

'Roots to Grow and Wings to Fly'



'Roots to Grow and Wings to Fly'

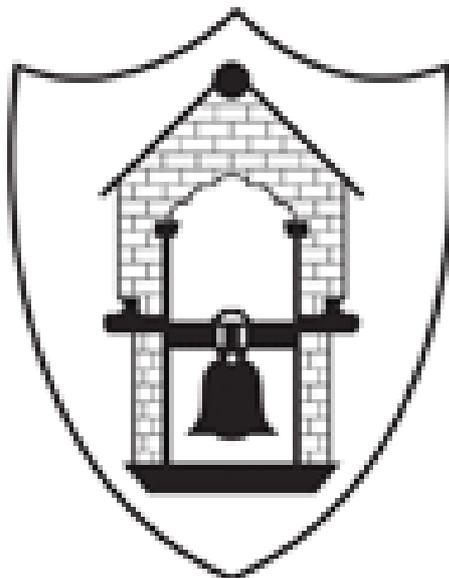
Curriculum Progression Document

Computing

St Bartholomew's Computing Curriculum

Vision-

To provide a high quality, inclusive computing education which will equip children to use computational thinking and creativity in order to understand and change their world. Children will learn digital literacy skills and key principles to flourish as confident, happy, self-motivated users of information and communication technology. They will make links with other areas of their learning such as Science, Mathematics and Design Technology. Our children will be equipped to become active and responsible participants in their digital world.



Contents:

| | |
|---------|---|
| Page 4 | EYFS Computing overview |
| Page 5 | EYFS computing progression |
| Page 6 | KS1 Computing Curriculum Overview |
| Page 11 | Reasoning behind our KS1 Computing Curriculum |
| Page 12 | KS1 Computing Vocabulary |
| Page 14 | KS2 Computing Overview |
| Page 19 | Reasoning behind our LKS2 Computing Curriculum |
| Page 20 | KS2 Computing Vocabulary |
| Page 22 | Progression in Computing |
| Page 25 | What will Computing look like in the classroom? |
| Page 26 | Strategies for teaching Computing |
| Page 26 | Assessment / SEN |
| Page 27 | Monitoring and review |

EYFS

| Knowledge | Vocab | Skills |
|---|----------------------------------|---|
| <p><u>Reception</u> <u>Computer Science</u></p> <p>To understand that computers follow a set of instructions.</p> | <p>Name types of equipment</p> | <p>Recognise and play with toys/equipment similar to real technology. Explore a range of technology – touch screen, keyboards and mouse. Discuss what happens when buttons are pressed/instructions are given. Explore programming Beebot app on iPads with simple code. Discuss what happens when instructions are given. How do they know what to do?</p> |
| <p><u>Reception</u> <u>Information</u> <u>Technology</u></p> <p>Recognise common uses of technology beyond school.</p> | <p>Name types of equipment</p> | <p>Recognise simple technologies in the world around us (phones, computers and printers). Take images on iPads. Create images using paint tools and complete basic editing.</p> |
| <p><u>Reception Digital</u> <u>Literacy</u></p> <p>Recognise how computers are used in their world.</p> <p>Understand who to talk to if they view content that is inappropriate or upsetting.</p> | <p>Name equipment in context</p> | <p>Recognise how computers are used beyond the classroom through role play and discussion. Understand who to talk to if they view content that is inappropriate or upsetting.</p> |

EYFS Computing Progression

| Learning Focus | | |
|--|-------------------------|--|
| Personal, Social and Emotional Development | | Show resilience and perseverance in the face of a challenge. |
| Physical Development | | Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'. |
| Expressive Arts and Design | | Explore, use and refine a variety of artistic effects to express their ideas and feelings. |
| Early learning goal | | |
| Personal, social and emotional development | Managing Self | Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. |
| Expressive Arts and Design | Creating with materials | Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. |

| | | | | | | | |
|-------------------|---|---|---|--|---|--|---|
| Technology | To know who to talk to if they are not sure about something they have seen online. | To know how to keep safe online. | To know how to keep safe online. | To know how to keep safe online. | To know how to keep safe online. | To know how to keep safe online. | There are no early learning goals that directly relate to computing objectives, though it is still expected that children will be introduced to appropriate technology and use it within their provision. |
| | To know how to keep safe online. | To know how to operate simple equipment | To access, understand and interact with a range of technology within the Year R environment | To use the I pads, changing games and programmes | To explore how a Bee-Bot works | To explain why we need to stay safe online | |
| | To show an interest in technological toys such as iPads, toys with knobs, pulleys and buttons | To draw pictures on the IPADS and begin to change colours | To draw pictures on the IPADS, changing colour and pen size | | To use the internet with adult supervision to find and retrieve information | To use the Bee- Bots and program them to go forwards and backwards | |
| | To learn about e-safety | To use the iPad to take pictures | | | | To type their name using a laptop | |

KS1 Computing Curriculum Overview

| Learning focus | Year 1 | Year 2 |
|----------------|--|--|
| Online Safety | Pupils should be taught to 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 their online technologies. | |
| | I can keep my password private. I can tell you what personal information is. I can tell an adult when I see something unexpected or worrying online. I can talk about why it's important to be kind and polit. I can recognise an age appropriate website. I can agree and follow sensible online safety rules. | I can explain why I need to keep my password and personal information private. I can describe the things that happen online what I must tell an adult about. I can talk about why I should go online for a short amount of time. I can talk about why it is important to be kind and polite online and in real life. I know that not everyone is who they say they are on the internet. |

| Learning Focus | Year 1 | Year 2 |
|----------------|---|---|
| Programming | Pupils should be taught to 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. | |
| | I can give instructions to my friend and follow their instructions to move around. I can describe what happens when I press buttons on a robot. I can press the buttons in the correct order to make my robot do what I want. I can describe what actions I will need to do to make something happen and begin to use the word 'algorithm'. I can begin to predict what will happen for a short sequence of instructions. I can begin to use software/apps to create movement and patterns on a screen. I can use the word 'debug' when I correct mistakes during programming. | I can give instructions to my friend (using forward, backward and turn0 and physically follow their instructions. I can tell you the order I need to do things to make something happen and talk about this as an algorithm. I can program a robot or software to do a particular task. I can look at my friend's program and tell you what will happen. I can use programming software to make objects move. I can watch a program execute and spot where it goes wrong so that I can debug it. |

| Learning focus | Year 1 | Year 2 |
|----------------|--|--|
| Handling data | <p>Pupils should be taught to use technology purposefully to organise and manipulate digital content.</p> <p>I can talk about the different ways in which information can be shown.</p> <p>I can use technology to collect information including photos, video and sound.</p> <p>I can sort different kinds of information and present it to others.</p> <p>I can add information to a pictograph and talk to you about what I have found out.</p> | <p>I can talk about the different ways I use technology to collect information including a camera, microscope or sound recorder.</p> <p>I can make and save a chart or graph using the data I collect.</p> <p>I can talk about the data that is shown in my chart or graph.</p> <p>I am starting to understand a branching database.</p> <p>I can tell you what kind of information I could use to help me investigate a question.</p> |

| Learning Focus | Year 1 | Year 2 |
|----------------|---|---|
| Multimedia | Pupils should be taught to use technology purposefully to create digital content. | |
| | I can be creative with different technology tools. I can use technology to create and present my ideas. I can use the keyboard or a word bank on my device to enter text. I can save information in a special place and retrieve it again. | I can use technology to organise and present my ideas in different ways. I can use the keyboard on my device to add, delete and space text for others to read. I can tell you about an online tool that will help me to share my ideas with other people. I can save and open files on the device I use. |

| Learning focus | Year 1 | Year 2 |
|-------------------------|---|---|
| Technology in our lives | <p>Pupils should be taught to use technology purposeful to store and retrieve digital content and to recognise common uses of information technology beyond school.</p> <p>I can recognise the way we use technology in our classroom.</p> <p>I can recognise ways that technology is used in my home and community.</p> <p>I can use links to websites to find information.</p> <p>I can begin to identify some of the benefits of using technology.</p> | <p>I can tell you why I use technology in the classroom.</p> <p>I can tell you why I use technology in my home and community.</p> <p>I am starting to understand that other people have created the information I use.</p> <p>I can identify benefits of using technology including finding information, creating and communicating.</p> <p>I can talk about the differences between the internet and things in the physical world.</p> |

Implementation – Reasoning Behind our KS1 Computing Curriculum

| STAGE | THEME | WE TEACH THIS BECAUSE ... | LINKS TO ST BARTS SCHOOL LIFE ... |
|-------|---|---|---|
| | <p>Technology in our lives</p> <p>Multimedia</p> <p>Programming</p> <p>Handling Data</p> <p>Online safety</p> <p>Autumn Term: I am kind and responsible</p> <p>Spring Term: I am safe and secure</p> <p>Summer Term: I am healthy</p> | <p>The New Wessex Planning allows our teachers to build their own Computing curriculum:</p> <ul style="list-style-type: none"> • to develop safe, responsible and competent learners • who are creative, curious and logical • as they navigate, investigate and contribute to the world around them <p>This planning, which has been developed and constantly updated since the 2014 National Curriculum was launched, is split into blocks for each area of Somerset's computing curriculum. Blocks are chosen to suit the technology available within our school.</p> <p>The Elim planning provides great pedagogy which is regularly updated to ensure new areas are covered appropriately with the latest information.</p> <p>Assessment is embedded and the program provides a strong progression throughout the year groups allowing children to enhance, develop and build on their existing knowledge and experiences.</p> <p>It provides an age-appropriate online safety curriculum that is flexible, relevant and engages pupils' interest</p> <ul style="list-style-type: none"> • Builds on the success of the original Somerset BYTE resources, updating for new opportunities and challenges • Increases pupil involvement and promotes active learning • Provides continually updated full lesson plans, assemblies and support for teachers • Includes a continuous provision map for foundation stage • Promotes partnership with parents, providing ideas for sharing learning with families | <p>Christian Values:</p> <p><i>Respect/Trust/Compassion/Aspiration/Forgiveness/Courage</i></p> |

KS1 Computing Vocabulary

Year 1

| <u>Programming</u> | <u>Handling Data</u> | <u>Multimedia</u> | <u>Technology in our Lives</u> |
|---|---|--|--|
| Algorithm Backward Button Clear Code Debug Distance Floor robot Forward Go Instructions Mistake Move Pause/wait Predict Program Quarter turn/right angle Turn left Turn right Sequence Stop | Collect Data Found out Pictograph Questions Record Sort Venn diagram | Animate App Backspace Camera Delete Insert Keyboard Open Photo(graph) Print Right click Save Shift Sound Space bar Video/film | Communicate QR code Search Technology/computer devices World Wide Web/Internet |

Year 2

| <u>Programming</u> | <u>Handling Data</u> | <u>Multimedia</u> | <u>Technology in our Lives</u> |
|---------------------------|-----------------------------|--------------------------|---------------------------------------|
| Algorithm | Branching database | Animate | Communicate |
| Backward | Collect | App | QR code |
| Button | Data | Backspace | Search engine |
| Clear | Decision tree | Clipart | Technology/computer devices |
| Code | Found out | Copy | Website |
| Debug | Graph | Delete | World Wide Web/internet |
| Distance | Investigate | Ener | |
| Execute | Pictograph | Folder | |
| Floor robot | Questions | Image | |
| Forward | Record | Insert | |
| Go | Sort | Keyboard | |
| Half turn | Venn Diagram | Open | |
| Instructions | | Photo(graph) | |
| Mistake/error | | Print | |
| Move | | Right click | |
| Pause/wait | | Save | |
| Predict | | Select | |
| Program | | Shift | |
| Quarter turn/right angle | | Software | |
| Turn left | | Sound | |
| Turn right | | Space bar | |
| Sequence | | Video/film | |
| Stop | | | |
| Symbol | | | |

KS2 Computing Curriculum Overview

Online Safety

| Learning Focus | Year 3 | Year 4 |
|----------------|--|---|
| Online Safety | Pupils should be taught to use technology safely, respectfully and responsibly, recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact. Be discerning in evaluation digital content. | |
| | I can talk about what makes a secure password and why they are important. I can protect my personal information when I do different things online. I can use the safety features of websites as well as reporting concerns to an adult. I can recognise websites and games appropriate for my age. I can make good choices about how long I spend online. I ask an adult before downloading files and games from the internet. I can post positive comments online. | I can choose a secure password when I am using a website. I can talk about the ways I can protect myself and my friends from harm online. I can use the safety features of websites as well as reporting concerns to an adult. I know that anything I post online can be seen by others. I choose websites and games that are appropriate for my age. I can help my friends make good choices about the times they spend online. I can talk about why I need to ask a trusted adult before downloading files and games from the internet. I comment positively and respectfully online. |

| Learning Focus | Year 3 | Year 4 |
|----------------|---|--|
| Programming | Pupils should be taught to design, write and debug programs that accomplish specific goals, including controlling or simulation 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. Select and use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals. | |
| | <p>I can break an open-ended problem up into smaller parts. I can put programming commands into a sequence to achieve a specific outcome.</p> <p>I keep testing my program and can recognise when I need to debug it.</p> <p>I can use repeat commands. I can describe the algorithm I will need for a simple task. I can detect a problem in an algorithm which could result in a program error.</p> | <p>I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. I can use an efficient procedure to simplify a program. I can use a sensor to detect a change which can select an action within my program.</p> <p>I know that I need to keep testing my program while I am putting it together.</p> <p>I can use a variety of tools to create a program. I can recognise an error in a program and debug it. I can recognise that an algorithm will help me sequence more complex programs.</p> <p>I recognise that using algorithms will also help solve problems in other learning such as maths, science and design technology.</p> |

'Roots to Grow and Wings to Fly'

| Learning Focus | Year 3 | Year 4 |
|----------------|---|---|
| Handling data | Pupils should be taught to 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. | |
| | <p>I can talk about the different ways data can be organised.</p> <p>I can search a ready-made database to answer questions.</p> <p>I can collect data to help me answer a questions.</p> <p>I can add to a database.</p> <p>I can make a branching database.</p> <p>I can use a data logger to monitor changes and can talk about the information collected.</p> | <p>I can organise data in different ways.</p> <p>I can collect data and identify where it could be inaccurate.</p> <p>I can plan, create and search a database to answer questions.</p> <p>I can choose the best way to present data to my friends. I can use a data logger to record and share my reading with my friends.</p> |

| Learning Focus | Year 3 | Year 4 |
|----------------|---|---|
| Multimedia | Pupils should be taught to 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. | |
| | <p>I can create different effects with different technology tools.</p> <p>I can combine a mixture of text, graphics and sound to share my ideas and learning.</p> <p>I can use appropriate keyboard commands to amend text on my device, including making use of the spellchecker.</p> <p>I can evaluate my work and improve its effectiveness.</p> <p>I can use an appropriate tool to share my work online.</p> | <p>I can use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p>I am confident to explore new media to extend what I can achieve.</p> <p>I can change the appearance of text to increase its effectiveness.</p> <p>I can create, modify and present documents for a particular purpose.</p> <p>I can use a keyboard confidently and make use of a spellchecker to write and review my work.</p> <p>I can use an appropriate tool to share my work and collaborate online.</p> <p>I can give constructive feedback to my friends to help them improve their work and refine my own work.</p> |

| Learning Focus | Year 3 | Year 4 |
|-------------------------|---|--|
| Technology in our Lives | <p>Pupils should be taught to 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.</p> <p>I can save and retrieve work on the internet, the school network or my own device. I can talk about the parts of a computer. I can tell you ways to communicate with others online. I can describe the World Wide Web as the part of the internet that contains websites. I can use search tools to find and use an appropriate website. I can think about whether I can use images that I find online in my own work.</p> | <p>I can tell you whether a resource I am using in on the internet, the school network or my own device. I can identify key words to use when searching safely o the World Wide Web. I think about the reliability of information I read on the World Wide Web. I ca tell you how to check who owns photos, text and clipart. I can create a hyperlink to a source on the World Wide Web.</p> |
| | Programming | <p>Year5</p> <ul style="list-style-type: none"> • I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. • I can refine a procedure using repeat commands to improve a program. • I can use a variable to increase programming possibilities. • I can change an input to a program to achieve a different output. • I can use 'if' and 'then' commands to select an action. • I can talk about how a computer model can provide information about a physical system. • I can use logical reasoning to detect and debug mistakes in a program. • I use logical thinking, imagination and creativity to extend a program. |
| Handling fata | | <ul style="list-style-type: none"> • I can use a spreadsheet and database to collect and record data. • I can choose an appropriate tool to help me collect data.. • I can present data in an appropriate way. • I can search a database using different operators to refine my search. • I can talk about mistakes in data and suggest how it could be checked. |
| Technology in our lives | <p>I can describe different parts of the Internet.</p> <ul style="list-style-type: none"> • I can use different online communication tools for different purposes. • I can use a search engine | <ul style="list-style-type: none"> • I can tell you the Internet services I need to use for different purposes. • I can describe how information is transported on the Internet. • I can select an |

| | | |
|----------------------|---|---|
| | <p>to find appropriate information and check its reliability. • I can recognise and evaluate different types of information I find on the World Wide Web. • I can describe the different parts of a webpage. • I can find out who the information on a webpage belongs to • I know which resources on the Internet I can download and use. • I can describe the ways in which websites advertise their products to me.</p> | <p>appropriate tool to communicate and collaborate online. • I can talk about the way search results are selected and ranked. • I can check the reliability of a website. • I can tell you about copyright and acknowledge the sources of information that I find online. • I know that websites can use my data to make money and target their advertising</p> |
| <p>Multimedia</p> | <p>• I can use text, photo, sound and video editing tools to refine my work. • I can use the skills I have already developed to create content using unfamiliar technology. • I can select, use and combine the appropriate technology tools to create effects that will have an impact on others. • I can select an appropriate online or offline tool to create and share ideas. • I can review and improve my own work and support others to improve their work.</p> | <p>• I can talk about audience, atmosphere and structure when planning a particular outcome. • I can confidently identify the potential of unfamiliar technology to increase my creativity. • I can combine a range of media, recognising the contribution of each to achieve a particular outcome. • I can tell you why I select a particular online tool for a specific purpose. • I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.</p> |
| <p>Online safety</p> | <p>I contribute to shared rules and use them to support myself and others when we use technology • I always communicate kindly and respectfully and can describe the impact where this does not happen • I know which online resources I can download and use • I use a search engine to find and evaluate different types of information • I explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to a trusted adult • I use a secure password and safe screen name when I am using an online tool • I explain the risks of sharing too much about myself online • I compare my online and face-toface relationships • I explain why I need to protect my computer or device from harm • I know the reasons why images are altered • I recognise that online friendships affect my feelings I select ageappropriate apps, games and websites and encourage my friends to do the same • I evaluate my own and others' choices when using games and devices • I identify the intended audience for an advert</p> | <p>I contribute to shared rules and use them to support myself and others • I always communicate kindly and respectfully, working with others to help all enjoy use of technology • I acknowledge the sources of information that I find online • I talk about the way search results are selected and ranked and check the reliability of websites I visit • I support my friends to protect themselves and make good choices online, including reporting concerns to a trusted adult • I consider terms and conditions and adjust privacy settings to maintain control of my personal information • I check the information about me online and know that some of it can be uploaded by others • I explain how to communicate safely and responsibly with people I only know online • I protect my computer or device from harm on the internet • I explain how images in the media affect how we feel about ourselves • I explain how online friendships affect our feelings • I select age-appropriate apps, games and websites and explain the potential risks of making different choices • I support my friends in evaluating their use of games and devices and make good choices for myself • I explain how my data is use</p> |

Implementation – Reasoning Behind our LKS2 Computing Curriculum

| STAGE | THEME | WE TEACH THIS BECAUSE ... | LINKS TO ST BARTS SCHOOL LIFE ... |
|-------|---|---|---|
| KS2 | <p><i>Technology in our lives</i> <i>Multimedia</i> <i>Programming</i> <i>Handling Data</i></p> <p><i>Online safety</i> <i>Autumn Term: I am kind and responsible</i> <i>Spring Term: I am safe and secure</i> <i>Summer Term: I am healthy</i></p> | <p>The New Wessex Planning allows our teachers to build their own Computing curriculum:</p> <ul style="list-style-type: none"> • to develop safe, responsible and competent learners • who are creative, curious and logical • as they navigate, investigate and contribute to the world around them <p>This planning, which has been developed and constantly updated since the 2014 National Curriculum was launched, is split into blocks for each area of Somerset's computing curriculum. Blocks are chosen to suit the technology available within our school.</p> <p>The Elim planning provides great pedagogy which is regularly updated to ensure new areas are covered appropriately with the latest information.</p> <p>Assessment is embedded and the program provides a strong progression throughout the year groups allowing children to enhance, develop and build on their existing knowledge and experiences.</p> <p>It provides an age-appropriate online safety curriculum that is flexible, relevant and engages pupils' interest</p> <ul style="list-style-type: none"> • Builds on the success of the original Somerset BYTE resources, updating for new opportunities and challenges • Increases pupil involvement and promotes active learning • Provides continually updated full lesson plans, assemblies and support for teachers • Includes a continuous provision map for foundation stage • Promotes partnership with parents, providing ideas for sharing learning with families | <p><i>Christian Values:</i></p> <p><i>Respect/Trust/Compassion/Aspiration/Forgiveness/Courage</i></p> |

KS2 Computing Vocabulary

Year 3

| Programming | Handling Data | Multimedia | Technology in our Lives |
|---|---|---|--|
| Algorithm Background Block Collaboration Control Costume Debug Event Forever Imagine Implement Input Make mistakes Movement Pattern Output Persevere Repeat Rotation Sequence Sprite Stage Wait/pause | Branching database Chart Collect Data Database Data logger Decision tree Graph Information Interpret Investigate Questions Record Results Tally Sort Venn diagram | Animate Animation App Backspace Clipart Copy Delete Document Edit Enter Font Greenscreen Image Insert Hyperlink Keyboard Layout Narration Open Photo(graph) Right click Save Select Shift Slides Software Sound Space bar Style Text Video/film | Communicate Computing devices Copyright Email Filter Internet QR code Reliability Search engine Search result Webpage Website World Wide Web |

Year 4

| Programming | Handling Data | Multimedia | Technology in our Lives |
|--|---|---|---|
| Algorithm Background Block Collaboration Computational thinking Control Costume Debug Design Effect Event Forever Imagine Implement Input Make mistakes Movement Pattern Output Persevere Repeat Rotation Selection (if/then) Sequence Sprite Stage Wait/pause | Branching database Chart Collect Data Database Data logger Decision tree Field Graph Hypothesis Information Interpret Investigate Predict Questions Record Results Tally Sort Venn diagram | Animate Animation App Audience Backspace Clipart Comic strip Document Edit Enter Folder Font Greenscreen Image Insert Hyperlink Layout Narration Persuasive Presentation Right click Select Screen shot Shift Slides Software Sound effect Space bar Story board Style Template Text | Blog Citation Communicate Computing devices Copyright Email Filter Hyperlink Internet QR code Reliability Search engine Search result Search query Vlog Webpage Website World Wide Web |

Progression in Computing

| | Children should be taught to- | |
|-------------------------|---|---|
| <u>Reception</u> | <u>KS1</u> | <u>KS2</u> |
| | <p>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>use logical reasoning to predict the behaviour of simple programs</p> <p>use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>recognise common uses of information technology beyond school</p> <p>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies</p> | <p>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller part</p> <p>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>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</p> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>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.</p> <p>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p> |

Year 5

| <u>Programming</u> | <u>Multimedia</u> | <u>Technology in our lives</u> | <u>Handling data</u> |
|---------------------------|--------------------------|---------------------------------------|-----------------------------|
| Algorithm | <i>Animate</i> | Blog | Anomaly |
| Block | <i>Animation</i> | Citation | Average |
| Broadcast | <i>App</i> | Communicate | Chart |
| Collaboration | <i>Audience</i> | Computing devices | Collect |
| Command | <i>Bullet points</i> | Copyright | Complex questions |
| Computational thinking | <i>Clipart</i> | Email | Data |
| Control | <i>Comic strip</i> | Digital content | Database |
| Debug | <i>Document</i> | Digital advertising | Data logger |
| Decomposition | Edit | Filter | Decision tree |
| Design | Folder | Hyperlink | Formulae |
| Effect | Font | Internet | Field |
| Event | Greenscreen | Internet Services | Graph |
| Forever | Insert | QR Code | Hypothesis |
| Imagine | Heading / subheading | Reliability | Information |
| Implement | Hyperlink | Search engine | Interrogate |
| Input | Layout | Search result | Interpret |
| Make mistakes | Narration | Search query | Investigate |
| Pattern | Persuasive | Vlog | Model |
| Output | Right click | Webpage | Plausible |
| Persevere | Select | Website | Predict |
| Repeat | Screen shot | World Wide Web | Questions |
| Rotation | Shift | | Record |
| Selection (If Then) | <i>Slides</i> | | Results |
| Sequence | <i>Software</i> | | Tally |
| Sprite | <i>Sound effect</i> | | Sort |
| Variable | <i>Sound recording</i> | | Venn diagram |
| X position / Y position | <i>Storyboard</i> | | |
| | <i>Style</i> | | |
| | <i>Tab</i> | | |
| | <i>Template</i> | | |

Year 6

| <u>Programming</u> | <u>Multimedia</u> | <u>Technology in our lives</u> | <u>Handling data</u> |
|---------------------------|--------------------------|---------------------------------------|-----------------------------|
| Abstraction | Animate | Blog | Analyse |
| Algorithm | Animation | Citation | Anomaly |
| Broadcast | App | Client | Average |
| Collaboration | Audience | Copyright | Chart |
| Command | Bullet points | Digital content | Collect |
| Computational thinking | Clipart | Digital advertising | Complex questions |
| Control | Comic strip | Domain | Data |
| Debug | Document | Filter | Database |
| Decomposition | Edit | Hyperlink | Data logger |
| Design | Folder | Internet Service Provider | Decision tree |
| Effect | Font | LAN Local Area Network | Formulae |
| Event | Greenscreen | Packets | Field |
| Forever | Insert | Protocol | Graph |
| Imagine | Heading / subheading | Router | Hypothesis |
| Implement | Hyperlink | QR Code | Information |
| Input | Layout | Reliability | Interrogate |
| Make mistakes | Narration | Search engine | Interpret |
| Pattern | Persuasive | Search result | Investigate |
| Output | Production | Search query | Knowledge |
| Persevere | Right click | Vlog | Model |
| Repeat | Select | Webpage | Plausible |
| Rotation | Screen shot | Website | Predict |
| Selection (If Then) | Shift | WAN Wider Area Network | Process |
| Sequence | Slides | | Questions |
| Sprite | Software | | Record |
| Variable | Sound effect | | Results |
| X position / Y position | Sound recording | | Tally |
| | Storyboard | | Sort |
| | Style | | Venn diagram |
| | Tab | | |
| | Template | | |
| | Theme | | |

What will computing look like in the classroom?

- Unplugged lessons – children will use key skills and knowledge to apply computer terms and vocabulary to everyday lives and activities
- Touch typing activities
- Using age appropriate apps and websites
- Strong Online safety focus
- Using technology tools to present or complete assignments
- Strong sense of compassion and respect for other people's work and opinions
- Appreciate diversity
- Lesson starter activity focusing on touch typing skills and online safety.
- Specify key vocabulary to be used and its meaning.
- Research, investigation and interpretation of findings.
- Children will communicate their computer and online safety knowledge and understanding appropriately.
- Children evaluate their learning and compare with peers.

Assessment

Teachers regularly assess capability through observations and looking at completed work. Key objectives to be assessed are taken from the national curriculum to assess key ICT and computing skills each term. Success criteria have been developed for each strand for each year and this remains an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and computing. As assessment is part of the learning process it is essential that pupils are closely involved. Assessment can be broken down into;

Formative assessments are carried out during and following short, focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity. Summative assessment should review pupils' capability and provide a best fit level. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. There should be an opportunity for pupil review and identification of next steps.

Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

SEN

At St Bartholomew's, we believe that all children have the right to access ICT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the ICT and computing curriculum for some pupils. We teach ICT and computing to all children, whatever their ability. ICT and computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and computing we provide learning opportunities that enable all pupils to make progress.

We do this by setting suitable learning challenges and responding to each child's different needs. Where appropriate ICT and computing can be used to support SEN children on a one to one basis where children receive additional support. Additionally, as part of our dyslexia friendly approach to teaching and learning we will use adapted resources wherever possible such as visual timetables, different coloured backgrounds and screen printouts.

Monitoring and review

The subject leader (Tammy Court) is responsible for monitoring the standard of the children's work and the quality of teaching in line with requirements from subject leader meetings, work analysis and lesson observations. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.