



Computer Science CURRICULUM OVERVIEW

Key Stages 3 & 4

YEAR	TOPICS	TERMLY INDEPENDENT WORK
7	<ol style="list-style-type: none">Autumn Term<ol style="list-style-type: none">Basic Digital SkillsComponents of a Computer SystemData Representation Techniques#Media literacySpring Term<ol style="list-style-type: none">Introduction to programming - blocksComputational thinkingSummer Term<ol style="list-style-type: none">Further programming with textIntroduction to Minecraft Hour of Code	<ol style="list-style-type: none">Autumn Term<ol style="list-style-type: none">Research into the history of Computer ScienceSpring Term<ol style="list-style-type: none">Binary practiceSummer Term<ol style="list-style-type: none">Programming Challenges
8	<ol style="list-style-type: none">Autumn Term<ol style="list-style-type: none">Flowcharts and ControlPhysical computing with MicroBitsSpring Term<ol style="list-style-type: none">Further introduction to text based programmingDeveloping for the webSummer Term<ol style="list-style-type: none">2D AnimationExcel skills	<ol style="list-style-type: none">Autumn Term<ol style="list-style-type: none">Flowol modelsInvestigation into embedded systemsSpring Term<ol style="list-style-type: none">Python: Chilli ChallengesMinecraft Data RepresentationSummer Term<ol style="list-style-type: none">HCI design



Computer Science CURRICULUM OVERVIEW

Key Stages 3 & 4

9	<ol style="list-style-type: none">1. Autumn Term<ol style="list-style-type: none">1.1. Networking – Online safety and the internet1.2. 3D modelling and animation2. Spring Term<ol style="list-style-type: none">2.1. Modular programming in C#2.2. Mobile apps development3. Summer Term<ol style="list-style-type: none">3.1. Game Development (Godot)3.2. Minecraft Edu	<ol style="list-style-type: none">1. Autumn Term<ol style="list-style-type: none">1.1. Develop revision guide on networking1.2. Using blender2. Spring Term<ol style="list-style-type: none">2.1. Creating mobile apps3. Summer Term<ol style="list-style-type: none">3.1. Robotics investigations3.2. Open Ended programming project
10	<ol style="list-style-type: none">1. Boolean Logic2. Data Representation3. Designing, creating and refining algorithms4. Machine Architecture5. Network Topologies6. Practical Programming	<ol style="list-style-type: none">1) A wide range of extension programming tasks are available throughout the year, requiring students to develop their analytical, design and development skills within C#2) Develop revision materials in collaborative work area3) Investigation into Assembly Language4) Investigation of alternative languages
11	<ol style="list-style-type: none">1. Wired and Wireless networks2. Topologies, protocols and layers3. Defensive Design4. Practical programming projects5. System software6. Language Translation7. Ethical, legal, cultural and environmental impact	<ol style="list-style-type: none">1) Develop revision materials in collaborative work area2) Research directly relating to the programming project

PLEASE NOTE:



Computer Science CURRICULUM OVERVIEW

Key Stages 3 & 4

- This overview sets out a general summary of the basic curriculum taught. It is not an exhaustive list of what may be taught and subject teachers may follow the above in a different order. Further details may be obtained from the Head of Department, if required.
- The Independent Work indicated represents core, headline tasks per term; independent/home work is set in all subject areas, and details are noted in Teams.