DROITWICH SPA HIGH SCHOOL AND SIXTH FORM CENTRE

Life. Changing. Learning.

Year 10 ICT and Computer Science

(GCSE Computer Science)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Computational Logic (2.4) Von Neumann Architecture (1.1) Data Representation (2.6)	Computational Logic (2.4) Von Neumann Architecture (1.1) Data Representation (2.6)	Programming Techniques (2.2) Data Representation (2.6) Translators and facilities of languages (2.5)	Programming Techniques (2.2) Data Representation (2.6) Translators and facilities of languages (2.5)	Programming Techniques (2.2) Computational thinking (2.1) Translators and facilities of languages (2.5)	Programming Techniques (2.2) Computational thinking (2.1) Translators and facilities of languages (2.5)
Assessment	SLR's (Student learning records), MCQ's and PPE	SLR's (Student learning records), MCQ's and PPE	SLR's (Student learning records), MCQ's and PPE	SLR's (Student learning records), MCQ's and PPE	SLR's (Student learning records), MCQ's and PPE Specifically a Unit 1 and Unit 2 PPE	

Building on Prior Learning	• Re-cap on their understanding of low-level languages in Year 8 (Binary, Boolean Logic) by looking further into binary representation of characters, images and sound. • Taught how to use Python in Year 8 and 9 to allow them to complete programming based tasks. • Re-cap on their understanding of systems security after covering cyber security in Year 9.
Links with other subjects	• Close links with Product Design/Engineering through programming and handling hardware (PC components) • Basic ICT skills applicable across all subjects. • Geography – Use of sustainability and how Computer Science technology can have an impact on the environment (e-waste) • Religious Studies – Looking into the ethics behind the use of technology. • Law – Focus on the legislation surrounding the use of technology (e.g. Copyright, GDPR etc..)
Extracurricular opportunities	• Cyber Discovery – Online student-led course that is of interest to students who enjoy problem solving. • Cyber Competitions – National competitions run each year for girls and boys in which they are actively encourage to participate. • Revision workshop for GCSE students.
A successful learner in this subject will demonstrate	• Well organised – ability to store files with appropriate naming conventions in correctly named folders. • Resilient – technology can be temperamental and it's encouraging students to not give up.

	• Develop ways to improve their long-term memory by treating the subject as an educational experience and not just a case of them learning what they believe is "what they need to know" to get by.
Impact on personal development	• To become logical thinkers, problems solvers and will help them to develop resilience. • Provide a good platform for any students who wish to undertake the A Level Computer Science course.

Ways to support student learning in this subject
• Create 'joint-up thinking' – you will find that the structure of content delivered goes between Unit 1 and Unit 2 because there is so much overlap. This helps create a bigger picture for students and understand how it all 'fits' together. • Revision workshops occur on a weekly basis. • Action plans that can be shared with students and parents. • Walk and talk mock examinations. • Build their resilience, especially when it comes to problem solving (i.e. writing algorithms/programs)