

Computer Science Curriculum Overview

Below is a curriculum overview, showing what is taught at each stage of the year.

	Cycle 1	Cycle 2	Cycle 3
Year 7	<p>Topic: IT Systems at Isca</p> <p>Overview: How to use Google Classroom How to use Classcharts How to use Google Documents Coding and sequencing online</p> <p>Assessment Week: Skills and keywords</p>	<p>Topic: Computer Systems and Binary</p> <p>Overview: Online Programming What is inside a computer Flowcharts and Sequencing Computer Memory</p> <p>Assessment Week: Computer hardware identification and binary</p>	<p>Topic: Programming</p> <p>Overview: What is a sprite Coordinates and movement Variables Project creation</p> <p>Assessment Week: Flowcharts and programming</p>

	Cycle 1	Cycle 2	Cycle 3
Year 8	<p>Topic: Python</p> <p>Overview: Flowcharts and sequencing Selection – IF statements Inputs and outputs Variables</p> <p>Assessment Week: Python programming</p>	<p>Topic: Introduction to iMedia</p> <p>Overview: This cycle is to give students an idea of what our other options course of iMedia contains. Photoshop tools Documentation and client briefs</p> <p>Assessment Week: Photoshop tools usage</p>	<p>Topic: Programming fundamentals</p> <p>Overview: Logic Gates Bubble Sorting Insertion Sorting Linear Searching Binary Searching</p> <p>Assessment Week: Application of searching and sorting</p>

	Cycle 1	Cycle 2	Cycle 3
Year 9	<p>Topic: OCR Computer Science J277 2.1 – 2.2</p> <p>Overview: Build a solid programming foundation. Python Skills Searching and sorting algorithms Python interactive story development Programming Trace Tables</p> <p>Mid-Cycle Assessment: Searching and Sorting</p> <p>Assessment Week: Topics 2.1 – 2.2 from the specification</p>	<p>Topic: OCR Computer Science J277 2.3 – 2.5</p> <p>Overview: Programming fundamentals Producing robust programs Boolean Logic Programming languages and integrated development environments Practice programming project development</p> <p>Mid-Cycle Assessment: Logic Gates</p> <p>Assessment Week: Topics 2.3 – 2.5 from the specification</p>	<p>Topic: OCR Computer Science J277 1.2</p> <p>Overview: Primary Storage Secondary Storage HTML & Javascript programming Binary conversion, addition and shifting Binary check digits Hexadecimal conversion Character sets Image resolution</p> <p>Mid-Cycle Assessment: Binary and hexadecimal conversion</p> <p>Assessment Week: Topic 1.2</p>

	Cycle 1	Cycle 2	Cycle 3
Year 10	<p>Topic: OCR Computer Science J277 1.1 – 1.3</p> <p>Overview: Computer System Architecture Primary & Secondary memory Computer Networks</p> <p>Mid-Cycle Assessment: System Architecture and Memory part 1</p> <p>Assessment Week: Topic Test on 1.1 – 1.3</p>	<p>Topic: OCR Computer Science J277 1.3 – 1.5</p> <p>Overview: Network topologies Virtual Networks Network Security Network layers & protocols</p> <p>Mid-Cycle Assessment: Network topologies and Virtual Networks</p> <p>Assessment Week: Topic test on 1.3 – 1.5</p>	<p>Topic: OCR Computer Science J277 1.6, 2.3 – 2.5</p> <p>Overview: Ethical, legal and cultural computer system considerations Defensive Design Maintainability of programs Logic Gates Translators and Interpreters</p> <p>Mid-Cycle Assessment: Topic test on 1.6, 2.3 – 2.4</p> <p>Assessment Week: Topic test on 1.6, 2.3 – 2.5</p>

	Cycle 1	Cycle 2	Cycle 3
Year 11	<p>Topic: OCR Computer Science J276 1.1 – 1.6</p> <p>Overview: System Architecture Computer Memory Storage Networks Network protocols Systems Software</p> <p>Mid-Cycle Assessment: Test on 1.1 – 1.4</p> <p>Assessment Week: Mock Paper 1 and Paper 2 (previous year)</p>	<p>Topic: OCR Computer Science J276 1.7 – 1.8 & 2.1 – 2.4</p> <p>Overview: Programming fundamentals Pseudocode Computational logic Translators and facilities of languages</p> <p>Mid-Cycle Assessment: Test on 2.1 – 2.3</p> <p>Assessment Week: Mock Paper 1 and Paper 2 (2 years previous)</p>	<p>Topic: OCR Computer Science J276 2.6 & Revision</p> <p>Overview: Data representation Binary Hexadecimal Sound & Compression Character Sets</p> <p>Assessment Week: Not present due to real exams occurring</p>