

Introduce:

Safety and Respect
Computational Thinking
Abstraction
Creativity

Sandbach School Computing Curriculum:

Year 7 Computing Curriculum Sequence

Intent: To equip all learners with the necessary building blocks to begin the computing pathways. Using technology safely and responsibly is core and pupils take their first steps in computational thinking, logic and data handling.

T1	T2	T3	T4	T5	T6
Acceptable Use Digital Dangers	Web development with HTML	Programming techniques with a visual language (Scratch)	Boolean logic and binary Images and sound in binary	Modelling real world abstractions	Fake News, information bias, reliability and copyright concerns
<p>Why these topics? Acceptable Use aims to set a level playing field and allows all pupils to be familiar with the rules and regulations they will be working under in the school plus it will teach them the intricacies of the network in the school. This will allow the boys to access digital learning in all future computer lessons but also for learning across a wider curriculum. e-Safety topics are a vital component of any computing curriculum and raising awareness of all risks associated with technology is a priority of the department.</p>	<p>Why This Topic? This is a chance for learners to combine creative IT skills with skills that form the fundamentals of computer science. The unit is a cross-curricular effort with the history department and will revisit the learning on local history and create a digital slant whilst reinforcing the key concepts.</p>	<p>Why This Topic? Focus groups have yielded that Scratch is widely taught in primary schools. It has been found, however, that often the key computational thinking skills have not been implicitly taught so this unit starts pupils on the journey to professional programming.</p>	<p>Why This Topic? This is directly from the National Curriculum and skill builds towards GCSE Computer Science which is offered at Key Stage 4.</p>	<p>Why This Topic? This links to the National Curriculum objective relating to abstraction and investigating real-world problems. Using spreadsheets is also a fundamental skill for business use of IT and isn't addressed anywhere else in a student's life journey through IT education in schools. Spreadsheets are revisited in maths for some pupils so this will help to skill build towards that outcome.</p>	<p>Why This Topic? In a world of disinformation it is vital that learners are taught to evaluate stories for context, bias and reliability so they may better be prepared to be responsible citizens. When using artefacts found online, pupils need to understand the legal ramifications to stay within relevant frameworks of law.</p>
<p>Curriculum Links</p> <ul style="list-style-type: none"> Responsibility Community Safety Rules Rights 	<p>Curriculum Links</p> <ul style="list-style-type: none"> Community Historical Code Graphic Design Online 	<p>Curriculum Links</p> <ul style="list-style-type: none"> Abstraction Algorithms Code Logic Technical 	<p>Curriculum Links</p> <ul style="list-style-type: none"> Logic Representation Number/Calculation Technical Problem solving 	<p>Curriculum Links</p> <ul style="list-style-type: none"> Abstraction Code Business Technical Solutions 	<p>Curriculum Links</p> <ul style="list-style-type: none"> Community Rules Rights Responsibility
<p>Teaching these topics here supports: Behaviour and safety in an ICT room, the rules of using computers, respect for equipment. eSafety topics that will be revisited throughout each pupil's school life in PSHCE and further on in the computing curriculum.</p>	<p>Teaching these topics here supports: Learners have their first opportunity to "code" something with HTML. This supports the learning of real programming languages later. Reflecting on local history and local life helps to ground pupils within their communities.</p>	<p>Teaching these topics here supports: Programming structures: sequence, selection, iteration and modularity</p>	<p>Teaching these topics here supports: Understanding how and why computers use binary. Computational thinking.</p>	<p>Teaching these topics here supports: Creating abstract models. Real world problem solving skills.</p>	<p>Teaching these topics here supports: Setting up pupils to be responsible citizens. Gathering artefacts for projects further up the school in a safe and responsible way.</p>
<p>These topics feed from: E-safety topics taught in primary school.</p>	<p>These topics feed from This is likely each pupil's first attempt at using text code.</p>	<p>These topics feed from Instruction sequencing in Scratch taught in primary school.</p>	<p>These topics feed from This is likely to be the pupil's first attempt at logic and binary. Builds on basic maths taught in KS1 and 2.</p>	<p>These topics feed from Pupils will not have studied spreadsheets before. They will use maths skills learned in KS1 and 2</p>	<p>These topics feed from First look at this content in this school</p>

