

Unit	Lessons	Key Progression Indicators Knowledge, Understanding and Skills
Representations from clay to silicon	6	This unit conveys essential knowledge relating to binary representations. The activities gradually introduce learners to binary digits and how they can be used to represent text and numbers. The concepts are linked to practical applications and problems that the learners are familiar with. This unit builds upon the concepts taught in Year 7 Under the hood of the computer.
Computer Crime	6	This unit takes learners on a journey of discovery of techniques that cybercriminals use to steal data, disrupt systems, and infiltrate networks. Learners will start by considering the value their data holds and what organisations might use it for. They will then learn about social engineering and other common cybercrimes, and finally look at methods to protect against these attacks. This unit builds upon Year 7 Online safety.
Introduction to Python	6	This unit introduces learners to text-based programming with Python. The lessons form a journey that starts with simple programs involving input and output, and gradually moves on through arithmetic operations, randomness, selection, and iteration. Emphasis is placed on tackling common misconceptions and elucidating the mechanics of program execution. A range of pedagogical tools is employed throughout the unit, with the most prominent being pair programming, live coding, and worked examples. The Year 7 programming units are a prerequisite for this unit.
Computing Systems	6	This unit takes learners on a tour through the different layers of computing systems: from programs and the operating system, to the physical components that store and execute these programs, to the fundamental binary building blocks that these components consist of. The aim is to provide a concise overview of how computing systems operate, conveying the essentials and abstracting away the technical details that might confuse or put off learners. The last lessons cover two interesting contemporary topics: artificial intelligence and open source software. These are linked back to the content of the unit, helping learners to both broaden their knowledge and focus on the topics addressed in the unit. The unit assumes no prior knowledge but links to Year 7 Under the hood of the computer.
Spreadsheet Modelling	5	This unit builds upon the introductory knowledge gained in Year 7 Spreadsheets. In this unit Students discover functions and Boolean operators. They discover how to correctly create more complex graphs and charts and then learn how spreadsheets are used to model different real-world scenarios. They use Goal Seek to answer what-if questions.
Developing for the web	3	Starting with an exploration of the building blocks of the World Wide Web, HTML, and CSS. By the end of the unit, learners will have a functioning webpage. This unit builds upon the Year 7 unit of Networks.

Computing Calendar

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
Intro to systems	Representations from clay to silicon KAT 1							Computer Crime Self - assessment				

Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26
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	Introduction to Python Self - assessment	Computing Systems KAT 2
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Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39
			Spreadsheet modelling					Developing for the web			End of year test KAT 3	