YEAR 9 ICT

PREPARING STUDENTS FOR TOMORROW, BIT BY BIT

The ICT department will help to create, share, and apply knowledge in all branches of Computer Science and ICT. We will educate students to be successful, ethical, and effective problem-solvers with a passion to innovate and create, rather than just passive consumers and users of technology. We will develop an understanding and appreciation of all aspects of digital products, from how they work to how they look. We will foster curiosity and encourage exploration to create students who can contribute positively to the well-being of our society and who are prepared to tackle the complex 21st Century challenges facing the world.

Summary focus areas:

- Innovate, create, develop
- Solving 21st Century problems
- Active developers not passive consumers

AUTUMN		SPRING		SUMMER	
System lifecycle User Interfaces	Designing for an audience and purpose	Project planning techniques Designing and developing interfaces	Designing and developing interfaces	Component 1 assessment Project Part A	Component 1 assessment project Revision and exam practice

Homework for ICT is set weekly to support and extend the students' studies from their lessons. Work may be a mixture of practical, computer-based tasks and paper-based written work or design tasks. Activities set as homework may be:

- Preparatory work or research ahead of a new topic or concept being discussed in lessons.
- Extension work that allows the student to explore a topic in more depth or in other contexts.
- Application work that allows students to practise skills or demonstrate abilities.

Students are expected to spend around an hour on a homework activity each week and work is marked promptly to help students to identify and understand their weaknesses to make incremental improvements over the course of the year.

UNIT	DURATION (LESSONS)	LEARNING OBJECTIVES/OUTCOMES
System lifecycle	8	• Understand the purpose of a system lifecycle • Explain the tasks that would take place at each stage • Apply the system lifecycle approach to different contexts
User interfaces	8	• Understand what a user interface is and different types that can be used • Identify how to choose an appropriate type of interface based on audience and purpose • Understand the different hardware components of a system • Explain the impact of different hardware and software on the user interface choice
Designing for an audience and purpose	16	• Identify the different needs of groups within society and understand how this impacts on their needs from a computer system and user interface • Understand how to provide services that cater for users with accessibility issues • Identify the audience in given contexts • Explore a range of design principles and understand the impact the choices can have on audiences and accessibility • Investigate a range of real life products and explain their use of design principles • Design products that are suitable for different audiences
Project planning techniques	10	• Explore a range of professional project planning tools and techniques • Understand the benefits and drawbacks of different techniques • Identify appropriate situations where different techniques should be used • Create a project plan for a given scenario

Designing and developing interfaces	12	• Explore different software tools that can be used to create user interfaces
		• Use software to create sample interfaces that perform different functions
		• Develop an interface to meet a specific brief by:
		  o Identifying system and user needs
		  o Designing an interface and justifying choices
		  o Presenting the design to potential users and using feedback to refine the design
		  o Creating a prototype
		  o Reviewing and evaluating the design

Component 1 assessment project, part A	20	- Investigate User Interface Design, including accessibility, hardware & software and emerging technologies. - Investigate design principles, such as colours, fonts, language, amount of information, layout, retaining user attention, sound and visuals. - Justify the most suitable choice of User Interface for a given purpose taking into account accessibility, user skill level and demographics and techniques used to improve speed and ease of access to the interface.