

IT

Curriculum Map

Year 7	Year 8
Introduction to the network Business documents Control programming with Flowol Internet safety Spreadsheets (Priory Papers) Summative Project (Lincoln Wildlife Park)	Programming with Python Graphics Introduction to Databases Binary numbers Turtle Graphics with Python Databases (Marvel Superheroes) Summative Project (Imp PC Services)

Year 9	Year 10/11
Graphics Digital animation	Creating a digital graphic Creating a multi-page website Creating a digital animation Pre-production skills (Examination)

Year 12	Year 13
Creating systems to manage information Using social media in business (Coursework Unit)	Information Technology Systems Website development



Computing Curriculum Map

Year 7 Introduction to Scratch Scratch game project	Year 8 Basic Animation skills Water Aid project brief
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Year 9 Introduction to programming Algorithms and flowcharts Fundamentals of Python Binary and hexadecimal Turtle using Python Computer ethics project Robotics	Year 10 Python consolidation of key skills Computer hardware Computational thinking and specific algorithms (searching and sorting) Storing data Introduction to databases Cyber security Advanced programming tasks	Year 11 Computer systems Computer networks Ethical, legal and environmental Further Databases (SQL) impacts of digital technology Revision Revisit pseudocode and flowcharts Revisit cyber security Revisit number bases and data storage Revisit computer systems General revision & examination practice
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Year 12 Computational thinking Finite state machines Beginning Visual Basic Data representation & encryption Standard algorithms Object oriented programming Event driven Visual Basic Logic & Boolean algebra Systematic approach to problem solving Computer systems hardware, operating systems, languages	Year 13 Hardware/ peripherals Computer architecture Fundamentals of networking The Internet fundamentals Internet security TCP-IP (Transmission Control Protocol/Internet Protocol) Client server Databases SQL (Structured Query Language) & DDL (Data Definition Language) Consequences of uses of computing Theory of computation Data structures Advanced algorithms Big data
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IT and Computing Assessment Guidance

Much of the students' work is completed on screen and focusses on developing skills with either software applications or programming solutions. Short term assessment therefore takes the form of verbal feedback and support. This forms the basis of a coaching model where teachers observe progress and intervene as necessary. This is under-pinned by traditional teaching in relation to the relevant theoretical knowledge associated with each subject.

Key finished products and associated documentation are assessed in detail and feedback given (in line with external examination board guidelines where appropriate). At KS4/5 these will be assessed against examination board criteria, whereas at KS3 the criteria will be defined internally by the Academy. Throughout Years 7 to 11, online testing is used to assess subject knowledge and understanding. Feedback in this case is immediate and specific.

In Years 9-13 written examinations are used at the end of subject units as well as annual mock examinations. Where possible these are based on examination board materials and formally assessed by the teacher in line with the examination board criteria. Coursework units in Years 9-13 are assessed and feedback is given in line with examination board procedures.

The validity and reliability of the techniques described above are supported by their closeness to examination board criteria. This is replicated in year 7 and 8 at a necessarily more basic level. In years 7 and 8 the wide variety of assignments can lead to students scoring unevenly across the year, but this serves to differentiate between the requirements of Computer Science and ICT.

Students derive value from the framework in terms of immediacy of feedback and through their understanding of the way they are being assessed against a series of shared criteria. This serves to identify gaps in their knowledge/evidence. Teachers derive value from the framework in that they can use the assessment data to inform module grades and written report content and through more detailed analysis, identify modifications to the associated Scheme of Learning for delivery to future cohorts.

