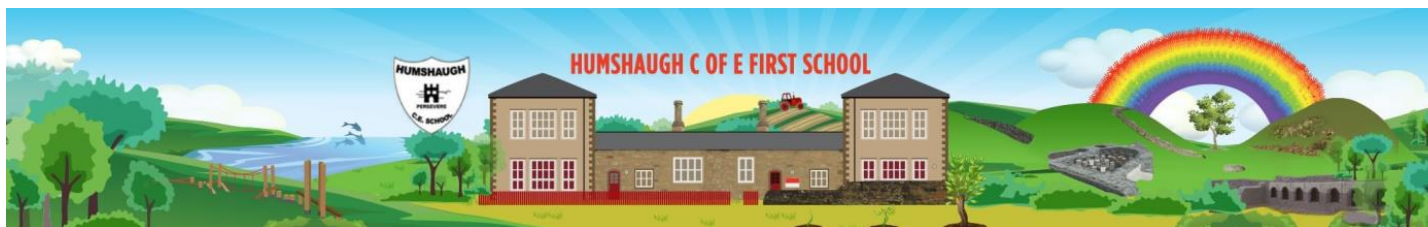


Computing Curriculum Progression in Skills



What will a Humshaugh First School Computer Scientist look like?

	At the end of Year 2 they will have the following knowledge:	At the end of Year 4 they will begin to have the following knowledge:
Being a computer scientist	<p>The National Curriculum for Computing aims to ensure that all pupils:</p> <ul style="list-style-type: none"> ● can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation ● can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems ● can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems ● are responsible, competent, confident and creative users of information and communication technology 	<p>The National Curriculum for Computing aims to ensure that all pupils:</p> <ul style="list-style-type: none"> ● can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation ● can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems ● can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems ● are responsible, competent, confident and creative users of information and communication technology

Computing Curriculum Progression in Skills

Knowledge	<p>During Key Stage 1, 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● 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>During Lower Key Stage 2, 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● 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

Computing Curriculum Progression in Skills

Progression of key skills from Y1 – Y4

	Computer Science	Information Technology
End of EYFS	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	
End of Year 1	<ul style="list-style-type: none"> ● To understand what algorithms are ● To create simple programs 	<ul style="list-style-type: none"> ● To use technology purposefully to access, create, store and retrieve digital content ● To use technology safely & to understand the need to keep personal information private ● To recognise common uses of information technology beyond school
End of Year 2	<ul style="list-style-type: none"> ● To understand that algorithms are implemented as programs on digital devices ● To understand that programs execute by following precise and unambiguous instructions ● To use logical reasoning to predict the behaviour of simple programs and debug simple programs 	<ul style="list-style-type: none"> ● To use technology purposefully to access, organise, edit and manipulate digital content ● To use technology respectfully and identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
End of Year 3	<ul style="list-style-type: none"> ● To write and debug programs that accomplish specific goals ● To use sequences in programs ● To work with various forms of input and output 	<ul style="list-style-type: none"> ● To use search technologies effectively ● To use a variety of software to accomplish given goals ● To collect information ● To design, create and present content ● To use technology responsibly and identify a range of ways to report concerns about contact

Computing Curriculum Progression in Skills

End of Year 4	<ul style="list-style-type: none"> ● To design, create and to use logical reasoning to debug programs that accomplish specific goals ● To use repetition in programs ● To control or simulate physical systems ● To understand how computer networks can provide multiple services, such as the world wide web ● To appreciate how search results are selected 	<ul style="list-style-type: none"> ● To select a variety of software to accomplish given goals ● To select, use and combine internet services ● To analyse and evaluate information ● To collect and present data ● To understand the opportunities computer networks offer for communication ● To identify a range of ways to report concerns about content and recognise acceptable and unacceptable behaviour
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Computer Science concepts

At the end of Key Stage 1, the pupils will have developed an understanding of the following computing concepts:	At the end of Lower Key Stage 2, the pupils will have developed an understanding of the following computing concepts:
Program (algorithm), Logical reasoning, Instructions, Debug, Information retrieval, manipulation, Online, Internet, Digital, Software, Hardware, Login/out,	Program (algorithm), Logical reasoning, Instructions, Debug, Information retrieval, manipulation, Online, Internet, Digital, Software, Hardware, Login/out, Design, Input, Output, Sequence and Repetition, Network, WWW, Analyse and Evaluate, Search, Browser, Control, Physical Systems, Simulate