

Perton Primary Academy Computing

Term	Year 1	Year 2	Year 3	Year 4
Autumn A	Internet Safety Systems and Networks - Technology around us	Internet Safety Creating Media - Making Music	Internet Safety Systems and Networks - Connecting Computers	Internet Safety Systems and Networks - The Internet
Autumn B	Digital Painting Lego WEDO - Getting Started - Milo the Science Rover	Networks and System - IT in the world around us Lego WEDO - Getting Started Part D - Collaborating	Data and information - Branching database Lego WEDO - Pulling - Creating a pulling robot	Creating Media - Editing Photos Lego WEDO - Grabbing Objects
Spring A	Digital Writing	Programming A - Robot algorithms	Creating Media - Animation	Programming A - Repetition in Shapes
Spring B	Programming A - Moving Robot Lego WEDO - Getting Started B - Milo's Motion Sensor	Creating Media - Digital Photography Lego WEDO - Make a sound machine/Making a dancing robot	Programming A - Sequence in Music Lego WEDO - Robust structures -creating an earthquake simulator.	Creating Media - Editing Audio Lego WEDO - Make a Life Hack
Summer A	Data and information - Grouping Data	Data and information - Pictograms	Creating Media - Desktop Publishing	Data and information - Data logging
Summer B	Programming B - Intro to Animation Lego WEDO - Getting Started Project Part C - Milo's tilt sensor	Programming B - Intro to quizzes Lego WEDO - Plants and Pollinators	Programming B - Events and Actions Lego WEDO - Predator and Prey - Creating a moving predator	Programming B - Repetition in Games Lego WEDO - Cleaning the Ocean

Year 1

Pupils should be taught to:

<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.	Spring B - Programming A Moving Robot Summer B - Programming B Introduction to animation (Additional Coverage - Lego WEDO)
<ul style="list-style-type: none">Create and debug simple programs.	Spring B - Programming A Moving Robot Summer B - Programming B Introduction to animation (Additional Coverage - Lego WEDO)
<ul style="list-style-type: none">Use logical reasoning to predict the behaviour of simple programs.	Spring B - Programming A Moving Robot Summer B - Programming B Introduction to animation (Additional Coverage - Lego WEDO)
<ul style="list-style-type: none">Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Autumn B - Digital Painting Spring A - Digital Writing
<ul style="list-style-type: none">Recognise common uses of information technology beyond school.	Autumn A - Systems and Networks - Technology around us Summer A - Data and information - Grouping Data

<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. 	<p>On-Going throughout all units Internet Safety Autumn A</p>
<p><u>Year 2</u></p> <p>Pupils should be taught to:</p>	
<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. 	<p>Spring A - Programming A Robot algorithms Summer B - Programming B Introduction to quizzes (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> Create and debug simple programs. 	<p>Spring A - Programming A Robot algorithms Summer B - Programming B Introduction to quizzes (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> Use logical reasoning to predict the behaviour of simple programs. 	<p>Spring A - Programming A Robot algorithms Summer B - Programming B Introduction to quizzes (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p>Autumn A - Creating Media - Making Music Spring B - Creating Media - Digital Photography</p>
<ul style="list-style-type: none"> Recognise common uses of information technology beyond school. 	<p>Autumn B - Networks and System - IT in the world around us. Summer A - Data and information - Pictograms</p>

<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. 	<p>On-Going throughout all units Internet Safety Autumn A</p>
<p><u>Year 3</u></p>	
<p>Pupils should be taught to:</p>	
<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. 	<p>Spring B - Programming A Sequence in Music Summer B - Programming B Events and Actions (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. 	<p>Spring B - Programming A Sequence in Music Summer B - Programming B Events and Actions (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 	<p>Spring B - Programming A Sequence in Music Summer B - Programming B Events and Actions (Additional Coverage - Lego WEDO)</p>
<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. 	<p>Autumn A - Systems and Networks - Connecting Computers</p>

<ul style="list-style-type: none"> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 	<p>Autumn B - Data and information - Branching database Spring A - Creating Media - Animation Summer A - Creating Media - Desktop Publishing Throughout cross-curricular learning</p>
<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. 	<p>Autumn B - Data and information - Branching database Spring A - Creating Media - Animation Summer A - Creating Media - Desktop Publishing</p>
<ul style="list-style-type: none"> Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>On-Going throughout all units Internet Safety Autumn A</p>
<p><u>Year 4</u></p>	
<p>Pupils should be taught to:</p>	
<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. 	<p>Spring A - Programming A Repetition in Shapes Summer B - Programming B Repetition in Games (Additional Coverage - Lego WEDO)</p>
<ul style="list-style-type: none"> Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. 	<p>Spring A - Programming A Repetition in Shapes Summer B - Programming B Repetition in Games (Additional Coverage - Lego WEDO)</p>

<ul style="list-style-type: none"> • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 	<p>Spring A - Programming A Repetition in Shapes Summer B - Programming B Repetition in Games (Additional Coverage - Lego WEDO)</p>
<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. 	<p>Autumn A - Systems and Networks - The Internet</p>
<ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 	<p>Autumn B - Creating Media - Editing Photos Spring B - Creating Media - Editing Audio Throughout cross-curricular learning</p>
<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. 	<p>Autumn B - Creating Media - Editing Photos Spring B - Creating Media - Editing Audio Summer A - Data and information - Data Logging</p>
<ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<p>On-Going throughout all units Internet Safety Autumn A</p>

Vocabulary

<u>Vocabulary Progression</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
<u>Computer Science</u>	Instructions, Buttons, Robots, Patterns, Program	Forward, Backward, Right-angle turn, Algorithm, Sequence, Debug, Predict	Sequence instructions, Sequence debugging, Test + improve, Sequence programming, sprite, background	Sensors, Open-ended problems, Bugs in programs
<u>Information Technology</u>	Photographs, camera stills, Video, Sound, Data, Pictogram, Digitally	Capturing moments, Magnified images, Questions, Data collection, Save, Retrieve, presentation, spacebar, caps lock, backspace, enter, paint effects, templates, animation	Questioning, Database, Recording data, Present data, charts, graphs, slides, transitions, copy, paste, amend, multimedia presentation, green sceen	Database creation, Database searches, Inaccurate data, Photo modifying, Keyboard shortcuts, Bullet points, Spell check
<u>Digitally Literacy</u>	Rules, Online, Private information, Email, Purpose, Online tools Communicate, keyboard,	Appropriate/inappropriate sites, Cyber-bullying, , Keyword searching, search engine, information sources, monitor, IWB, username, password	Acceptable use, Secure passwords, Report abuse button, website content, devices, computer network, computer parts,	Blogs, Responsible online communication, messaging, Gaming, reliability, block, Information collection, hardware, software, Digital footprint