

Sackville School Computer Science Curriculum - Year 13 IT



TERM	WHAT? (Is delivered?)	WHY? (Is this important?)	WHY NOW? (Why is this taught now?)	IMPACT? (What is the impact at the end of this half term?)	ASSESSMENT
Aut 1	Unit 17: Internet of Everything	<ul style="list-style-type: none"> To enable the creation of context-aware, hyper-personalized, and adaptive applications that interact seamlessly with both physical and digital environments. Essential for managing and deriving actionable value from the vast, heterogeneous data sets (Big Data) generated by integrated IoT systems.. 	<ul style="list-style-type: none"> The industry standard for application development is rapidly shifting from isolated mobile/desktop apps to holistic, interconnected systems (e.g., smart infrastructure, industrial automation). To equip developers with the necessary skills to design applications that utilize emerging technologies like edge computing, machine learning, and sensor integration, which are IoT fundamentals. 	<ul style="list-style-type: none"> Learners can design and document application architectures that clearly differentiate between IoT data sources (people, process, things) and define the necessary processing points (edge vs. cloud). Students will be able to justify the selection of appropriate IoT technologies (e.g., communication protocols, security models) required to meet complex, real-world business requirements. 	Final NEA Assessment
Aut 2 and Spr 1	Unit 6: Application Design and Prototyping	<ul style="list-style-type: none"> To validate the technical feasibility and usability of the application early, allowing designers to fix flaws and confirm requirements before expensive development begins. Ensures the final product is user-centric, aesthetically pleasing, and provides an intuitive experience that meets stakeholder needs. 	<ul style="list-style-type: none"> Design and prototyping are the first steps in any structured project methodology (like Agile or Waterfall), establishing the blueprint for all subsequent development work. It is critical for the pathway as it directly leads into development units, ensuring students have a fully scoped and tested design specification to code against. 	<ul style="list-style-type: none"> Learners can produce a detailed, signed-off design specification that includes wireframes, navigational maps, UI components, and justified design choices. Students will create an interactive, high-fidelity prototype that allows stakeholders to simulate key user journeys and provide specific, actionable feedback on the application's look and feel. 	Final NEA Assessment
Spr 2 and Sum 1	Unit 15 - Game Design and Prototyping	<ul style="list-style-type: none"> The systematic creation of core mechanics, narrative structure, level layouts, and rules that govern player interaction within a game environment. The development of iterative, playable versions (prototypes) to test and refine the game's core loop, pacing, and player enjoyment (fun factor). 	<ul style="list-style-type: none"> The principles of game design (user flow, instant feedback, reward loops) are transferable to mainstream application development, making user interfaces more engaging. Prototyping allows for rapid, low-cost failure and learning, which is a critical skill in modern, iterative software development environments. 	<ul style="list-style-type: none"> Learners can produce a detailed Game Design Document (GDD) that covers mechanics, player goals, technical specifications, and monetisation strategies (if applicable). Students will deliver a functional, minimal-viable-product (MVP) prototype that clearly demonstrates and validates the core gameplay loop and rules of their game concept. 	Final NEA Assessment

Links to L4L Curriculum and Gatsby Benchmarks:
Job roles and professional bodies in IT

