

Generic INTENT

Vision		Mission
<ul style="list-style-type: none"> *An inspirational, stimulating and well-resourced environment *A safe and secure school at the heart of the community *Inquiry, independence and enthusiasm for learning 		<ul style="list-style-type: none"> *Preparing all children for life *A high quality professional team *Taking pride in all our achievements *High standards of behaviour <p>Where every child counts</p>
<p>Excellent teaching gives children the life chances they deserve...Enjoyment is the birthright of every child. The most powerful mix is the one that brings the two together. Children learn better when they are excited and engaged – but what excites and engages them best is truly excellent teaching. Education is for all, not the few. All children have the right to be the best they can be. We foster a love of learning and the development of the well-rounded child.</p>		
<p align="center">Preparing Children for Life</p> <p>We believe that we are preparing children for 21st Century life. We aim for them to be independent thinkers, confident learners and global citizens, equipped to live and work in and contribute to the global economy.</p>		
<p align="center"><u>Aims and Objectives</u></p> <p align="center"><u>At William Barnes Primary School, we believe that children deserve:</u></p> <ul style="list-style-type: none"> To be set appropriate and stimulating learning challenges To be taught well and be given the opportunity to learn in ways that maximise the chances of success To be given quality feedback which highlights successes and areas for improvement. To have adults working with them to tackle the specific barriers to progress they face. <p align="center"><u>It is also our aim that :</u></p> <ul style="list-style-type: none"> Children develop a lasting love of all aspects of learning which will aid and enhance their further education and life. Children are given the opportunity to experience the widest variety of the written and spoken word possible - a vocabulary rich curriculum and school experience. This includes trips to pantomimes, art galleries and orchestral concerts. Children develop a healthy lifestyle this is supported by Active Learning, The Daily Mile, Wake and Shake and a robust healthy eating policy. 		
<p align="center"><u>Knowledge and Skills</u></p> <p>As a school, we believe in the equal relationship between knowledge and skills in our curriculum.</p> <p align="center">We believe that:</p> <ul style="list-style-type: none"> Knowledge can be declarative (to know that) or Procedural (to know how). Both these forms are important and that Declarative knowledge is turned into Procedural knowledge. through action and the act of applying. Skills can be Procedural knowledge as a result of the application of Declarative knowledge. Skills can be linked to dispositions and behaviours. <p>In short, skills often procedural knowledge and are linked intrinsically to declarative knowledge.</p> <p>We prefer to see the debate laid out as:</p> <p align="center">Knowledge → Comprehension → Application → Evaluation</p>		
<p align="center"><u>Global Community</u></p> <p>We aim to equip our children for living in, and contributing to, a secure, transformative and sustainable world.</p>		<p align="center"><u>Parents</u></p> <p>“For all children, the quality of the home learning environment is more important for intellectual and social development than parental occupation, education and income. What parents do is more important than who parents are.” (EPPE)</p>

Computing INTENT

Introduction

Our vision is for all children to be confident and safe e-learners. At William Barnes, the children's safety when using information technology is paramount and the school's computing policy is underpinned by our commitment to E-safety. (Please see E-safety policy)

Computing at William Barnes has three interconnected aspects. Firstly, children learn the principles of information and computation and how digital systems work, and how to put this knowledge to use through programming. Secondly, the children build on this knowledge and understanding to become equipped to use information technology to create programs and content. Finally, the children need to become digitally literate so that they are able to use, express themselves and develop their ideas through information and communication technology (ICT) preparing themselves for the future work place.

At William Barnes, the increased emphasis on programming or coding in the 2014 national curriculum is welcomed and has been reflected in our scheme of work.

Long Term Aims

At William Barnes we aim to offer a broad and stimulating Computing curriculum which encompasses all areas of study outlined in the National Curriculum. By setting appropriate challenges we aim to prepare pupils to participate in a rapidly changing world, in which we work and other activities which are increasingly transformed, by access to varied and developing technology. We aim to provide the opportunity and tools to enable pupils to find, analyse, exchange and present information responsibly, creatively and with discrimination. William Barnes is committed to an Equal Opportunities Policy, and we aim to ensure that all pupils receive the same experiences.

E-Safety

Children are required to read, understand and sign a responsible use form. See the School E-Safety Policy for more details.

Aims

To enable each child to develop their computing skills, to aid their learning and in preparation for use in work and the outside world.

To promote and encourage use of initiative and independent learning where the children are able to understand, apply, analyse and evaluate their knowledge and understanding of computing and information and communications technology.

Current Practice

Computing is taught as a discrete subject and a cross curricular tool throughout the school from reception to year 6. IT and computing is timetabled so that staff can guarantee that all the devices they will need are available. The school has a network with a central server that stores children's work. Each child and member of staff has an account which is accessed using a username and password. To use the school network, children must use one of the school laptops. These are stored centrally in two computer trolleys. The school also

has a set of iPads. These do not require passwords for access. Children and staff do not store work on iPADS and any images and videos are transferred to the school network and then deleted from the iPADS for GDPR reasons.

Teachers use IT to deliver their lessons using a variety of interactive white boards (IWB). Each teaching area has an IWB and there is also a further IWB in the Butterfly room which is particularly used to support phonics

SEND/Vulnerable Groups/EAL

Special educational needs and disabilities:

- Children with AEN, SEN and Higher Achieving Children have activities differentiated to their individual needs.
- Children with SEN issues linked to Computing will have targets included in their IEPs.
- Teaching is be sufficiently differentiated to meet the needs of all children.
- Because of the difficulties associated with logging in, children will often use a single class password in year 1 and Reception.
- Specific skills for computing could be included in an IEP and additional time needs to be available for the teaching of these.
- The setting of IT based tasks for home learning should be done recognising that some children from vulnerable groups may not have access to digital learning outside of school.

Equal Opportunities

- Computing is taught within the framework of the school's equal opportunities policy.

Teachers Responsibilities.

Whilst teaching Computing and IT children are given the opportunity to:

- Use technology safely and responsibly and learn about E-Safety through the PSHE curriculum.
- Learn how to keep themselves and children safe when using the internet and recognise and know what to do when it is not safe – see E-safety policy.
- Develop hand eye co-ordination using a mouse or mouse pad, keyboard, touch screen to move the pointer on the screen.
- Operate various ICT tools, which include laptops, tablets, digital cameras, digital sound recorders, digital microscopes, sensors, CD ROMs, interactive whiteboards, Roamers and Lego Wedo.
- Collect, process, store and retrieve information.
- Communicate ideas through text, graphics, charts, sound and video for a variety of audiences.
- Evaluate the experience of using ICT compared with other forms of communication.
- Select suitable media to develop their ICT capability and knowledge.
- See and compare ICT at work in the community.
- Develop, question and explore ideas.
- Plan a set of instructions, enter them into the computer and manipulate them to achieve a desired end.
- Detect patterns and relationships and form and test simple hypotheses.
- Co-operate in pairs or small groups, to make joint decisions and persevere with a task.
- Learn to write code using software such as Logo, Scratch and Kodu
- Learn to debug code until a program functions effectively
- Be discerning about information obtained from the internet and be able to evaluate its accuracy and intent.

When teaching Computing staff

- Give all children at William Barnes access to all areas of Information and Communications Technology (ICT) with a particular focus on coding.
- Enable each child to develop their potential skills, to aid their learning in preparation for use in work and the outside world.
- Promote and encourage use of initiative and independent learning where the children are able to make informed judgements and choices.
- Use the computer to support and develop other learning which is taking place within the classroom using computing as a cross curricular too.
- Enable children to work together, collaborate and share ideas.
- Use direct class teaching to introduce a specific program or skill.
- Teach through practical tasks using the appropriate hardware and software.
- Plan group activities, so that children can interact with each other.
- Provide children with real experience in the practical application of computing and coding skills.
- Use of the Scheme of Work based on the code-it approach produced by Hampshire advisor Phil Bagge available on line at code-it.co.uk.
- Give children the choice to use computing where possible for a specific purpose perceived by the child.
- Develop ICT skills in line with the code-it scheme.
- Enhance topic work as support in other curriculum areas.
- Record and review work in other subjects.
- Post homework tasks on Mathletics and Time Tables Rockstars (see Maths Policy).
- Assess children's progress against the programmes of study for Computing as laid down in Curriculum 2014.
- Teach children how to be E-Safe in line with the school's E-Safety policy.

Planning and Assessment

Each member of staff is responsible for planning Computing work to meet the needs of the children in their class in line with planning policy and the 2014 Computing Curriculum. Teachers use the code-it scheme of work, and statutory and non-statutory guidance to help inform their planning, as well as other on line resources such as Twinkl to create their planning. At William Barnes class teachers are responsible for their own class organisation and teaching style in relation to computing, however, these should reflect the overall aims and philosophy of the school. Teachers keep their own records of their class's progress and use these to inform their end of year reports to parents. Children are judged annually as to whether they are working towards age related expectations (ARE), working at ARE or exceeding ARE and this information is stored with the school's online tracking system Educater.

Resourcing and Equipment

Staff take equal and shared responsibility for the recharging and care of the school's set of iPads and laptops. Keys are kept centrally in the office and devices are returned after each lesson to either the POD or Governor's room for storage and recharging.

As far as possible, each member of staff is provided with a laptop to dispense their duties as teachers only and these are not for personal use as is outlined in the staff code of conduct.

IT Technician Support

All issues regarding the efficacy of the school network should be recorded on the online support request portal found on the desk top on each of the laptops. During his fortnightly visits the technician uses these to prioritise his tasks. Pressing issues can be reported to the Computing coordinator, who can notify the technician, who may be able to resolve the issue remotely between visits.

Security

Staff have a duty to ensure that their passwords are kept safe and not shared with children or anyone who could compromise the security of the school network. All data is either stored on the network server and transferred either using Office 365 One Drive or using encrypted data sticks that are password protected.

Planning

- Long term and medium term planning is in line with Curriculum 2014 and is used as part of the connected curriculum.
- Each term a class will be taught a broad and balanced curriculum consisting of the development of coding skills and the use ICT as a cross-curricular tool.
- Weekly planning follows an agreed proforma and generic principles.
- Broad Learning Intentions from Curriculum 2014 are broken down in the smaller, appropriate Learning Intentions. Success Criteria, required exposition and linked differentiated activities are also included.

OVERVIEW

William Barnes Primary School - Curriculum Plan for Computing

Term	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	How to handle equipment appropriately.	Identifying technology	Programming Bee bots	Programming Scratch – Dressing Up	Programming Scratch – Smoking car	Comparing Graphics packages	Text & Multimedia
Autumn 2	Using a simple programme to create a picture. Developing mouse control.	Multimedia	Technology in Our Lives Communicating	Using images to create Repeated Patterns	Internet Research – Multimedia Presentation	Programming – Logo commands	Programming & Control
Spring 1	How to follow instructions and to make things happen. Understand how ever day appliances operate and respond to commands	Word Processing	Multimedia Graphics E-Safety	Programming Scratch – Music Machine Garage Band	Scratch – Conversation Internet research	Programming Logo – repeat loops, procedures and variables Spreadsheets	Communication & Collaboration
Spring 2	Moving and assembling pictures	Creating Graphs	Technology in Our Lives The Internet	Programming Scratch – Magic Carpet Collect and represent Data	Desk Top Publishing – Create an information poster	Web site design – hyperlinks, sounds and animations	Simulations & Modelling
Summer 1	Understanding instructions and making things happen	Introducing Algorithms	Multimedia Text	Internet research Presentation	Scratch - Train	Scratch – Pong Game	Data Handling
Summer 2		Programming Bee bots	Multimedia Handling Data	Scratch – Times table game	Internet research	Spreadsheets Internet Research	Digital Media

Year R – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software used	Cross Curricular	Skills and Knowledge
Autumn 1	This is an introductory unit. The unit assumes that children can recognise some colours, numbers, letters and pictures	How to handle equipment appropriately.	My world 2Simple Simple city	CLD	Naming parts of a computer and technology. Treating technology carefully.
Autumn 2	This unit will introduce children to the control of the mouse. It will introduce simple drawing tools which will provide a foundation for work in Key Stage 1 EYFS: 30-50 months- uses ICT hardware to interact with age appropriate software.	Using a simple programme to create a picture. Developing mouse control.	2 paint a picture Colour Magic	EAD CD PD	ICT can be used to create pictures. The mouse can be moved around on screen.
Spring 1	Introductory unit EYFS: 30-50 months -Knows how to operate simple equipment.	How to follow instructions and to make things happen. Understand how every day appliances operate and respond to commands	CD player CDs I-pad to record videos, photos	EAD CD	key idea: that machines and devices can be controlled Key idea: that songs/musical compositions express different feelings
Spring 2	This is an introductory unit. The unit assumes that children can <input type="checkbox"/> press keys on the key-board <input type="checkbox"/> Can use a mouse to select <input type="checkbox"/> Can recognise simple pictures on screen EYFS: 30-50 months- uses ICT hardware to interact with age appropriate software. 40-60 months- completes a simple program on a computer. 40-60 months- uses ICT hardware to interact with age appropriate software.	Moving and assembling pictures	Computer program e.g. My World which allows pictures to be organised on screen. Resource bank of pictures		<input type="checkbox"/> key idea: that computers have a variety of uses technique: to use the mouse to select and move items on the screen key idea: that ICT can be used to assemble pictures
Summer 1	40-60 months- responding to two part instructions. ELG- Follow instructions involving several ideas or actions.	Understanding instructions and making things happen	<input type="checkbox"/> Cones or other "route" markers	PD CLD Orienteering	<input type="checkbox"/> key idea: that instructions make things happen. key idea: that instructions can be given in a common language <input type="checkbox"/> technique: to use directional language to "control" someone Key idea: that instructions can include measurable units in a common language <input type="checkbox"/> Technique: to use unit lengths and a common
Summer 2	ELG- Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes	Selecting and using technology for a purpose	Children bring in technology they use at home. i-pads beebots controllers CD players Remote controlled cars Mics		Key idea to demonstrate and show the technology at home. To demonstrate how to use technology in school. To explain how to use it. To role play using technology.

Year 1 – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs 	Progression in technology Identifying different types and uses of technology at school, home and beyond			Switching on, logging on, logging off computers, laptops, iPads.
Autumn 2	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 	Progression in multimedia	using 2 simple software 2 paint 2 publish	Learn how to use an iPad digital camera and take shots	use a photo to manipulate photographs. Use the internet to find information (infant encyclopaedia) E: Safety.
Spring 1	<ul style="list-style-type: none"> use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	Progression in multi media	Word	English and Topic	Text opening a word document typing name using shift key backspace return and space bar Saving and opening files
Spring 2	<ul style="list-style-type: none"> recognise common uses of information technology beyond school or other online technologies. 	Progression in Handling Data Collecting data using RM starting Graph	RM Starting graph		Collecting data using RM starting Graph
Summer 1	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 	Progression in programming	Bee Bots	Maths	Introduction to algorithms, programming and debugging using Bee Bots.
Summer 2	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 				

Year 2 – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software/Hardware used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs 	Programming Beebots	Beebots	Maths – shape and direction	navigate programmable toys around a course or a familiar journey. program a sequence of instructions. ‘debug’ an algorithm.
Autumn 2	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 	Technology in Our Lives Communicating E-safety	Blogging 2simple email	English – writing for purpose	communicating via the internet
Spring 1	<ul style="list-style-type: none"> use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	Multimedia Graphics E-Safety	Powerpoint	Geog/history presentation of information	use different layouts and templates for different purposes add graphics and sound select presentational features
Spring 2	<ul style="list-style-type: none"> recognise common uses of information technology beyond school or other online technologies. 	Technology in Our Lives The Internet	Chrome/safari we browser web browser	History – changes over time, answering questions using the internet Science – research using the internet	recognise common uses of information technology outside school, think about how computer technology works. know what algorithms are.
Summer 1	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 	Multimedia Text	Word 2publish	English – writing for purpose, publishing work	basic editing skills, presentational features print, retrieve and amend
Summer 2	<ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content 	Handling Data Digital media - Animation	Excel Icananimate on ipads (or similar)	Maths – data handling Science – research using the internet	using ICT to present and store data

Year 3 – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software/Hardware used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	Programming Scratch – Dressing Up	Scratch		Designing, problem, solving, creating sprites, controlling movement, editing backgrounds
Autumn 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices etc. (see above) 	Using images to create Repeated Patterns	2Publish+	Diwali, Christmas cards and Calendars	Repeated images
Spring 1	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	Programming Scratch – Music Machine Garage Band Internet Safety	Scratch iPad – Garage Band Google Chrome	Music – creating and performing music	Coding Layering Repeated loops
Spring 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices etc. (see above) 	Programming Scratch – Magic Carpet Collect and represent Data	Scratch RM Starting graph	Maths Data handling	Inputting data Creating graphs
Summer 1	<ul style="list-style-type: none"> understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 	Internet research Presentation	Google Chrome Powerpoint	Topic South America	Formatting images Editing Text
Summer 2	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals etc. (See above) 	Scratch – Times table game	Scratch	Maths – x table	Variables

Year 4 – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software/Hardware used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	Programming Scratch – Slug trail / Slug trail	Scratch		Move a sprite Series of command rotate Sense of sprite
Autumn 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information understand computer networks including the internet (See below) use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 	Internet Research – Multimedia Presentation - make a poster based research into Gods	Publisher	Romans	Changing text size Text boxes Image boxes Resizing tools Linking text boxes for for overflows
Spring 1	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals etc. (See above) understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	Scratch – Conversation Internet research Internet Safety	Google Maps Scratch	UK Study	Talking between sprites – formatted text - formatted picture – linking text boxes – broadcast and review
Spring 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices etc. (see above) 	Desk Top Publishing –Create an information poster	Powerpoint	UK Study	Take photos on iPAD transfer to network; manipulate in various programs
Summer 1	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals etc. (See above) understand computer networks including the internet (see above) use search technologies effectively 	Scratch – Codeit Train	Scratch	Maths – Times tables	Ask answer loops variables
Summer 2	<ul style="list-style-type: none"> understand computer networks including the internet (see above) use search technologies effectively (see above) 	Internet research	Google Google maps Publisher	Vikings	Talking between sprites – formatted text - formatted picture – linking text boxes – broadcast and review

Year 5 – Curriculum for Computing

Term	National Curriculum Content	Project Name or Theme	Software used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 	Comparing Graphics packages	Microsoft Paint Textease Paint To Simple suite	Orienteering Art – Mondrian and Seurat	Using different tools from each package
Autumn 2	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	Programming – Logo commands	Textease Turtle	Maths – angles, coordinates	Setpos, fd, rt, pu, pd, settc home
Spring 1	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals etc. (See above) use use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration 	Programming Logo – repeat loops, procedures and variables Spreadsheets Internet Safety	Textease Turtle Microsoft Excel	Maths – angles, coordinates	Repeat loops and nested repeat loops Procedures variables
Spring 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices etc. (see above) 	Web site design – ‘Mountain website’	Textease Studio	Geography Mountains	Hyperlinks, animations, sounds, editing text, frames and graphics
Summer 1	<ul style="list-style-type: none"> understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration understand computer networks including the internet (see above) use search technologies effectively 	Scratch – Pong Game Internet Research	Scratch Google Chrome	Maths – angles and reasoning skills	Using variables for scoring If then else loops Sensing colours
Summer 2	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices etc. (see above) understand computer networks including the internet (see above) use search technologies effectively 	Spreadsheets Internet Research	Microsoft Excel Google Chrome	Maths – formulas, statistics Athletics History – Stone Age	Using formulas Creating graphs and charts

Term	National Curriculum Content	Project Name or Theme	Software used	Cross Curricular Link	Skills and Knowledge
Autumn 1	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 	Text & Multimedia	PowerPoint Microsoft Word BBC Dance Mat Typing ZType	Our World –Geog topic presentation of a particular country	organise , refine and present information for a specific audience.
Autumn 2	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	Programming & Control	Code-It Kodu Codecademy Scratch	MATHS <ul style="list-style-type: none"> works with formulas and using/applying mathematical algorithms. 	Use create, test, debug algorithms
Spring 1	<ul style="list-style-type: none"> understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	Communication & Collaboration	school blog/website email	ENGLISH <ul style="list-style-type: none"> using blogs to publish written work 	using the computer to communicate with others blogging and email internet safety
Spring 2	select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information correct errors in algorithms and programs	Simulations & Modelling	Excel	MATHS <ul style="list-style-type: none"> Rounding numbers. Using and calculating decimal numbers. Using mathematical formulae. Solving problems involving the calculation of percentages. 	understanding different types of data, performing calculations using automations, changing variables and seeing effect
Summer 1	<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use search technologies effectively 	Data Handling	Zinvestigate	ENGLISH <ul style="list-style-type: none"> Use the data collected as supporting evidence for a debate. Creating appropriate questions. MATHS <ul style="list-style-type: none"> Creating and interpreting pie charts and graphs to solve problems. Interpreting data. 	collecting and presenting data
Summer 2	<ul style="list-style-type: none"> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information understand computer networks including the internet. use technology safely, respectfully and 	Digital Media	Windows Movie Maker	MUSIC <ul style="list-style-type: none"> Improvise and compose music for a range of purposes using the inter-related dimensions of music. ENGLISH <ul style="list-style-type: none"> Write a film script to act out and record. Write a news report to film. 	making a short film, adding sound, edit and add effects evaluating and adapting

IMPLEMENTATION

How We Teach

Computing is normally taught as a discrete whole class lesson but it is also used as a cross curricular learning tool. In computing lessons, children will be taught new skills at the start of the lesson, (often during the time that laptops connect to the network). A recap of previous learning is often delivered by the children, particular in older year groups, with children coming up to the front of the class and modelling their understanding using the IWB. Once new skills have been explained, children will apply this to a task using either a laptop or an iPad. The children will work individually or collaboratively in pairs. Lessons are not drawn to a close when children demonstrate and recap the learning that has taken place in the lesson, before next steps are discussed. Children are normally organised into flexible mixed ability groups that often change.

More Able

Able children are often used as experts helping children who have become stuck and freeing up the teacher to support other children. More able children can also be given further challenges, or more complex tasks to begin with. More able children can often be used as excellent demonstrators in the initial input, or during later mini plenaries and the final summing of the lesson. More able children may not always need to listen to the main input of the lesson and can start straight away whilst other children are still listening. Children who are more able in Computing often make unexpected discoveries in lessons about how a piece of software functions and these should be valued and shared with the rest of the class.

DT Lego Leaders

In year 5, children who are socially skilled and more able in computing are training to become Lego Leaders. Using the Wedo software, they are given some time with the Computing leader to learn how to use the Wedo iPad app and the associated Lego kits. Each Leader takes responsibility for a kit and its maintenance. Once trained these children guide other children in the class with using Lego Wedo as part of the design technology curriculum and ensure that the equipment is well maintained and stored correctly.

Parents

At William Barnes Primary School, we believe that parents and teachers working together is highly beneficial to long term quality learning. When children complete IT based learning using Mathletics and Times Tables Rockstars.

IMPACT

Assessment

Formative Assessment

Children are assessed in Computing during lessons using AFL strategies (See AFL policy) and support provided as required for children struggling and for more able children who require additional challenge. Although teachers and teaching assistant will endeavour to help children who are finding work challenging, children who have mastered a particular skill can also be used as experts to support other children. Teachers keep informal records of the children's progress in mark books and assessment folders.

Summative Assessment

Summative assessments are completed annually. Children are assessed against the expectations for their year group and are judged to be either working towards age related expectations (ARE), working at ARE or exceeding ARE. This information is shared with parents in each child's annual report using a grading system. Grade A is given for exceeding ARE, grade B for working at ARE and grade C for working towards ARE. Children are also given a grade from 1 to 5 to show their effort in Computing, with 1 indicating a low level of effort.

Support

Whenever possible staff are trained in Computing within the school due to budgetary constraints. A culture of collaboration exists amongst staff who often help each other by sharing areas of expertise. Particular IT skills and new developments are shared in scheduled staff meeting slots. Curriculum and technical support is also available through the school's IT support contracts with TurnItOn which include a telephone helpline and help portal. The IT leader is always on hand to support staff with any computing issues where possible.

Monitoring

The monitoring of standards in Computing is undertaken by the Senior Leadership Team (SLT) and the Computing leader. At present, learning is scrutinised by the SLT to ensure continuity and progression. This will become more rigorous when staff have agreed expectations for storing work across the school. (See future developments).

Governors

- There is a member of the Governing Body with overall responsibility for E-Safety.
- Whole school attainment data for Computing is shared with the Governing Body.
- Governors are kept up to date with any developments/decisions at Governing Body meetings.

Future Developments

- Explore the use of Office 365 account for children to promote collaboration between children on projects.
- Explore the use of KODU as a coding language.
- Agreeing with staff expectations for storing Computing work for in school moderation and how this should progress across the school.

Richard Hull
May 2020

Originated by.....Richard Hull

Date 6th February 2017

Adopted date:	<i>28th July 2021</i>
Signature of Headteacher:	<i>Karen Wrixon</i>
Signature of Governing body:	<i>Cliff Walters</i>
Next review date	<i>Summer 2022</i>