Curriculum Links

Please note:	Our workshops may not cover all of the links below in great depth as we are restricted by time, however you have the opportunity to cover them in the follow up activities you will be receiving from us.	
Aims and Activities taken from the workshop booklet	Miss Smart owns a very large diamond which she keeps in a safe with a programmable alarm, sensors and lights. She has heard that a gang of thieves are planning to steal the diamond and she must write some computer programs to stop them. Working in pairs your pupils take on the role of programmers, learning how to write code to stop the thieves from stealing the diamond. After some initial exercises your class are encouraged to use their imagination to develop their own solutions to stop the intruders. The aims of the workshop are to: - provide a stimulating and practical activity, suitable for all abilities, which compliments learning in school - learn to program the BBC micro:bit computer using block code - introduce flow diagrams, sequencing and binary concepts - develop logical thinking, analytical and problem solving skills - improve team working and communication skills - provide an opportunity to use imagination and creativity	
	National Curriculum	**Non-Statutory Opportunities**
Science	**Working Scientifically (UKS2)** • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments	Pupils will have the opportunity to: - explore different ways of recording and presenting data, including flow diagrams - Explore and ask questions about how programming works and how it relates to the world of science
Computing	• 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	- Use block code to program the BBC micro:bit computer -use computational thinking and creativity to understand programming and explore how computer science is changing the world

		- introduce flow diagrams, sequencing and binary concepts
DT	Technical Knowledge – apply knowledge of computing to program, monitor and control their products	Apply knowledge, understanding and skills from the computing curriculum to develop a code with the purpose of stopping intruders
Maths	The National Curriculum for mathematics aims to ensure that all pupils: • reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language • can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.	Programming provides pupils opportunity to - develop reasoning and problem solving skills - break problems into a series or simpler steps - persevere in seeking solutions - make connections between maths and computing and real world careers in programming
English	• ask relevant questions to extend their understanding and knowledge • articulate and justify answers, arguments and opinions • developing a broader, deeper and richer vocabulary	