



Year 7

Computer Science - STEAM

General Aim of the subject

In year 7 Computer Science is taught through Science, Technology, Engineering, Art and Mathematics (STEAM). Pupils will explore STEAM using a university-inspired model of learning. Each unit of work will involve tackling real-world challenges where the need to experiment rather than wait for instructions and will be required. This will allow for collaboration and critical thinking skills to be developed that can be used to solve even the trickiest problems.

Throughout the year each of the units of work has a firm grounding within the three strands of Computer Science:

- Computer Science (CS)

Understanding how computer function. Learning to write computer code.

- Digital Literacy (DL)

(Being able to use technology safely and responsibly)

- Information and Communication Technology (ICT)

(Create, re-use, revise and repurpose digital products)

The year 7 curriculum provides a solid base for students to continue their studies in year 8 and 9 through to IGCSE at year 10.

Year 7 Curriculum Content

Number of lessons per timetable cycle: 2

(Note - The order in which units take place will be different for each group due to availability of equipment)

Term	Term 1	Term 2	Term 3
Topic	7.1 - Hydro Dynamics CS - Basic programming ICT- Word processing DL - Facts and information online STEAM - Human water life cycle	7.2 - F1 in Schools CS - Vectors Vs Bitmaps ICT - Editing graphics DL - Digital copyright STEAM - Gears and Ratios used in a racing car (Lego)	7.3 - Abu Dhabi 2030 vision CS - 3D Vectors (3D modelling) ICT- Spreadsheets (Formulae and functions) DL - Website security STEAM - Building a 3D model for a concept building on Reem Island
Assessment	STEAM project - Lego robotics programming DL/ICT - Online test	STEAM project - Drag racing Lego cars DL/ICT - Online test	STEAM project - A concept building for reem island in 3D DL/ICT - Online test End of Year exam (all units)

Useful website(s):

teams.microsoft.com (all resources and support available with pupil login and password)