BROOK FIELD PRIMARY SCHOOL

Computing and Digital Literacy Policy Statement

INTRODUCTION

The following policy sets out the aims for achieving good Computing education and how these relate to other curriculum areas and the overall aims of the school.

The intent of computing at Brook Field School is to equip pupils with the skills to become competent, confident, and creative users of information and communication technology. Pupils will be taught to evaluate and apply information technology, including new or unfamiliar technologies to solve a range of problems.
They should be able to effectively communicate and connect with others responsibly and know how to keep themselves safe online.

AIMS

Computing at Brook Field aims to:

- Develop pupil's computing capability including and understand the importance of information literacy (how to select sources of information appropriately)
- Develop pupils' ability to analyse problems using computational thinking including decomposition, pattern recognition and abstraction (Use problem solving techniques first)
- Develop an experience of programming by implementing the algorithms that have been designed in both unplugged and plugged activities or scenarios
- Develop skills to use coding computer programs and physical systems to solve problems or "debug". Using testing and debugging skills to explore on programs
- Develop their skills in using hardware and software to enable them to manipulate information using a variety of inputs and outputs (multi-sensory curriculum)
- Provide learning opportunities of both discrete computing and also through cross-curricular experiences
- Develop their ability to apply computing capability and computing to support their use of language and communication (oracy)
- Explore their attitudes towards computing, its value for themselves, others and society, and their awareness of its advantages and limitations
- Develop good Health and Safety attitudes and practice (Online Safety).
- Communicate online safety to parents and carers to create a whole school awareness
- Develop children's use of metacognition within each of the computing strands to deepen and think carefully about the process of their thinking

SPIRTUAL, MORAL, SOCIAL AND CULTURAL AND BRITISH VALUES

Spiritual, Moral, Social and Cultural development is an inclusive element of our computing curriculum with every opportunity taken within our sessions to develop our children's skills within this area further.

Social and moral development is a particular focus for our Online Safety provision with strong emphasis in developing the skills children need to navigate technology safely and becoming more independent and responsible in their use of information technology.

We aim to enhance our provision through an Online Safety discussion starter to every lesson by:

- Exploring their attitudes towards Computing, its value for themselves, others, and society.
- Their awareness of its advantages and limitations.
- Developing good Health and Safety attitudes and practice by raising discussions about social media and trusting information sources.
- Knowing to treat people with dignity and respect on and offline.

- Knowing that being a valued citizen means listening to other people's opinions and respecting differences on and offline.
- Developing an ability to recognise the difference between right and wrong and to readily apply this understanding in their own lives, and to recognise legal boundaries and, in doing so, respect the civil and criminal law of England and link to British Values.
- Ensuring an understanding of the consequence of their behavior and actions and how this relates to both online and real-world situations.

Parents and children have completed a home-school agreement in which the guidelines for the use of the Internet in school and the standards of the Internet's acceptable use were given. SWGFL will provide restricted access to the Internet and a filter to prevent access to unsuitable websites.

PLANNING & TEACHING

Our teaching is based on the programme of study for Key Stages 1 and 2 as taken from the National Curriculum 2014. In Foundation Stage, Computing activities are planned for children to achieve Early Learning Goals. The statements of attainment inform our planning and ensure progression. Each of the three strands for Computing has been further divided into six progressions in line with Computing planning from Swindon Borough Council.

Curriculum 2014 strand	Swindon Borough Council Progression
Computer Science	Programming
	Computational thinking
Information Technology	Creativity
	Productivity
Digital Literacy and Online Safety	Networks and the internet
	Communication and collaboration

At Brook Field, computing is cross curricular. Technology is also used in many other areas of the curriculum, giving children opportunity to embed their skills but also to use technology for pleasure (for example maths games to support their progress) and for purpose (to create content such as publishing work).

Teachers refer to the computing curriculum overview grid to ensure all the skills are planned for and that there is a clear progression in the school. Skills are outlined on each year group's curriculum map and medium- and short-term planning then comes from the long-term plan. Teachers refer to the online safety curriculum overview to ensure all online safety strands are covered throughout the academic year. Planning is to include differentiation, so the lesson meets the needs of all learners, including challenge for all. Through providing challenge to our learners, children are provided with the opportunity to become a digital leader to enable them to have additional responsibility within computing. SEND pupils may have physical resources or adult support within sessions while more able children will be stretched through different, extension activities and challenging questioning to develop their understanding of the processes and vocabulary associated with computing. Computing is a subject that lends itself to a variety of learning styles and these different styles will be considered in the planning of lessons. Children are usually taught in mixed ability groups.

To ensure continuity and progression between years, Computing planning is centrally collated for the Computing subject lead to monitor and moderate. Other staff may also view the plans to evaluate the experiences of the children. Summative assessment records will be passed on at the end of each year. Computing subject lead conducts a pupil voice three times per year to create an opportunity to assess progress of understanding and recall of knowledge throughout the year. Computing subject lead ensures that new resources are disseminated to teachers and TA's and staff training is provided where and when

required. A selection is children's work is to be saved centrally on the school system at the end of the term for monitoring purposes.

ASSESSMENT & MONITORING

In computing, by the end of each key stage, pupils are expected to understand and apply the skills and processes specified curriculum overview. The expectation is that pupils' achievements will be assessed by teachers. Careful questioning and observation will also be used for assessing children in Computing.
In addition to this, children should be given the opportunity to discuss completed work with the class teacher as often as possible and discuss what they might do to improve their work. Children's work is produced on the computer is saved into their individual folders. A selection of work is saved centrally on the teachers shared drive for the purpose of monitoring.

The assessment in Computing is based on the whole school assessment procedure. For more information, please refer to the Assessment Policy.

RESOURCES

We have a fully equipped computer suite comprising of:

- 32 networked multimedia PCs
- Printers
- iPads
- Digital cameras
- 3D Printer
- A wide variety of software
- Microbits

Year groups are timetabled to use the computer suite weekly, for a dedicated computing lesson. iPads can be used to support activities in other areas of the curriculum.

All the classrooms within the main school building are networked and have at least two PCs. All teachers have access to a wireless-enabled laptop. Other technological equipment includes: beebots; televisions; video; photocopier and telephones.

The school has access to a Computing technician who maintains the technical side of the network, along with a Computing Teaching Assistant.

THE ROLE OF THE COMPUTING CO-ORDINATOR

The Subject Leader will facilitate the use of Computing and digital Literacy in the following ways:

- By updating the policy and schemes of work
- By ordering/updating resources
- By providing training so that all staff are confident in how to teach the subject and have sufficient subject knowledge
- To keep staff updates of new developments and any software or opportunities the school have
- By taking an overview of whole school planning to ensure that opportunities occur for pupils to develop an information and communication technology capability and that progression is taking place
- By supporting staff in developing pupils' capability
- By attending appropriate courses to update knowledge of current developments, including local networking events
- Monitoring the curriculum and standards
- Celebrate Safer Internet Day annually within EYFS, KS1 and KS2.

APPENDIX 1

Curriculum map for computing – progression of knowledge and skills
Computing Curriculum: Progression of Knowledge and Skills

	Early Learning Goals & Development Matters					
Early Years	**Physical Development – Fine Motor Skills**			• Use a range of small tools, including scissors, paint brushes and cutlery		
	Term 1 Mouse skills – Bubble Pop **Privacy & Security**	**Term 2** Mouse skills – Dress the Teddy 2Paint – changing pen colour and thickness **Managing Online Information**	**Term 3** 2Paint – Create a Penguin – shapes and filling tool **Online Relationships & Bullying**	**Term 4** **Online Reputation**	**Term 5** **Health, wellbeing & lifestyle & Self-image & identity**	**Term 6** **Copyright & ownership**

Strand	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Project/Product		**T1 Programming (BeeBots)** **T2 Firework picture on paint** **T3 Navigating websites (Maze Explorers)** **T4 Programming (Coding)** **T5 Animated stories** **T6 Data- Pictograms**	**T1 Adobe Spark** **T2 Using computers for research** **T3 Coding (Code.org)** **T4 2Paint a picture** **T5 Emailing & 2Simple for space pictures** **T6 Beebots**	**T1 Emailing** **T2 Coding (Code.org)** **T3 Roman Mosaic using Revelation Art** **T4 Hadrian's Wall image creation & Roman leaflet on Purple Mash** **T5 Data publishing (excel)** **T6 Coding**	**T1 Coding (Code.org)** **T2 E Books (Adobe Spark)** **T3 Digital literacy (PPT)** **T4 Animations** **T5 Word Fact file** **T6 Data publishing (Excel)**	**T1 Coding (Code.org)** **T2 Programming Microbit** **T3 Publisher (Space leaflet)** **T4 Purple Mash (Research volcanic formations & email to friend)** **T5 PowerPoint Hyperlinks** **T6 Data publishing (Excel)**	**T1 Adobe Spark** **T2 Publishing – word processing** **T3 PowerPoint Quiz with Hyperlinks** **T4 Data analysis (Excel)** **T5 Coding (code.org)** **T6 Using animation to show work on production (Stopmotion)**
Computer Science	**Programming**	I can understand what algorithms are. T1 I can create simple programs. T1 I can understand forwards and backwards. T1 I can put together 2 instructions to control a programmable toy. T1	understand that algorithms are implemented as programs on digital devices. **T3, T4 & T5** control a programmable toy using forwards, backwards, left, right, up and down. **T5** control a character in an adventure or quest game on screen. **T3 & T4** generate a sequence of instructions including 'right angle' turns. **T3, T4 & T5** discuss how to improve/change my sequence of commands. **T5**	Write programs that accomplish specific goals. **T2** draw a square, rectangle, other regular shapes and line drawings on screen, using commands. **T2 & T6**	design programs that accomplish specific goals. **T2** work with various forms on input and output. **T1/2** use repetition in programs. **T1/2**	design programs that accomplish specific goals. **T1** work with various forms on input and output. **T1** use repetition in programs. **T1**	In code.org: design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts **T4/5** use sequence, selection, and repetition in programs; work with variables and various forms of input and output **T5**

	Computational Thinking	I can discuss what will happen when instructions are given in a sequence. T4 I can sequence a storyboard of activities/events. T4 I can give instructions to complete a task. T4	I can use logical reasoning to predict the behaviour of simple programs. **T3 & T4** debug simple programs. **T3 & T4** use the 'repeat' (loop) and 'when' (conditional statement) command within a series of instructions. **T3, T4 & T5** plan a series of movements and write commands to accomplish them. **T5** edit a sequence of commands. **T3, T4 & T5**	Use sequences in programs. **T2 T6** debug simple programs. **T2 T6** use a variety of inputs. **T2 T6** use the 'repeat' command within a series of instructions. **T2 T6** Use the if…then… (conditional statement) command within a series of instructions. **T6**	use conditional statements and infinite loops. **T2**	use conditional statements and infinite loops. **T1**	use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs **T5** use selection in programs and work with variables. **T5**
Information Technology	**Creativity**	I can use technology purposefully to create digital content. T2 I can use art software to: click and drag a brush, change colour, clear the screen and fill a shape. T2 I can move images and text on the screen. T2	use technology purposefully to manipulate digital content. **T1 & T6** I can use the shape tools to draw. **T1 & T6** I can use solid patterns and gradient fills. **T6** I can change the width of brush, spray and lines. **T6** I can re-size an object. I can use software to record music and sounds.**T6** I can include simple animations by making incremental changes. **T6**	design and create content. **T3** use ICT to capture still images. **T4** select certain areas of an image and resize and rotate an image. **T3 T4** edit pictures using various tools in paint or photo-manipulation software. **T4**	use information from the internet in my published leaflet **T3** analyse and evaluate the information I find. **T5** combine video, pictures, text and audio to appeal to the reader. **T3** organise my work using features such as front cover, page structure, etc. **T3**	use information from the internet in my published ebook. **T3** analyse and evaluate the information I find. **T3** combine video, pictures, text and audio to appeal to the reader. **T3** organise my work using features such as front cover, page structure, etc. **T3**	Use a variety of software to accomplish given goals. **T1** Design and create content for the purpose of informing others **T1** plan a multi-scene animation including characters, scenes, camera angles and special effects.**T1** use a editing package to edit and refine my animation. **T1**
	Productivity	I can use technology purposefully to save digital content. **T5** I can use technology purposefully to retrieve digital content. **T5** I can enter information into a template on a computer to make a graph. **T6** I can talk about the results shown on my graph. **T6** On a keyboard, I write my ideas. **T5**	I can use technology purposefully to organise digital content. **T3** I can fill in a data collection sheet. **T3** I can enter information to make a graph and I can print this. **T3** I can experiment with text, pictures and animation to make a simple slide show. **T1 & T6** I can type a piece of text. **T1 & T6**	present information. **T4 T5** collect information. **T4 T5** recognise the grid layout of a spreadsheet program. **T5** use the terms cells, rows and columns. **T5** enter data, highlight it and make bar charts. **T5** copy graphics from a range of sources and paste them into a desktop publishing program. **T3 T4 T5**	collect data and present data **T6** use hyperlinks to organise my presentation. **T5** use formulas in a spreadsheet model. **T6** make graphs from calculations on my spreadsheet. **T6**	collect data and present data **T6** use hyperlinks to organise my presentation. **T3** use formulas in a spreadsheet model. **T6** make graphs from calculations on my spreadsheet. **T6**	collect information **T2** present information. **T3** use hyperlinks to organise my presentation. **T3** use more complex formulas in a spreadsheet model. **T4** use databases to enter, organise and search through data. **T4**

		I can use the spacebar, back space, enter, shift and arrow keys. **T5**	I can insert/delete a word using the mouse and arrow keys. **T6** I can highlight text to change its format (**B**, U, *I*) **T3 & T6**	create a text box and position it. **T4 T5** change the font, format and size of text. **T3 T4** create a simple presentation of 3-5 slides. **T4 T5**			
Digital Literacy and E-safety	**Networks and the Internet**	I can use technology safely. **T3** I can keep personal information private. **T3** I can look at a website with the teacher and discuss what I see. **T3** I can click on links in a website. **T3** I can use the 'back' button on a website. **T3** I know how and why ICT is used in the home. **T3**	identify where to go for help and support I have concerns about content or contact on the internet or other technologies. **T2 & T6** know that information can be found using the internet. **T2 & T6** can click links in a website. **T2 & T6** I know how we often rely on computer networks for everyday tasks. **T1, T3 & T6**	identify a range of ways to report concerns about contact. **T1** conduct a search on a website. **T4**	I can understand how computer networks can provide multiple services, such as the World Wide Web. T4	I can understand how computer networks can provide multiple services, such as the World Wide Web. **T4**	Use search technologies effectively **T2 &T3** Understand and appreciate how search results are ranked. **T2** Be discerning in evaluating digital content to determine if it is relevant and appropriate **T2** Use a range of software and devices creatively.**T1**
	Communication and Collaboration	I can recognise common uses of information technology beyond school. **T1** I understand that there are different ways of sending a message. **T4** I recognise what an email address looks like. **T4** I have joined in sending a class email message. **T4** I can find the @ key and check that email addresses are in lower case. **T4**	use technology respectfully. **T6** send and reply to messages send by a safe email partner (within school) through VLE. **T6**	share and exchange my ideas with others. **T1 T4** send and reply to email messages sent to other schools or contacts (giving no personal details: address, telephone number, etc.) **T1** Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact **T1 T3 T4**	**T1 Coding (Scratch)** **T2 Programming Micro:bit** **T3 E Book/ Publisher** **T4 Wiki Page volcanoes** **T5 PowerPoint Hyperlinks** **T6 Data publishing (Excel)**	I can understand the opportunities computer networks offer for communication. **T4,T5 & T6**	understand the opportunities computer networks offer for communication. **T6** understand that files may be saved off my device in 'clouds' (servers) **T1 T2 T3** upload and download a file to the cloud on different devices. **T1 T2 T3** use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.**T6**

Digital Literacy and E-safety	**Networks and the Internet**	I can use technology safely. **T3** I can keep personal information private. **T3** I can look at a website with the teacher and discuss what I see. **T3** I can click on links in a website. **T3** I can use the 'back' button on a website. **T3** I know how and why ICT is used in the home. **T3**	identify where to go for help and support I have concerns about content or contact on the internet or other technologies. T3 know that information can be found using the internet. T3 can click links in a website. T3 & T4 I know how we often rely on computer networks for everyday tasks. All terms E safety?	identify a range of ways to report concerns about contact. **T1** conduct a search on a website. **T3**	use search technologies effectively. T4 identify a range of ways to report concerns about contact. T2 I can explore the different types of computers used by people in the community (e.g., tills, engine tuning, handheld stock control, etc.) T5 I can appreciate how search results are selected. T5 I know when it is not appropriate to use a computer. T5 refine a search to get more accurate results. T4	I can understand how computer networks can provide multiple services, such as the World Wide Web.	Use search technologies effectively **T2** Understand and appreciate how search results are ranked. **T2** Be discerning in evaluating digital content to determine if it is relevant and appropriate **T2** Use a range of software and devices creatively. **T1**
	Communication and Collaboration	I can recognise common uses of information technology beyond school. I understand that there are different ways of sending a message. I recognise what an email address looks like. I have joined in sending a class email message. I can find the @ key and check that email addresses are in lower case.	use technology respectfully. **T6** send and reply to messages send by a safe email partner (within school) through VLE. **T6**	share and exchange my ideas with others. **T1 T3** send and reply to email messages sent to other schools or contacts (giving no personal details: address, telephone number, etc.) **T1** Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact **T1 T3**	use technology responsibly. T3 send and reply to email messages sent to other schools or contacts (giving no personal details: address, telephone number, etc.) T3	I can understand the opportunities computer networks offer for communication.	understand the opportunities computer networks offer for communication. **T6** understand that files may be saved off my device in 'clouds' (servers) **T1 T2 T3** upload and download a file to the cloud on different devices. **T1 T2 T3** use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. T6

APPENDIX 2

Curriculum map for online safety

Online Safety Termly Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Foundation Stage	Privacy & Security	Managing online information	Online relationships & bullying	Online reputation	Health, wellbeing & lifestyle & Self-image & identity	Copyright & ownership
Year 1	Privacy & Security	Managing online information	Copyright & Ownership	Online relationships & Online bullying	Self- image & identity & online reputation	Health, wellbeing & lifestyle
Year 2	Privacy & Security	Copyright & Ownership	Online relationships & Online bullying	Self-image & identity & Online reputation	Managing online information	Health, wellbeing & lifestyle
Year 3	Privacy & Security	Managing online information	Online relationships & Online bullying	Online reputation	Health, wellbeing & lifestyle & Self-image & identity	Copyright & ownership
Year 4	Privacy & Security	Online relationships & Online bullying	Copyright & Ownership	Managing online information	Self-image & identity & Online reputation	Health, wellbeing & lifestyle
Year 5	Privacy & Security	Online relationships & Online bullying	Managing online information	Self-image & identity & Online reputation	Copyright & Ownership	Health, wellbeing & lifestyle
Year 6	Privacy & Security	Managing online information	Copyright & Ownership	Self-image & identity & Online reputation	Online relationships & Online bullying	Health, wellbeing & lifestyle