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Ormiston Academies Trust
ACHIEVING MORE TOGETHER

Computing curriculum overview

Computing at Sandymoor Ormiston Academy

Key stage 3, Years 7, 8 and 9

Our KS3 Computing curriculum equips pupils with the knowledge and skills they need to thrive in a digital world. We aim to develop confident, responsible, and creative users of computing technology who understand how computers work, how data is processed, and how digital systems shape modern life. Pupils learn the fundamentals of programming, computational thinking, and problem-solving, enabling them to design, test, and refine their own digital solutions.

We also teach pupils to use technology safely, respectfully, and critically. They explore issues such as online identity, digital footprints, and cybersecurity so they can make informed choices. By the end of KS3, our intent is for pupils to be digitally literate, adaptable, ready to apply their computing knowledge across the curriculum and beyond, and enthusiastic to study computer science further.

Key stage 4, Years 10 and 11

Our KS4 Computer Science curriculum is designed to prepare pupils for success in Computer Science GCSE using the Cambridge OCR exam board.

Building on strong foundations from KS3, pupils will learn to apply the core concepts in computer science. They will analyse problems in computational terms and devise creative solutions by designing, writing, testing and evaluating programs.

As well as leaving KS4 with a strong qualification in GCSE Computer Science, our intent is that this curriculum sets pupils up with the skills that will allow them to pursue a future in computer science.

GCSE course information

Exam board	OCR
Course	GCSE Computer Science (J277)
Specification and resources	https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/

Year 7

In year 7, students begin to learn about how computers work and how we can use them well to enhance our lives.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Foundations for digital success	Block-based programming	Understanding computer systems	How do computers represent our world? (Data representation)	Introduction to text-based programming (Python)	Creative computing

Assessments will take place in January and June and we will share revision information a few weeks before each assessment.

Year 8

Legacy curriculum

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Data representation - binary	Computing Systems	Media – digital graphics	Digital Safety	HTML & CSS	Python

Assessments will take place in January and June and we will share revision information a few weeks before each assessment.

Year 9

Legacy curriculum

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cyber security	Data science	Back to the Future – CS history	Python 2	Networks	Computer Science related issues

Assessments will take place in January and June and we will share revision information a few weeks before each assessment.

Year 10

In year 10, students are immersed in programming, developing a strong knowledge and the ability to solve problems which is then revisited throughout the course. They then move to considering the architecture of systems and how computer hardware works.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Python programming and fundamentals	Further Python programming	Computational thinking and languages	Robust programming & SQL	Systems architecture	Memory and storage

Assessments will take place in April and we will share revision information a few weeks before each assessment.

Year 11

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Development	Procedural Programming	Data, systems and networks	Software, algorithms and digital technology	*Exams*	*Exams*

Mocks will take place in November and February and we will share revision information a few weeks before each assessment.