

## KS2 National Curriculum

Mapping of the Rabbids Coding levels has been completed against the UK National Curriculum for Computing in Key Stages 1, 2 and 3. Further mapping has been carried out against the CAS Progression Pathways to give an indication of the progression of complexity within the levels. Each level is identified as meeting various NC statements at beginner, intermediate, or advanced level. These levels correspond directly to the CAS progression pathways; All key stages have been mapped to pink, yellow and blue strands,

<b>X</b>	General
<b>B</b>	Beginner level
<b>I</b>	Intermediate level
<b>A</b>	Advanced level

	<b>Progression Pathway Colour</b>	<b>Progression Pathway Strand</b>
<b>Digital Literacy</b>		
Uses technology safely	<b>X</b>	
Uses technology respectfully	<b>X</b>	
Uses technology responsibly	<b>B</b>	
	<b>I</b>	Demonstrates responsible use of technologies and online services
	<b>A</b>	
Identifies a range of ways to report concerns about content and contact	<b>B</b>	
	<b>I</b>	knows a range of ways to report concerns
	<b>A</b>	
Recognises acceptable/unacceptable behaviours	<b>B</b>	Recognises what is acceptable and unacceptable behaviour when using technologies and online services
	<b>I</b>	

	<b>A</b>	Recognises ethical issues surrounding the application of information technology beyond school.
Computer Science		
Designs programs that accomplish specific goals	<b>B</b>	Uses diagrams to express solutions.  Designs solutions (algorithms) that use repetition and two-way selection i.e. if, then and else.
	<b>I</b>	Recognises that different solutions exist for the same problem. (AL) (AB)  Designs modular programs using procedures.
	<b>A</b>	Represents solutions using a structured notation.  Can identify similarities and differences in situations and can use these to solve problems (pattern recognition).
Writes programs that accomplish specific goals	<b>B</b>	Creates programs that implement algorithms to achieve given goals.
	<b>I</b>	Writes modular programs using procedures.
	<b>A</b>	Understands that programming bridges the gap between algorithmic solutions and computers.  Has practical experience of a high-level textual language, including using standard libraries when programming
Debugs programs that accomplish specific goals	<b>B</b>	
	<b>I</b>	Debugs modular programs using procedures.
	<b>A</b>	
Controls or simulates a physical system	<b>x</b>	

Solves problems by decomposing them into smaller parts	<b>B</b>	
	<b>I</b>	Designs solutions by decomposing a problem and creates a sub-solution for each of these parts (decomposition).
	<b>A</b>	
Uses sequence in programs	<b>x</b>	
Uses selection in programs	<b>B</b>	Uses a sequence of selection statements in programs, including an if, then and else statement
	<b>I</b>	Understands the difference between, and appropriately uses if and if, then and else statements.
	<b>A</b>	Uses a range of operators and expressions e.g. Boolean, and applies them in the context of program control
Uses repetition in programs	<b>B</b>	Uses post-tested loop e.g. 'until'
	<b>I</b>	Uses a variable and relational operators within a loop to govern termination.
	<b>A</b>	Understands that iteration is the repetition of a process such as a loop.  Uses a range of operators and expressions e.g. Boolean, and applies them in the context of program control
Works with variables	<b>B</b>	Declares and assigns variables.
	<b>I</b>	
	<b>A</b>	Selects the appropriate data types  Defines data types: real numbers and Boolean
Uses various forms of input and output	<b>B</b>	Knows that computers collect data from various input devices, including sensors and application software
	<b>I</b>	
	<b>A</b>	

Uses logical reasoning to explain how some simple algorithms work	<b>B</b>	Uses logical reasoning to predict outputs, showing an awareness of inputs.
	<b>I</b>	Knows that a procedure can be used to hide the detail with sub-solution (procedural abstraction)
	<b>A</b>	Recognises that different algorithms exist for the same problem
Detects errors in algorithms	<b>x</b>	
Corrects errors in algorithms	<b>x</b>	
Detects errors in programs	<b>x</b>	
Corrects errors in programs	<b>x</b>	
Understands computer networks including the internet	<b>B</b>	
	<b>I</b>	Knows the difference between physical, wireless and mobile networks
	<b>A</b>	Knows that computers transfer data in binary  Understands data transmission between digital computers over networks, including the internet i.e. IP addresses and packet switching
Appreciates how results are ranked	<b>B</b>	
	<b>I</b>	
	<b>A</b>	Understands how search engines rank search results.
Appreciates how results are selected	<b>B</b>	
	<b>I</b>	knows how search results are selected, including that search engines use 'web crawler programs'.
	<b>A</b>	

Appreciates how the internet provides multiple services	<b>B</b>	Understands the difference between the internet and internet service e.g. world wide web
	<b>I</b>	
	<b>A</b>	
Information Technology		
Designs a range of systems and content that accomplish given goals	<b>B</b>	
	<b>I</b>	Recognises the audience when designing digital content  Shows an awareness of tasks best completed by humans or computers
	<b>A</b>	
Creates a range of systems and content that accomplish given goals	<b>B</b>	Creates digital content to achieve a given goal
	<b>I</b>	Recognises the audience when creating digital content
	<b>A</b>	Understands how to construct static web pages using HTML and CSS.
Presents data and information	<b>B</b>	Presents and organises data and information in digital content
	<b>I</b>	
	<b>A</b>	
Collects data and information	<b>B</b>	Collects data and information in digital content
	<b>I</b>	Understands how to effectively use search engines
	<b>A</b>	
Analyses data and information	<b>B</b>	Understands the difference between data and information. (AB) Knows why sorting data in a flat file can improve searching for information. (EV)
	<b>I</b>	Analyses data and information, and recognises that poor quality data leads to unreliable results, and inaccurate conclusions.

	<b>A</b>	
Evaluates data and information	<b>B</b>	Makes appropriate improvements to solutions based on feedback received, and can comment on the success of the solution
	<b>I</b>	<p>evaluates data and information, and recognises that poor quality data leads to unreliable results, and inaccurate conclusions.</p> <p>Uses criteria to evaluate the quality of solutions, can identify improvements making some refinements to the solution, and future solutions.</p>
	<b>A</b>	Designs criteria to critically evaluate the quality of solutions, uses the criteria to identify improvements and can make appropriate refinements to the solution
Appreciates the opportunities networks offer for communication and collaboration	<b>B</b>	Communicates with a wider audience e.g. blogging.
	<b>I</b>	Understands the potential of information technology for collaboration when computers are networked
	<b>A</b>	
Uses search technologies effectively	<b>B</b>	Uses filters or can perform single criteria searches for information. (AL)
	<b>I</b>	Performs more complex searches for information e.g. using Boolean and relational operators
	<b>A</b>	Queries data on one table using a typical query language.
Is discerning in evaluating digital content	<b>B</b>	

	<b>I</b>	Makes judgements about digital content when evaluating and repurposing it for a given audience. (EV) (GE)
	<b>A</b>	
Uses a range of digital devices	<b>B</b>	
	<b>I</b>	Understands why and when computers are used
	<b>A</b>	Evaluates the appropriateness of digital devices to achieve given goals
Selects from a variety of software (including internet services)	<b>B</b>	
	<b>I</b>	Selects internet services
	<b>A</b>	Knows that there is a range of operating systems and application software for the same hardware.
Uses a variety of software (including internet services)	<b>B</b>	Shows an awareness of, and can use a range of internet services e.g. VOIP
	<b>I</b>	Uses internet services
	<b>A</b>	Evaluates the appropriateness of internet services and application software to achieve given goals
Combines a variety of software (including internet services)	<b>B</b>	Combines software packages and internet services
	<b>I</b>	Combines internet services
	<b>A</b>	