



# Whitley Abbey Primary School

Hand in hand we learn

## Computing Curriculum

| Curriculum Drivers  |  |  |   |
|---|--|--|---|
| Possibilities and Citizenship   | Reading and Oracy  | Health and Wellbeing   | Celebrating Diversity   |
| <p>Our curriculum is designed to promote aspirations by preparing children for a changing world by making links between their learning and careers and opportunities in adult life. The curriculum enables children to make connections between what is learnt in school and open-up possibilities for them in later life.</p> <p>Teachers support children to be good citizens through the development of British Values and the core learning values of; Commitment, Opportunity, Respect and Excellence.</p> | <p>Our curriculum is carefully designed to meet the needs of the children we serve, placing strong emphasis on the development of oracy skills and fluency in reading. At Whitley Abbey, we recognise that strong oracy underpins effective communication, enabling children to express themselves clearly and to understand others with confidence.</p> <p>Reading remains a cornerstone of our curriculum, supporting pupils in developing the independent learning skills they will need to thrive in later life.</p> | <p>Our curriculum is designed to promote children's health, wellbeing and resilience through the promotion of Whitley Character Values, friendship, kindness, courage, resilience, gratitude and honesty. We want our children to make good choices about their own health and wellbeing.</p> <p>Research suggested that better emotional wellbeing is associated with higher achievement in primary school. When children feel safe they are able to better access learning in the classroom.</p> | <p>Our curriculum is designed to celebrate diversity. This means understanding that each individual is unique and recognising and celebrating our individual differences. The concept of diversity encompasses community, acceptance and respect. We foster the exploration of these differences in a safe, positive, and nurturing environment.</p> <p>We believe that by practicing mutual respect for qualities and experiences that are different from our own we build alliances across differences so that we can work together to eradicate all forms of discrimination.</p> |

## Intent

At Whitley Abbey Primary school we encourage pupils to become MASTERS of technology. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. In every year group each term pupils will complete an online safety unit of work. We subscribe to the [nationalonlinesafety.com](http://nationalonlinesafety.com) site and therefore have access to units of work linked to local and national issues. Our curriculum is planned but it is expected that teachers may substitute units of work to tackle current issues that are pertinent to the pupils that they teach.

Our computing curriculum focuses on the study of computer science and is knowledge rich. We encourage staff to try and embed computing across the whole curriculum to make learning creative and accessible through continuous provision. We want our pupils to be fluent with a range of tools to best express their understanding. We aspire that by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers in other areas of the curriculum.

## Implementation

### **Resources**

At Whitley Abbey Primary school we follow the National Curriculum and use 'Teach Computing' to support the teaching of computing and to support non specialist teachers in the delivery of the curriculum. Each of the units of work are linked to programs to support the development of key skills in computing and to promote the development of Key vocabulary.

### **Assessment:**

At Whitley Abbey Primary School, assessment is carried out in accordance with our Assessment Policy. Ongoing teacher assessment ensures that skills are developed and progress is made in the area of Computing. Key assessment questions are planned for in the curriculum, at the end of each unit of work.

Class teachers also assess each child's skills through application in other subjects – for example producing a word processed document as part of another subject or data handling in geography or science (for example).

### **Monitoring:**

- Books scrutiny to check coverage of content, skills, quality and evidence of key computing vocabulary being taught in all topics.
- Pupil voice
- Teacher observations
- Evidence of continuous assessment

### **Work-life balance:**

The 'Teach Computing' scheme of work and national online safety site support staff by providing high quality resources to support the teaching of the computing curriculum in its entirety.

| EYFS  |   |
|---|---|
| <p>In the Foundation Stage, the learning and development of computing is taught throughout all areas of the curriculum as and when it compliments existing learning opportunities. For example computing may be taught through providing pupils opportunities to:</p> <ul style="list-style-type: none"> <li>• take a photograph with a camera or tablet</li> <li>• search for information on the internet</li> <li>• play games on the interactive whiteboard</li> <li>• explore an old typewriter or other mechanical toys including telephones and keyboards in role play</li> <li>• using a Beebot</li> <li>• watching a video clip</li> <li>• listening to music</li> </ul> <p>. These experiences and skills prepare the children for work in Y1 onwards and subject specific study.</p> <p><b>ELG: Managing Self Children at the expected level of development will: - Be confident to try new activities and show independence, resilience and perseverance in the face of challenge;</b></p> |   |
| Key Stage 1   | Key Stage 2   |
| <p>Pupils should be taught to:</p> <p>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; use technology purposefully to create, organise, store, manipulate and retrieve digital content ; recognise common uses of information technology beyond school ; 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.</p>   | <p>Pupils should be taught to:</p> <p>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 ; 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 ; select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of</p> |

|  |   |
|--|---|
|  | programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information ; use technology safely. |
|--|---|

| EYFS   |  |
|--|--|
| Our EYFS curriculum is planned but may be adapted to be responsive to pupil's interests  |  |
| - Example - Teacher Led experiences  | Example - Enhanced Provision opportunities linked to Computing   |
| <p>Children in Nursery and Reception will engage in ongoing learning in this subject throughout the academic year. Lesson content from the UKCIS “Education for a Connected World” framework. There are 8 areas:</p> <p>1) Self-image and self-identity   2) Online relationships   3) Online reputation   4) Online bullying<br/> 5) Managing online information   6) Health well-being &amp; lifestyle   7) Privacy and security<br/> 8) Copyright and ownership.</p> <p>0-4 lesson plans based on the 8 topics outlined on National Online Safety website.</p> <p>Children will also access ‘Smartie the Penguin’ and ‘DigiDuck’ with their teachers during whole class teaching.</p> | <p>~ Toys that move in different ways<br/> ~ Light box and torches<br/> ~ Toy microphone<br/> ~ Use of iPads and tablets<br/> ~ Controlling and listening to audio stories on a CD player<br/> ~ Using equipment to enhance play in role play, such as a till.<br/> ~ Use Google to find out information<br/> ~ Use of Google maps<br/> ~ Use of Beebots<br/> ~ Taking photographs and short videos using iPads.<br/> ~ Use of Purple Mash<br/> ~ Use of Interactive Whiteboards</p> |
| <p>Vocabulary<br/> Choices, Internet, Website, Equipment, Buttons, Movement, Screen, Mouse, Images<br/> Keyboard, Technology, Share, Create, collect, count, organise.</p>   | <p>Assessment Questions<br/> Can children name the main parts of a computer?<br/> Can children explain a use for the internet?</p>   |

|           |                                 |   |  |   |
|-----------|---------------------------------|---|--|---|
|           |                                 |   |  | Can children talk about what they should not share online?<br>Can children use technology with increasing confidence?   |
| Year 1    |                                 |   |  |   |
|           | Term                            | Autumn  | Spring   | Summer  |
| Computing | Deliberate Practice (Skills)    | <ul style="list-style-type: none"> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li><b>use technology safely and respectfully, keeping personal information private; identify help and support when they have concerns about content or contact on the internet or other</b></li> </ul>  |  |   |
|           | Continuous provision            | Our computing curriculum aims to explicitly teach Computer Science Skills.<br>Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.   |  |   |
|           | Knowledge Assessment questions: | <b>Safety/ Technology beyond school / grouping and sorting</b><br><b>National Online Safety Unit - Self image and identify</b><br><br><b>1.3 Moving a robot</b> <ul style="list-style-type: none"> <li>Explain what a given command does</li> <li>Predict the outcome of a sequence involving up to four commands</li> <li>Match a command to an outcome</li> <li>Understand that a program is a set of commands that a computer can run</li> <li>Know that a series of instructions can be issued before they are enacted</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>Spreadsheets</b><br><b>National Online Safety Unit - Online Relationships</b><br><br><b>1.4 Grouping Data</b> <ul style="list-style-type: none"> <li>Explain the key requirements of the task</li> <li>Explain how objects have been grouped</li> </ul> Know that labels are used to identify a group with similar characteristics <ul style="list-style-type: none"> <li>Group the same objects in more than one way</li> <li>Count how many objects are in group and identify which has more</li> <li>Record how many objects are in a group</li> <li>Group objects to answer a question</li> <li>Compare objects to group them explaining what has been found</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>Algorithms</b><br><b>National Online Safety Unit - Online Reputation</b><br><br><b>1.6 Programming animations</b> <ul style="list-style-type: none"> <li>Plan a project involving more than one sprite</li> <li>Explain what a sprite is</li> <li>Compare different programming blocks</li> <li>Know a series of commands can be joined together to form a program</li> <li>Understand that a program is a set of commands a computer can run</li> <li>Predict the outcome of a command</li> <li>List commands that can be used on a device</li> <li>Match a command to an outcome</li> <li>Recognise how to run a command</li> <li>Run different commands for different sprites</li> <li>Choose a command for a given purpose</li> <li>Build a sequence of commands in steps</li> <li>Use the start command to initialise a program</li> <li>Debug a program</li> </ul> Test a program created and evaluate how successful it has been<br>Identify how closely a plan matches the outcome |
|           | Vocabulary                      | Tee-Bot, Forwards, turn, clear, go, commands, instructions, directions, algorithm, program  | Object, Label, search, property, value, data, set  | ScratchJr, Command, sprite, block, algorithm, predict, value, instruction   |
| Year 2    |                                 |   |  |   |

**Deliberate practise vocabulary:**

Rules, Online, Private information, Email, Safe, Unsafe, Report.

|           | Term                                   | Autumn   | Spring  | Summer  |
|-----------|--|--|---|---|
| Computing | <b>Deliberate Practice (Skills)</b>    | <ul style="list-style-type: none"> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>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</li> </ul>  |   |   |
|           | <b>Continuous provision</b>            | Our computing curriculum aims to explicitly teach Computer Science Skills. Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.   |   |   |
|           | <b>Knowledge Assessment questions:</b> | <b>National Online Safety Unit – Online Bullying <u>Assessment Questions</u></b><br><br>2.2 Digital Photography <ul style="list-style-type: none"> <li>Explain the key requirements of the task</li> <li>Explain some aspects of taking a good photograph</li> </ul> Know that a photo can be portrait or landscape <ul style="list-style-type: none"> <li>Take a photograph using a simple camera or device that has been set up in camera mode</li> <li>Identify some of the reasons why a photograph may be good or bad</li> <li>Experiment when taking photos with different light sources</li> <li>Identify a photo that has been enhanced using tools when asked questions use different tools to change how a photograph looks</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>National Online Safety Unit – Managing Online information <u>Assessment Questions</u></b><br><br>2.3 Robot algorithms <ul style="list-style-type: none"> <li>Plan and execute a program onto a floor robot to reach a given point</li> <li>Understand a series of instructions Understand different algorithms by changing the sequence of commands</li> <li>Predict what a sequence of commands will do</li> <li>Follow sequences of instructions including moving forwards and backwards, and turning left and right.</li> <li>Plan a series of instructions for someone else to follow</li> <li>Plan a mat layout with several possible routes</li> <li>Plan and execute a program to reach a goal and debug as needed</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>National Online Safety Unit – Health wellbeing and lifestyle <u>Assessment Questions</u></b><br><br>2.6 Programming quizzes <ul style="list-style-type: none"> <li>Plan a project including changing backgrounds</li> <li>Know that a sequence can be started using a variety of event blocks</li> <li>Know that a sequence has an outcome, and identify different programs that have the same outcome</li> <li>Know the backgrounds can be changed through the programming blocks</li> <li>Understand the role of the numbers on ScratchJr blocks</li> <li>Write and run a simple program with a start block, and an end block which changes the background</li> <li>Adapt a given design to create a program with multiple sprites and backgrounds which uses the blocks given in the example</li> <li>Create and program a quiz with at least two backgrounds which switch based on an action Identify errors in their program, and debug them</li> <li>Test a program created and evaluate how successful it has been Identify how closely a plan matches the outcome</li> </ul> |
|           | <b>Vocabulary</b>                      | Device, camera, photograph, capture, image, digital, landscape, portrait, subject, compose, focus, edit, filter  | Instruction Sequence clear, unambiguous, algorithm, order, design, debugging.   | Sequence, command, run, blocks, sprite, algorithm, debug, decomposition, code.  |
| Year 3    |  |  |   |   |
|           | Term                                   | Autumn   | Spring  | Summer  |

Deliberate practise vocabulary:  
 Appropriate/inappropriate sites  
 Cyber-bullying  
 Digital footprint  
 Keyword searching

|           |                                 |   |   |  |  |
|-----------|---------------------------------|---|---|--|--|
| Computing | Deliberate Practice (Skills)    | <ul style="list-style-type: none"><li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li><li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li><li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms</li><li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating</li><li>select, use and combine a variety of software (including internet services) on a range of digital devices to develop programs, systems and content that accomplish given goals, including collecting, analysing, evaluating an information</li><li><b>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behavior; report concerns about content and contact</b></li></ul> |   |  | <div>Deliberate Practise Vocabulary:</div> <div>E-safety rules<br/>Secure passwords<br/>Report abuse button<br/>Gaming<br/>Blogs</div> |
|           | Continuous provision            | Our computing curriculum aims to explicitly teach Computer Science Skills.<br>Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.   |   |  |  |
|           | Knowledge Assessment questions: | <b>National Online Safety Unit – Self Image and identity Activity 1</b><br><br><u>Assessment Questions</u><br><br><b>3.2 stop frame animation</b> <ul style="list-style-type: none"><li>Explain the key requirements of the task</li><li>Storyboard has a clear beginning, middle, and end</li><li>Movement is smooth</li><li>The animation follows the storyboard</li><li>Make some improvements</li><li>Add some additional media</li><li>Evaluate how successful they were in meeting the task requirements</li></ul>  | <b>National Online Safety Unit - Self Image and identity Activity 2</b><br><br><u>Assessment Questions</u><br><br><b>3.4 Branching databases</b> <ul style="list-style-type: none"><li>investigate questions with yes/no answers</li><li>make up a yes/no question about a collection of objects</li><li>create two groups of objects separated by one attribute</li><li>select an attribute to separate objects into groups</li><li>create a group of objects within an existing group</li><li>arrange objects into a tree structure</li><li>create a physical version of a branching database</li><li>suggest real-world uses for branching databases</li></ul> | <b>National Online Safety Unit - Self Image and identity Activity 3</b><br><br><u>Assessment Questions</u><br><br><b>3.6 Events and actions in programs</b> <ul style="list-style-type: none"><li>explain the relationship between an event and an action</li><li>choose which keys to use for actions and explain choices</li><li>identify a way to improve a program</li><li>program movement</li><li>use a programming extension</li><li>choose blocks to set up my program</li><li>match a piece of code to an outcome</li><li>I can modify a program using a design</li></ul> |  |
|           | Vocabulary                      | Animation, stop frame, sequence, image, consistency, media, import, transition  | Attribute, value, branching, database, objects, separate, structure, compare, order, organise, selecting, decision tree.  | Motivate, event, sprite, algorithm, logic, move, extension block, errors, debugging, code, test  |  |
| Year 4    |                                 |   |   |  |  |
|           | Term                            | Autumn  | Spring  | Summer   |  |

|           |                                 |   |  |  |
|-----------|---------------------------------|---|--|--|
| Computing | Deliberate Practice (Skills)    | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms a</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluati</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design a</li> <li>of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and pre:</li> <li><b>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; id</b></li> <li><b>report concerns about content and contact</b></li> </ul> <div> Deliberate Practise Vocabulary<br/> E-safety rules<br/> Secure passwords<br/> Report abuse button<br/> Gaming<br/> Blogs </div> |  |  |
|           | Continuous provision            | Our computing curriculum aims to explicitly teach Computer Science Skills.<br>Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.   |  |  |
|           | Knowledge Assessment questions: | <b>National Online Safety Unit – Online reputation 1+2</b><br><u>Assessment Questions</u> <ul style="list-style-type: none"> <li>Can children keep themselves safe?</li> <li>Can children explain how online and offline identities can be different?</li> </ul> <p><b>4.1 The internet</b></p> <ul style="list-style-type: none"> <li>describe how networks physically connect to other networks</li> <li>describe the internet as a network of networks</li> <li>demonstrate how information is shared across the internet</li> <li>discuss why a network needs protecting</li> <li>recognise that the World Wide Web contains websites and web pages</li> <li>describe how content can be added and accessed on the World Wide Web (WWW)</li> <li>recognise how the content of the WWW is created by people</li> <li>evaluate the consequences of unreliable content and explain that not everything on the World Wide Web is true</li> </ul>  | <b>National Online Safety Unit –Online reputation 3</b><br><u>Assessment Questions</u> <ul style="list-style-type: none"> <li>Can children describe positive ways for someone interact online?</li> <li>Can they understand how this can impact on how they are perceived?</li> </ul> <p><b>4.5 photo editing</b></p> <ul style="list-style-type: none"> <li>Explain the key requirements of the task</li> <li>Identify the types of image needed in relation to their chosen theme</li> <li>Outline how the images will be used together</li> <li>Suggest colours and effects that might suit their scene</li> <li>Select images and combine them into one</li> <li>Use a range of tools to create their image</li> <li>Add relevant text to their publication</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>National Online Safety Unit –Online reputation 4</b><br><u>Assessment Questions</u> <ul style="list-style-type: none"> <li>Can children explain that others online pretend to be someone else and explain reasons why they might do this?</li> </ul> <p><b>4.6 repetition in games</b></p> <ul style="list-style-type: none"> <li>Detail the specific requirements of the task</li> <li>Choose relevant sprites and backdrops for a game</li> <li>Create an algorithm that includes show, hide, and move blocks</li> <li>Create an algorithm that includes relevant sound blocks</li> <li>Create additional sprites and copy code over to those sprites</li> <li>Modify their code for additional sprites</li> <li>Run their code and identify whether it meets the requirements of the task</li> </ul> <p>Evaluate how successful they were in meeting the task requirements</p> |
|           | Vocabulary                      | Internet, router, network, security, server, wireless, website, web page, download, permission, information   | Image, edit , digital crop, rotate, effects, cut, copy, paste, foreground, zoom, combine, clone, retouch, saturation   | Scratch, sprite, blocks code, value, infinite loop, repetition, animate, event block, duplicate, modify, debug, refine, evaluate.  |
|           | Year 5                          |   |  |  |
|           | Term                            | Autumn  | Spring   | Summer   |



|           |  |   |  |  |
|-----------|--|---|--|--|
| Computing | <b>Deliberate Practice (Skills)</b>    | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital data</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data</li> <li><b>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify and report concerns about content and contact</b></li> </ul> |  |  |
|           | <b>Continuous provision</b>            | <p>Our computing curriculum aims to explicitly teach Computer Science Skills.</p> <p>Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.</p>  |  |  |
|           | <b>Knowledge Assessment questions:</b> | <b>National Online Safety Unit – Managing Online Information</b><br><b><u>Assessment Questions</u></b><br><br><b>5.1 Systems and searching</b> <ul style="list-style-type: none"> <li>explain that computers can be connected together to form systems</li> <li>explain that systems are built using a number of parts</li> <li>describe the input, process, and output of a digital system I can explain that computer systems communicate with other devices</li> <li>recognise the role of computer systems in our lives I can identify tasks that are managed by computer systems</li> <li>identify the human elements of a computer system</li> <li>explain the benefits of a given computer system</li> <li>explain how to keep my personal information safe online</li> <li>identify how to use a search engine</li> <li>make use of a web search to find specific information</li> <li>refine my web search</li> <li>compare results from different search engines I can recognise trustworthy websites</li> </ul>  | <b>National Online Safety Unit – Managing Online Information/ Copy right and ownership</b><br><b><u>Assessment Questions</u></b><br><br><b>5.3 selection in physical computing</b> <ul style="list-style-type: none"> <li>Describe the requirements of the task, including the use of selection</li> <li>Construct a wiring diagram to show how components will be connected</li> <li>Build a model that supports the hardware that will be used in the task</li> <li>Write an algorithm that uses selection to control a sequence using output devices</li> <li>Combine appropriate blocks to implement their algorithm</li> <li>Suggest a strategy to fix the code when it is not working</li> <li>Test their code with their model</li> <li>Evaluate how successful they were in meeting the task requirements</li> </ul> | <b>National Online Safety Unit – Managing Online Information/ Health and well being</b><br><b><u>Assessment Questions</u></b><br><br><b>5.6 selection in quizzes</b> <ul style="list-style-type: none"> <li>explain how selection is used in computer programs</li> <li>recall how conditions are used in selection</li> <li>identify conditions in a program</li> <li>modify a condition in a program</li> <li>relate that a conditional statement connects a condition to an outcome</li> <li>can use selection in an infinite loop to check a condition</li> <li>identify the condition and outcomes in an ‘if... then... else...’ statement</li> <li>create a program that uses selection to produce different outcomes</li> <li>implement my algorithm to create the first section of my program</li> <li>test my program I can share my program with others</li> </ul> |
|           | <b>Vocabulary</b>                      | System, connection, digital, input, process, storage, search, search engine, refine, links, algorithm   | Microcontroller, USB, components, output, switch, programme, debug, circuit, power, cell, buzzer.  | Selection, condition, outcomes, statement, algorithm, debug, question, input, task, run, setup operator.   |
|           | <b>Year 6</b>                          |   |  |  |
|           | <b>Term</b>                            | <b>Autumn</b>   | <b>Spring</b>  | <b>Summer</b>  |

Deliberate Practise Vocabulary:

Responsible online communication  
Informed choices  
Virus threats  
Blogs  
Messaging  
Cyber bullying

|  |  |   |  |  |
|--|--|---|--|--|
|  | <b>Deliberate Practice (Skills)</b>    | <ul style="list-style-type: none"> <li>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> <li><b>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</b></li> </ul> <div data-bbox="389 456 797 673"> <p>Deliberate Practise<br/>Responsible online communication<br/>Informed choices<br/>Virus threats<br/>Blogs<br/>Messaging<br/>Cyber bullying</p> </div> |  |  |
|  | <b>Continuous provision</b>            | <p>Our computing curriculum aims to explicitly teach Computer Science Skills.</p> <p>Digital literacy and Information Technology will be delivered in a cross curricular approach. Therefore, children will be given regular opportunities to practise word processing skills, use search engines, save and edit their work and present ideas in a variety of forms through other areas of the curriculum.</p>  |  |  |
|  | <b>Knowledge Assessment questions:</b> | <p><b>National Online Safety Unit – Online Bullying Assessment Questions</b></p> <ul style="list-style-type: none"> <li>Can children identify and critically evaluate online content?</li> <li>Can children explain why it is important to challenge and reject inappropriate representations online?</li> <li>Can children explain how to keep themselves safe in a digital world?</li> </ul> <p><b>6.2 website design</b></p> <ul style="list-style-type: none"> <li>To review an existing website and consider its structure</li> <li>know that websites are written in HTML</li> <li>To plan the features of a web page</li> <li>To consider the ownership and use of images (copyright)</li> <li>To recognise the need to preview pages</li> </ul>   | <p><b>National Online Safety Unit – Privacy and security Assessment Questions</b></p> <ul style="list-style-type: none"> <li>Can children identify and critically evaluate online content?</li> <li>Can children explain why it is important to challenge and reject inappropriate representations online?</li> <li>Can children explain how to keep themselves safe in a digital world?</li> </ul> <p><b>6.3 variables in games</b></p> <ul style="list-style-type: none"> <li>define a 'variable' as something that is changeable</li> <li>identify examples of information that is variable and explain that the way a variable changes can be defined</li> <li>identify that variables can hold numbers or letters</li> <li>To explain why a variable is used in a program</li> <li>identify a program variable as a placeholder in memory for a single value</li> <li>explain that a variable has a name and a value</li> </ul> | <p><b>National Online Safety Unit –Managing online information Assessment Questions</b></p> <ul style="list-style-type: none"> <li>Can children identify and critically evaluate online content?</li> <li>Can children explain why it is important to challenge and reject inappropriate representations online?</li> <li>Can children explain how to keep themselves safe in a digital world?</li> </ul> <p><b>6.4 introduction to spreadsheets</b></p> <ul style="list-style-type: none"> <li>create a data set in a spreadsheet</li> <li>collect data and suggest how to structure and enter data into a spreadsheet</li> <li>choose an appropriate format for a cell</li> <li>apply an appropriate format to a cell</li> <li>explain that formulas can be used to produce calculated data</li> <li>explain which data types can be used in calculations</li> </ul> |

|  |                   |  |   |  |
|--|-------------------|--|---|--|
|  |                   | <ul style="list-style-type: none"> <li>• add content to a web page</li> <li>• evaluate what my web page looks like on different devices and suggest/make edits.</li> <li>• outline the need for a navigation path I</li> <li>• make multiple web pages and link them using hyperlinks</li> </ul> | <ul style="list-style-type: none"> <li>• recognise that the value of a variable can be changed</li> <li>• choose how to improve a game by using variables I can decide where in a program to change a variable</li> <li>• make use of an event in a program to set a variable</li> <li>• recognise that the value of a variable can be used by a program</li> </ul> | <ul style="list-style-type: none"> <li>• construct a formula in a spreadsheet</li> <li>• calculate data using different operations</li> <li>• create a spreadsheet to plan an event</li> </ul> |
|  | <b>Vocabulary</b> | Website, browser, hypertext, HTML, logo, layout, header, media, copyright, fair use, navigation, hyperlink, embed  | Variable, change, name, value, design, event, algorithm, code, task, project, debug, improve, assign.   | <b>Data, structure, cell, spreadsheet, code, sigma, software, input, output</b>  |