP
Year 2	Navigating websites	Creating an e-book Book creator APP	Paint- artists Animate Toontastic APP	Bee bots and Algorithms 2 Debugging	Scratch	Blogging and sending e-mails

COMPUTING PROGRESSION OF SKILLS

	Early Years Foundation Stage	Year One	Year Two	Next Steps
Multimedia Text and Images	Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and the decide which materials to use to express them. Join different materials and explore different textures. Choose the right resources to carry out their own plan.	Use computing to generate ideas for their work. Use various tools including brushes, pens, lines, fill, spray and stamps. Use save, retrieve, amend and print. Use the spacebar, back space, enter, shift and arrow keys. Start to use two hands when typing. Word process short texts, rather than copying up written work	Use keyboard to enter text, Use colour coded fingers to help use correct fingers (index fingers left and right hand). Use the RETURN/ENTER key. Use SHIFT and CAPS LOCK to enter capital letters. Use DELETE and BACKSPACE buttons to correct text. Create sentences, SAVE and edit them later. To use cameras to take photographs To use various tools to create images in a rage of styles	Use cut and paste tools Use bold and change fonts/size/colour of text
Multimedia Sound and Motion	Use one-handed tools and equipment, for example, use the keyboard and mouse. Shoe a presence for a dominant hand. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at table or sitting on the floor. Use a range of equipment to experiment making sounds and changing sounds.	**iPad (Book Creator)** Use iPad app to create own eBook or topic trailer link to relevant topic area. Use camera and built in video.	Capture video. Discuss which videos to keep and why. Arrange clips to make a short film that conveys meaning on storyboard. Add simple titles and credits. Select text and make simple changes including bold, italic and underlined. Export the video Animation (2Animate) Plan a multi-scene animation including characters, scenes and special effects. Use 2Animate with an external camera (computer webcam) to shoot the animation frames e.g. waving hands. Adjust the number of photographs taken to improve the quality of the animation. The more photos you have the better the animation Save and retrieve animation	
Technology in Our Lives	Explore websites and how we use them to find information. Use iPads to support learning selecting APPs for a purpose	**Websites** Talk about websites they have been on. Explore a website by clicking on buttons, arrows, menus and hyperlinks. Navigate 'back' by clicking on the 'back' button. Complete a search under the supervision of adults. **2Email:** Learn to use email using closed email system. Give usernames and	**Email** Recognise an email address. Find the @ key on a keyboard. Contribute to a class email. Open and select to reply to an email as a class. Class email to a class in another school, locally, nationally or internationally.	

		passwords allowed within the program. Send text, pictures or text and pictures. Identify key features of email program.	Blogging	
Coding and Programming	Codapillar and bee bots Investigate how to use buttons to make them move with some purpose	**Bee Bots (app & program)** Give and follow instructions, which include straight and turning commands, one at a time to navigate other children and programmable toys around a course or a familiar journey. Explore outcomes when instructions are given in sequence. Give a simple sequence of instructions. **Scratch** Discuss/explore what will happen when instructions are given in a sequence. Give a sequence of instructions to complete a simple task. **2Code on Purple Mash** Plan, generate and follow a sequence of commands (actual and on-screen) to complete a given task or problem. Espresso coding	**Bee Bot (program or app)** Give and follow instructions, which include straight and turning commands, one at a time. Explore outcomes when instructions are given in sequence. Give a sequence of instructions to complete the 'Race Track' or locate the treasure on the 'Island'. **Scratch** Use the 'repeat' command within a series of instructions. Plan a short 'story' for a sprite and write the commands for this. Edit/refine a sequence of commands. **Logo (app)** Generate a sequence of instructions including 'right angle' turns. Create a sequence of instructions to generate simple geometric shapes (oblong /square). Discuss how to improve/change their sequence of commands. Espresso coding	Debug a program and reprogram and test
Online Safety	See Online Safety Overview and Progression			
Vocabulary	Internet website Search Technology Share Photograph Sounds Buttons Keys APPs Keyboard Mouse Screen Equipment	Instructions Buttons Robots Patterns Program Videos Camera stills Sounds Image bank Word bank Space bar Photographs Video Sound Data Pictogram Digitally Purpose Online tools	Capturing moments Magnified images Questions Data collection Graphs Charts Save Retrieve Information sources Communication Purposes Website content Paint effects Templates Animation Documents Index finger typing Enter/return Caps lock	Multimedia Presentations Alignment Repeats Reflections Amend Copy Paste Sequence instructions Sequence debugging Test + improve Logo commands Sequence programming

		Communicate	Backspace Forward Backward Right-angle turn Algorithm Sequence Debug Predict e-mail blogging	