Knowledge and skills development

Subject area: Computing

EYFS				
National Curriculum strand:	**Algorithms**	**Programs**	**Using technology**	**Working safely**
Knowledge	Give instructions to a programmable toy to make it move	Select a program on an iPad or laptop and know how to open it	Talk about the technology they use at home Talk about different types of technology Show they can use a range of technology such as iPad, laptop, camera	Talk about age appropriate apps and games Know that some apps and games are not safe for young children
Skills	- Begin to talk about how something moves or works - Begin to list different IT in their home - Begin to describe when technology can help us - Begin to talk about ways to keep safe when using technology			
Key Vocabulary	Instructions; program; iPad; laptop; mouse; camera; app; game; safe			

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Year 1				
National Curriculum strand:	**Algorithms**	**Programs**	**Using technology**	**Working safely**
Knowledge	Create a series of instructions and plan a journey for a programmable toy Make a simple animation by inputting a code	Create, store and retrieve digital content	Use a website and a camera Record sound and play back	Use technology safely Keep personal information private
Skills	- Begin to clarify understanding about what algorithms are - Plan a program - Use a keyboard and mouse - Use shape and line tools - Use a keyboard to type and edit - Add and remove text - Begin to describe when technology can be used to solve problems - List different IT in their home - Talk about ways to keep safe on devices and online			
Key vocabulary	Programmable; animation; keyboard; code; open; save; exit; website; online; record; playback; technology; private			

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Year 2			
National Curriculum strand:	**Algorithms and programs**	**Using technology**	**Working safely**
Knowledge	Understand that algorithms are used on digital devices Input algorithms to create animations Write a simple program and test it Predict what the outcome of a simple program will be (logical reasoning) Learn that programs run on different sorts of inputs	Understand that programs require precise instructions Organise digital content Retrieve and manipulate digital content Navigate the web to complete simple searches Know that the keyboard can be used to control objects on screen	Know where to go for help if concerned Use technology respectfully Know how technology is used inside and outside of school
Skills	- Clarify understanding about how algorithms are used and reflect on different algorithms, analysing their effectiveness - Explain how computer programs could be used to solve problems and create their own simple programmes - Design an algorithm and predict results - Create and debug a program - Use digital devices to take photographs - Use tools to edit photographs - Move and resize images - Open a file - Retrieve content from the web - List different IT in school and outside of school. - Give reasons why it is important to and evaluate ways of staying safe, including online.		
Key vocabulary	Algorithm; digital; device; input; outcome; precise; retrieve; manipulate; navigate; respectfully		