All Saints' Academy Computing KS3 Curriculum 2024-2025

Cycle/Year	7			8			9		
	Knowledge & Skills	Enrichment	Cross-Curricular	Knowledge & Skills	Enrichment	Cross-Curricular	Knowledge & Skills	Enrichment	Cross-Curricular
1	**Introduction to Using a Computer** - Logging in, creating files, managing workspace **Programming 1 – Kodu** - Introduced to KODU and its programming environment - Explore movements, characters, and terrain building - Make use of the block-based coding skills to build a successful game - Drive your own project to create an exciting and intuitive game *End of Module Assessment*	***Year 7 – Cyber Explorers***	**Mathematics:** Programming Logic Students create simple programs using Microbit that involve mathematical operations, such as calculating the sum of two numbers or creating patterns with LEDs based on mathematical sequences.	**Cyber Security** - Fundamentals of cyber security - Online safety and privacy - Digital footprint and social media - Cyber security tools and techniques **Vector Graphics in Inkscape** - Drawing and manipulating shapes - Grouping objects, converting paths - Vector design based on a scenario **Website Development Using Rocket Cake** - Basics of HTML and CSS - Creating and modifying web pages - Using search technology and hyperlinks *End of Module Assessment*	***Year 8 - BEBRAS***	**Mathematics**: Geometric Transformations Use Inkscape to explore geometric transformations such as scaling, rotation, and reflection. Integration: Link geometric concepts to practical applications in vector design. **Art and Design:** Graphic Design Principles Create a project that involves designing a product (e.g., a logo, poster, or promotional material) using vector graphics.	**Graphics Designing Using Canva** - Introduction to Canva - Graphic design principles - Designing marketing materials, presentations, infographics **Introduction to Blender** - 3D design and modelling - Mini project: Pen topper ECDL (European Computer Driving License) - Proficiency in Word, PowerPoint, Excel - Assessment against criteria *End of Module Assessment*	***Raspberry Pi Setup and configuration***	**English:** Creating Promotional Materials Design marketing materials such as brochures, flyers, or social media graphics for a fictional or real product or event. **Art and Design:** Graphic Design Principles Create a series of digital artwork or a portfolio showcasing different graphic design principles learned in Canva. This can include designing posters,

									flyers, or digital art.
Careers	Software Developer, Embedded System Engineer or STEM Educator			Graphics Designers, UI Interface designer or motion Graphics Designer			Computer Hardware Engineer, Software Tester or Memory Systems Architect		
2	**Data Science – Spreadsheets:** - Data entry, formatting, formula creation - Data analysis and modelling - Visual data presentation **App Lab – Mobile Phone Development** - Programming concepts: variables, loops, conditionals, functions - UI design - App development process - Problem-solving skills *End of Module Test Assessment*	***Design for 3D printing***	**Mathematics:** Use spreadsheets for calculations, modelling and graphs. Using Algebra in Code and Algorithms.	**Game Development Competition using Game Maker Arcade** - Design and develop games based on competition criteria **Creative iMedia – Pre-Production** - Pre-production documentation (mood boards, storyboards, scripts) - Time management, and planning skills - Legal and ethical issues, client requirement analysis *End of Module Test Assessment*	**Game Development Competition**	**Mathematics** Geometry: Use geometric principles for game design. Algebra: Apply algebraic formulas for game physics, scoring systems, and character movement. Statistics: Analyse player data to improve game design and mechanics.	**Alessi Inspired Phone Holder** - Working on a brief, product analysis - Designing for laser cutting - Evaluation against specifications **Extended CAD Project** - 3D CAD design using TinkerCAD. - Problem-solving, client feedback, 3D printing. **Extended CAD Project** - 3D CAD design using TinkerCAD. - Problem-solving, client feedback, 3D printing. *End of Module Test Assessment*	**Cyber Adventurers**	***Art and Design*** *Product Analysis: Study and incorporate design aesthetics inspired by Alessi, focusing on form, function, and visual appeal.*

Careers	**Mobile phone developer**			**Project Manager**			**Software Designer**		
3	**Packaging pop-outs** -Designing for others -Design influence in our design ideas -Sketching and modelling out your design ideas -Modelling skills used in idea generation -Production processes used in prototyping of design ideas -Mass production of products. - -Graphic communication -An introduction to CAD & 3D modelling -The world of design -Technical drawings -Printing Name tags *Assessment: Project Evaluation*	**VR Experience**	**DT:** Working to create 3d modelling for use with 3d printing **ART:** Sketching and drawing for prototyping and printing	**Core design skills** -Graphic communication -An introduction to CAD & 3D modelling -The world of design -Technical drawings -Create and 3D print a pen - Introduction to 3D Printing - 3D Design Software the pen - Designing a Model / Prototype -3D Print *Assessment: Project Evaluation*	**Web Design Contest**	**DT:** Working to create 3d modelling for use with 3d printing **ART:** Sketching and drawing for prototyping and printing	**Microbit Revisited** - Code with Python - Variables, loops, conditionals, event-driven programming **Microbit Wearable** **3D printing group Project** - Introduction to 3D Printing - Understanding 3D Models - Advanced 3D Design Software skills - Designing a Model / Prototype -Submit project -Preparing for Printing - Operating a 3D Printer -Printing and Post-Processing - Reflection and Evaluation *Assessment: Project Evaluation*	***3D design***	**DT:** Working to create 3d modelling for use with 3d printing **ART:** Sketching and drawing for prototyping and printing **English:** Writing a project submission brief
Careers	**CAD Engineer, Game Designer**			**Animator, Product Engineer**			**3D Graphics Designer, Game developer**		