Computing Department
Curriculum – Key Stage 3

Key Stage 3 Curriculum Overview 2025-26

		AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
7	Unit description	<u>Topic 1 - Digital Licence</u> **6 Lessons** The Digital Licence unit is designed to equip students with the essential IT skills needed to succeed at Bishop Stopford. Students learn how to confidently log in to key school systems, navigate the digital learning environment, and communicate effectively by writing professional emails. The unit also introduces students to the responsible use of AI tools, helping them understand how to use technology ethically and effectively to support their learning.	<u>Topic 2 - Interactive PowerPoint</u> **6 Lessons** Students learn how to create an interactive, kiosk-style system using PowerPoint, designing their project around a topic of their choice. They explore the use of hyperlinks, navigation buttons, and basic scripting features to build a non-linear presentation. The unit places a strong emphasis on file management and organisation, addressing a key area for development identified across all year groups.	<u>Topic 3 – Small basic</u> **6 Lessons** Students are introduced to text-based programming through Small Basic, using the Turtle tool to draw a range of shapes and patterns. As their confidence grows, students expand their programs to include the use of variables, for loops, and subroutines. This unit builds foundational programming skills in a simple and engaging environment, preparing students for more advanced coding in future units.	<u>Topic 4 – Video editing</u> **5 lessons** Students are introduced to the fundamentals of video production, learning about different types of camera shots and how they are used to create meaning. They develop practical editing skills by importing and arranging clips in a video editor, and enhancing their work with captions, transitions, and basic animations using keyframes. The unit encourages creativity while building technical proficiency in multimedia editing.	<u>Topic 5 – Binary and logic circuits</u> **4 lessons** Students are introduced to how computers use binary to represent data, learning to convert between binary and denary and perform simple binary addition. They also explore basic logic gates, including AND, OR, and NOT, and use truth tables to understand how these gates are used in decision-making processes within computer systems.	<u>Topic 6 - Spreadsheets</u> **5 lessons** Students develop key spreadsheet skills, including basic formatting and the use of common functions such as SUM, AVERAGE, MAX, MIN, and COUNT. They learn how to organise and analyse data by sorting, filtering, and searching through datasets. The unit also introduces data collection using forms
	Assessment	**Baseline test – self marked quiz** Students will complete a baseline test on basic IT, problem solving and use of common software taught at Ks2. The aim of this assessment is to identify the strength and weakness of the group.	**Project hand in – teacher marked** Student will upload their completed PowerPoint to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.	**Programming test – self marked quiz** Students will complete a MS form with a mix of question that require written responses, reordering code and multiple-choice questions.	**Project hand in – teacher marked** Student will upload their completed Video to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.	**Binary test – self marked quiz** Students will complete a MS form with a mix of question that require written responses and multiple-choice questions.	**Spreadsheet hand in – teacher marked** Student will complete a spreadsheet scenario with a range of different skill and upload their completed spreadsheet to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.

Computing Department
Curriculum – Key Stage 3

Key Stage 3 Curriculum Overview 2025-26

		AUTUMN 1	AUTUMN 2	SPRING 1 / SPRING 2	SPRING 2 / SUMMER 1	SUMMER 2
8	Unit description	<u>Topic 1 – App lab</u> 7 Lessons Students learn how to design and build their own apps using App Lab. The unit begins with a guided project where students recreate a teacher-led app to familiarise themselves with the tools and interface. They then move on to designing and developing their own original app ideas. Most students start with block-based programming, but as their confidence grows, they are encouraged to transition to JavaScript to extend their skills and understanding. (Links to Y7 Small Basic topic)	<u>Topic 2 – Hardware and software</u> 6 Lessons Students explore the difference between hardware and software, learning about common input and output devices and the various types of software, including system and application software. The unit then introduces students to artificial intelligence, with a focus on the responsible and ethical use of AI tools. To apply their learning, students create a basic image recognition tool, gaining hands-on experience with how AI can be used in real-world applications. (Links to Y7 digital licence topic)	<u>Topic 3 – Image editing</u> 6 Lessons Students develop essential skills in photo editing using Photopea, learning how to remove backgrounds and manipulate images through moving, resizing, and transforming. They explore advanced techniques such as using the burn and dodge tools to enhance images and create depth. The unit culminates in students producing graphic using the skills learnt. (Links to Y7 video editing topic)	<u>Topic 4 – Algorithms and computational thinking</u> 11 lessons Students begin by exploring key concepts of computational thinking, focusing on abstraction and decomposition. In the second half of the unit, they learn to design and interpret flowcharts using the interactive tool Flowol, which brings their flowcharts to life through animated, interactive diagrams. (Links to Y7 small basic topic)	<u>Topic 5 - HTML</u> 7 lessons Students learn the fundamentals of web development by creating simple web pages using HTML. They practice adding and formatting text, inserting images, and creating hyperlinks. The unit also introduces basic CSS styling to control the appearance of their pages. To enhance interactivity, students experiment with basic JavaScript, adding simple scripts to make their websites more dynamic and engaging.
	Assessment	**Project hand in – teacher marked** Student will upload their completed app to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.	**Hardware and software test – self marked quiz** Students will complete a MS form with a mix of question that require written responses, reordering code and multiple-choice questions.	**Project hand in – teacher marked** Student will upload their completed graphic to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.	**Algorithms test – self marked quiz** Students will complete a MS form with a mix of question that require written responses, reordering code and multiple-choice questions.	**Project hand in – teacher marked** Student will upload their completed website to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.

Computing Department
Curriculum – Key Stage 3

Key Stage 3 Curriculum Overview 2025-26

		AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
9	Unit description	<u>Topic 1 – System security</u> 5 Lessons Students explore common cybersecurity threats including malware, DDoS attacks, and social engineering techniques. They learn about both physical and software-based methods to prevent and protect against these threats, developing an understanding of how to maintain security and safeguard personal and organisational data.	<u>Topic 2 – Python programming</u> 5 Lessons Students are introduced to fundamental programming concepts using Python, including input and output with print statements, variables, and decision-making using if statements and iteration practice through for loops. Student do this unit before the options. **(links to Y7 small basic topic)** **(Links to Y8 app lab topics)**	<u>Topic 3 - Python text-based adventure game</u> 4 Lessons Students build a simple text-based adventure game using Python, applying key skills like input, variables, if statements, loops, lists, and functions. This project develops their programming confidence and problem-solving abilities. **(links to Y7 small basic unit)** **(Links to Y8 app lab topics)** <u>Topic 4 – Women in computing</u> 2 Lessons Students explore the contributions of women in computing from the past to the present and discuss future opportunities. The unit aims to inspire more girls to consider careers in STEM by highlighting diverse role models and achievements.	<u>Topic 5 - 3D modelling in blender</u> 7 lessons Students learn the fundamentals of 3D modeling using Blender, including how to create, move, rotate, and scale objects within a 3D space. They explore adding materials and applying basic animations to bring their models to life. The unit also introduces more advanced techniques such as editing individual shapes using tools like loop cut and extrude, enabling students to build complex and detailed models.	<u>Topic 6 – Ethical and legal impacts of technology</u> 4 lessons this unit introduces students to key ethical and legal considerations in computing, including data privacy, intellectual property, and cybercrime. It places additional emphasis on emerging technologies such as AI, automation, and their societal impacts, encouraging students to think critically about the responsibilities and challenges that come with technological advancement. **(Links to Y8 hardware and software topic)**	<u>Topic 7 – Spreadsheets 2</u> 5 lessons Building on prior spreadsheet skills, this unit begins with a recap of key functions such as SUM, AVERAGE, and data sorting. Students then move on to more advanced features, including conditional formatting, IF statements, and VLOOKUP functions. Students will use these skills in a small spreadsheet project. **(links to year 7 spreadsheets 1)**
	Assessment	**System security test – auto marked** Students will complete a MS form with a mix of question that require written responses and multiple-choice questions.	**Python baseline test** Student will complete a python question based on the GCSE. This gives students an indication of their programming skills before options.	**Python game peer assessed** Students will review each other's games and provide feedback. Student will make changes to their games based on this feedback.	**Project hand in – teacher marked** Student will upload their completed blender project to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.	**Written response – teacher marked** Student will write a written response to a scenario. That will then be graded by their teacher.	**Project hand in – teacher marked** Student will upload their completed spreadsheet project to a Team's assignment which will be marked using a Rubrik. Student will be aware of grading requirements beforehand.

>Something More?

Curriculums at BSS are designed to nurture not only intellectual and physical development but also the spiritual growth of students. This will be through:

Encouraging students to reflect on their experiences, beliefs and purpose and to contemplate the big Questions of Who am I? Why am I here? What is my purpose?

Highlighting extraordinary people, events, and discoveries that inspire awe or investigates how a sense of awe has led to breakthroughs and creativity.

Using art, music, literature, and nature to inspire awe, wonder, and spiritual insight.

Encouraging creative expression to connect with the inner self and the transcendent.

Fostering a sense of belonging and interconnectedness with others, nature, and the universe.

Encouraging self-awareness, emotional intelligence, and moral reasoning.

Promoting open-ended investigations rather than just seeking right answers.

Using hands-on activities, field trips and experiments to immerse students in learning and evoke wonder.

How does our curriculum do >Something More?

Encouraging students to reflect on their experiences, beliefs and purpose and to contemplate the big Questions of Who am I? Why am I here? What is my purpose?

- ✓ **Discussions on AI, social media, or data ethics can prompt reflection on personal values and the role of humans in a digital world.**

Highlighting extraordinary people, events, and discoveries

- ✓ **Sharing the stories of computing pioneers like Alan Turing, Tim Berners-Lee or the extraordinary women in STEM (year 9 unit 4)**

Encouraging creative expression / Promoting open-ended investigation

- ✓ **With the removal of creative iMedia as an option, the Ks3 specification has been altered to include 3D modelling, image editing and video editing. This topics end in student led projects and focus on curiosity and self-exploration. All programming topics allow students to go beyond the scope of the KS3 curriculum adding their own thoughts and ideas.**

Fostering a sense of belonging and interconnectedness

- ✓ **Students are introduced to a range of different technologies to encourage communication and collaborative work through office 365.**

Encouraging self-awareness, emotional intelligence, and moral reasoning

- ✓ **Topics like AI bias, data privacy, or cybersecurity ethics can prompt students to think deeply about fairness, justice, and personal responsibility**.