Highfields Primary School **Whole School National Curriculum Computing Overview**

Years 1 & 2 🟨

Years 3 & 4 🟦

Years 5 & 6 🟩

Spiral curriculum

The units for key stages 1 and 2 are based on a spiral curriculum. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme.

This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly. It also ensures that connections are made even if different teachers are teaching the units within a theme in consecutive years.

National Curriculum Coverage	**Year 1**						**Year 2**						**Year 3**						**Year 4**						**Year 5**						**Year 6**					
	Technology around us	Digital painting	Moving a robot	Grouping data	Digital writing	Programming animations	Information technology around us	Digital photography	Robot algorithms	Pictograms	Digital music	Programming quizzes	Connecting computers	Stop-frame animation	Sequencing sounds	Branching databases	Desktop publishing	Events and actions in programs	The internet	Audio production	Repetition in shapes	Data logging	Photo editing	Repetition in games	Systems and searching	Video production	Selection in physical computing	Flat-file databases	Introduction to vector graphics	Selection in quizzes	Communication and collaboration	Webpage creation	Variables in games	Introduction to spreadsheets	3D modelling	Sensing movements
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	✓			✓	✓		✓	✓	✓	✓																										
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 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														✓		✓			✓	✓			✓	✓												

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 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																									✓	✓						✓	✓		✓	