

Academic Learning Plan 2022-2023

Computer Science – Year 11

Intent : The Computing Department aims to establish, in all students, an enquiring mind and a positive can do approach. Computing is a practical subject that at times requires students to active learns sometimes learning through trial and error, helping to build resilience. Students will leave Wadham School with essential Computing skills for everyday life and an understanding of how to develop those skills further in our ever-changing technological landscape.



	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 11 Units	11A CT – Structured Programming 1 11 A PC - Internet Services	11B CT – Design and Testing 1 and Sorting 11B PC – Environmental Issues, Legislation and Licensing	11 C CT – Strings Design and Testing 2 11C PC – Images and Sound	11D CT – Structured Programming 2 11D PC – AI and Privacy		
Content	11A Computing Theory Intro to programming Subprograms Local, global Maths, time Problem solving 11A Principles of Computing Embedded systems The Internet of Things Packet switching TCP/IP 1 TCP/IP 2	11B Computing Theory Trace tables Errors Bubble sort Binary search Problem solving 11B Principles of Computing Environmental impact: manufacture & use Environmental impact: e-waste Low-level & high-level languages Translators Intellectual Property	11C Computing Theory Data types, string manipulation, validation Data structures (one-dimensional) Trace tables Errors Problem solving 11C Principles of Computing Bitmaps Bitmaps Sound Sound Compression	11D Computing Theory Data structures (two-dimensional) Subprograms (local, global, procedures, functions) Problem solving Trace tables, errors Problem solving, testing with data 11D Principles of Computing AI, machine learning & robotics 1 AI, machine learning & robotics 2 Personal data Privacy & ownership Data protection legislation	Revision	
Literacy	PPT for all lessons – keywords and new words / concepts re highlighted	PPT for all lessons – keywords and new words / concepts re highlighted	PPT for all lessons – keywords and new words / concepts re highlighted	PPT for all lessons – keywords and new words / concepts re highlighted		
Knowledge organiser	Coding organiser purchased for students to use. Knowledge organiser also given. Students have ppts for all the module given at the start of the module.	Coding organiser purchased for students to use. Knowledge organiser also given. Students have ppts for all the module given at the start of the module.	Coding organiser purchased for students to use. Knowledge organiser also given. Students have ppts for all the module given at the start of the module.	Coding organiser purchased for students to use. Knowledge organiser also given. Students have ppts for all the module given at the start of the module.		
Assessment	End of Module assessment sheet completed for each section (Computational Thinking and Principles of Computing)	End of Module assessment sheet completed for each section (Computational Thinking and Principles of Computing)	End of Module assessment sheet completed for each section (Computational Thinking and Principles of Computing)	End of Module assessment sheet completed for each section (Computational Thinking and Principles of Computing)		
GCSE AO Link (or other) if applicable	All AO's assessed.	All AO's assessed.	All AO's assessed.	All AO's assessed.		