TechnoKids and National Curriculum in England | Computing Programmes of Study

TECHNOKids

TechnoKids Computing Curriculum includes over 40 technology projects that develop digital literacy. We have aligned a sampling of our materials to show how they meet the National Curriculum learning outcomes. Alternative projects can also achieve these objectives.

		Year 1	Year 2	
KEY STAGE 1 (Ages 5-7) | TechnoKids Primary Curriculum		**Start**	**Gallery**	**Whiz**
•	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	•	•	

		Year 3		Year 4		Year 5		Year 6	
KEY STAGE 2 (Ages 7-11) | TechnoKids Junior and Intermediate Curriculum		**Internet**	**Tales**	**Research**	**Arcade**	**Presenter**	**Race**	**Restaurateur**	**Code**
•	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	•		•	•	•	•		•

TechnoKids and National Curriculum in England | Computing Programmes of Study

TECHNOKids

TechnoKids Computing Curriculum includes over 40 technology projects that develop digital literacy. We have aligned a sampling of our materials to show how they meet the National Curriculum learning outcomes. Alternative projects can also achieve these objectives.

		Year 7		Year 8		Year 9	
KEY STAGE 3 (Ages 11-14) | TechnoKids Intermediate and Senior Curriculum		**Wonderland**	**Bot AI**	**Specialist**	**Turtle** (Python)	**Ad**	**Python**
•	design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems		•		•		•
•	understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem		•		•		•
•	use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions		•		•		•
•	understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]		•		•		•
•	understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems		•	•			
•	understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits			•			
•	undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users	•	•	•		•	
•	create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability	•	•	•	•	•	•
•	understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns		•	•		•	

		Year 10		Year 11	
KEY STAGE 4 (Ages 14-16) | TechnoKids Intermediate and Senior Curriculum		**Photoshop**	**HTML**	**Animate**	**ChatbotAI***
•	develop their capability, creativity and knowledge in computer science, digital media and information technology	•	•	•	•
•	develop and apply their analytic, problem-solving, design, and computational thinking skills	•	•	•	•
•	understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns				•

* coming soon