Develop:
Abstraction
Computational Thinking
Data structures
Security and safety
Independence

Sandbach School Computing

Year 9 Computer Science Curriculum Sequence

Intent: to provide a grounding in the digital skills that are a pre-requisite to success in professional IT careers including computational thinking, practical investigation and system safety.

T1	T2	T3	T4	T5	T6
Computational thinking (Group 1)	Python Basics (Group 1)	Computational thinking (Group 2)	Python Basics (Group 2)	Python Unit 2	Web development with HTML/CSS/JavaScript
Why these topics? Understanding how to think in the same was as a computing is fundamental to understanding digital technology. This topic also builds an appreciation for key figures in computing history for an enriched cultural capital and links to British identity and achievements • George Boole • Charles Babbage • Ada Lovelace • Alan Turing • Sir Tim Berners-Lee	**Why This Topic?** Learning computational thinking skills with programming is fundamental to understanding the career opportunities that IT offers.	**Why these topics?** Understanding how to think in the same was as a computing is fundamental to understanding digital technology. This topic also builds an appreciation for key figures in computing history for an enriched cultural capital	**Why This Topic?** Learning computational thinking skills with programming is fundamental to understanding the career opportunities that IT offers.	**Why This Topic?** Further skills in the Python programming language introducing data structures, more complex iteration and modular code.	**Why This Topic?** Web development is a sought after skill in industry and learners are now capable of building imaginative and interactive web artefacts
Curriculum Links • **Technical** • **Algorithms**	**Curriculum Links** • **Code** • **Algorithms** • **Abstraction**	**Curriculum Links** • **Technical** • **Algorithms**	**Curriculum Links** • **Code** • **Algorithms** • **Abstraction**	**Curriculum Links** • **Code** • **Algorithms** • **Abstraction**	**Curriculum Links** • **Code** • **Algorithms** • **Independence**
Teaching these topics here supports: All future programming and problem solving skills	**Teaching these topics here supports:** Programming and computational skills useful in a wide range of career pathways and future careers as yet not created..	**Teaching these topics here supports:** All future programming and problem solving skills	**Teaching these topics here supports:** Programming and computational skills useful in a wide range of career pathways and future careers as yet not created..	**Teaching these topics here supports:** Deepening understanding of computational structures, problem solving techniques and application design.	**Teaching these topics here supports:** Programming skills in a second language highly in demand in industry
These topics feed from: Fundamental programming building blocks in year 7 and 8	**These topics feed from** Building from Python unit in year 8.	**These topics feed from:** Fundamental programming building blocks in year 7 and 8	**These topics feed from** Building from Python unit in year 8.	**These topics feed from** Previous Python unit	**These topics feed from** HTMIL and CSS units in Year 7 and 8, programming units in Python, applied to a new language.