



Curriculum Overview KS3 Computing

Curriculum Intent

“Our world is digital. An understanding of computers will enable students to make informed choices in their digital world.”

Our computing keystage 3 curriculum equips pupils to use computational thinking and creativity to understand and change the world as well as develop a wide range of software and ICT skills using multiple packages.

Computing is an umbrella term to encompass two different strands that we offer to learners of our subject: Computer Science and ICT. In Year 9 students are given the foundations in Business/ICT/Computer Science/Digital Media

By the end of KS3 an Oldbury Academy Computing student will:

Be aware of the opportunities and limitations of living in a digital world

Understand the core principles of information and computation, how digital systems work and how to put this knowledge to use through programming or product creation.

Be equipped to use technology to create programs, systems and a range of content.

Become digitally literate – able to use computers to express themselves and develop their ideas.

at a level suitable in order to become active participants in a digital world.

How will we know if we have been successful?

- Students will understand a range of ways to use technology safely, respectfully, responsibly and securely
- Students will understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems.
- Students will understand how instructions are stored and executed within a computer system
- Students will understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally
- Students will undertake creative projects that involve selecting, using, and combining multiple applications
- Students will create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability



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	Year 7	Year 8	Year 9
Autumn Sept – Oct	<p>Overview – Introduction to Computing/knowledge Computing Standards and expectations, using the network, introduction to key software, e-safety.</p>	<p>Overview – Social Networking /knowledge Researching and presenting information on cyber threats to teenagers, catfishing, grooming, viruses, and developing a poster for e-safety</p>	<p>Overview – Theme Park Students will be developing a number of resources for an existing theme park. They will be provided with a Scenario and use mindmaps to plan ideas. They will be taught about Market Research, how to storyboard to plan a video and then create a video. They will use logicator or flowol to program a ride for the theme park and then use excel to understand profit and loss and create a spreadsheet to track data for the theme park.</p>
	<p>Skills Files & folders, saving, file management PowerPoint – key skills and professional presentations Word - tables</p>	<p>Skills Graphics – text and vector skills PowerPoint – professional designs</p>	
	<p>Assessments Socrative Assessment on key knowledge Self-assessment on PowerPoint, Word, Knowledge of Computing and E-safety through AE. Mid-point and End-point teacher feedback and peer assessment</p>	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Graphics, Word, PowerPoint, and E-safety through AE. Mid-point and End-point teacher feedback and peer assessment</p>	
Autumn Nov – Dec	<p>Overview – History of Computing/knowledge Introduction to Computer Science and history of key computer scientists. Ada Lovelace and her role in the history of computing</p>	<p>Overview – Webdesign/knowledge Plan and develop an website for a specific purpose Design graphical elements for a website Learn key webdesign terminology Learn about the make up of a URL and domain</p>	<p>Skills Mindmaps & Storyboards Market research – planning and creating surveys. Collating and analysing data using spreadsheets. Difference between primary and secondary research. Video editing skills, including cutting videos, transitions, effects, sound overlays Control – input and output, decisions, loops, Excel – data analysis, graphs, formulas, goal seek?</p>
	<p>Skills Publisher – layout a document Excel – creating tables, creating a timeline Ada – introduction to flowcharts and sequencing</p>	<p>Skills Word – visualisation of webpage, layout of pages Fireworks – applying graphics tools, editing existing images Web serif – using web serif , setting up pages, links between</p>	
	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Publisher, Excel, Knowledge of Computing and E-safety through AE Mid-point and End-point teacher feedback and peer assessment</p>	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Word, Graphics, App Development, Spreadsheets through AE. Mid-point and End-point teacher feedback and peer assessment</p>	
Spring Jan - Feb	<p>Overview - Sea Life Centre/knowledge Range of activities around the sea life centre. Introduction to graphics and simple animations. Key element is creating a game using Scratch. Create a simple spreadsheet, introduced to formulas. Introduced to access and setting up a flat file.</p>	<p>Overview – E3 Expo/knowledge Complete a range of tasks to prepare for the E3 Expo, a technology expo in LA. Developing a spreadsheet of computer games, a flyer to hand out to delegates, a database of information about the Expo and a scrolling digital advert. Finally complete a mobile game in Kodu.</p>	<p>Overview – Supermarket Develop resources for a business. Suggestion is a supermarket. Students will develop moodboard for an advertisement campaign, then use photoshop to create an advertisement for the business. Students will learn about ownership models and use word/powerpoint to collate and present their findings. Students will develop a database to organise, sort and search customer data. Students will develop a “user interface” for the database using forms and reports. They will consider what makes an effective UI.</p>
	<p>Skills Fireworks – basic graphic elements, and simple animations Access – setup of flat files, data entry Scratch – developing a game – sequencing, loops, selection, Excel – tables, simple formulas</p>	<p>Skills Excel – functions review, charts & graphs Publisher – using templates, layout of page PowerPoint – master slides, slideshow setup, timings Fireworks – 2 page spread, descriptive writing, layers Kodu – developing a gaming environment</p>	



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	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Graphics, Databases, Scratch and Spreadsheets through AE Mid-point and End-point teacher feedback and peer assessment</p>	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Graphics, Excel, Publisher, PowerPoint, Kodu through AE. Mid-point and End-point teacher feedback and peer assessment</p>	<p>They will use Word/Access to mailmerge a marketing email/letter. They will learn about cyber security and network topologies in the context of the business.</p>
<p>Spring Feb - Easter</p>	<p>Overview – Superhero Theme/knowledge Will create a database for superheroes. Simple flat files and then filtering/searching the database. Create a graphic logo for superhero. Embedded systems in the iron man suit.</p>	<p>Overview – Think Tank/knowledge Complete a range of tasks for Thinktank Science Museum, including a newsletter, a database, excel spreadsheet with multiple tabs, poster to advertise an event, and a presentation about robotics.</p>	<p>Skills Developing moodboards Photoshop – importing and editing images. Layers and adjustments Word – document layout and presentation Database – importing data, datatypes, searching and filtering. Creating & editing forms & reports. How to mail merge</p>
	<p>Skills Databases – setup flat files, basic filtering & searching PowerPoint – animations and transitions Graphics – magic wand, lasso tool Publisher – setup publisher document, layout, wrapping text</p>	<p>Skills Word – templates, header & footer Database – forms, filters, queries Excel – multiple worksheets, functions & formulas Fireworks or Photoshop – layers, filters, magic wand</p>	
	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Databases, publisher, Powerpoint, Graphics and Knowledge of Computing through AE Mid-point and End-point teacher feedback and peer assessment</p>	<p>Assessments Socrative Assessment on key knowledge Self-assessment on PowerPoint, word, databases, excel through AE. Mid-point and End-point teacher feedback and peer assessment</p>	
<p>Summer Easter - May</p>	<p>Overview – NASA/knowledge Learning about computer systems and NASA. Basic structure of computers, Hidden Figures, Input & Output, Storage. Scratch game to control a Mars Rover</p>	<p>Overview – PC world/knowledge Create resources for PC World. Develop a video to advertise a product using just images, text and sound. Create a dummies guide to PC hardware</p>	<p>Overview – Reality TV Show Students will help the planning for a new reality TV Show. Project planning, waterfall methodologies and using a Gantt Chart. They will create a jingle using sound editing software. Develop a visualisation for a logo, and then create this using graphic editing software. They will then design layout and develop a website for the new TV show. They will use python to create a voting tool for viewers to vote about participants in the show.</p>
	<p>Skills PowerPoint – professional presentations. Creating own design Publisher – layout of documents Scratch – develop skills with sequencing, loops and selection</p>	<p>Skills Video editing – setting up video, transitions, adding sound, effects Publisher – layout of a document, multiple pages, consistent design</p>	
	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Scratch, PowerPoint, Publisher, Knowledge of computing through AE</p>	<p>Assessments Socrative Assessment on key knowledge Self-assessment on Video Editing, Publisher and Knowledge of Computing through AE. Mid-point and End-point teacher feedback and peer assessment</p>	
<p>Summer June - July</p>	<p>Overview – Game On/knowledge Students develop a computer game. Firstly carry out research into games, secondly develop a proposal and a game cover. Finally they develop the game independently.</p>	<p>Overview – Programming/knowledge Learn basic programming skills in python to create simple programs. Introduction to binary number system and how it is useful for computers Introduction to HTML to create simple pages</p>	<p>Skills Creating Gantt charts, planning projects Audacity – sound editing skills Visualisations – graphic and website layout Graphic editing (Photoshop/fireworks) – combining elements of an image</p>



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	<p>Skills Word – layout of word document, tables, formatting PowerPoint – professional presentations Graphics – layers, bitmap tools to edit existing images Scratch/Kodu – further development of skills in these subjects</p>	<p>Skills Python – input, output, variables, datatypes, selection (if, elif, else) HTML – basic tags and attributes, layout of a page Binary – simple binary translations. Image representation</p>	<p>Websites – using dreamweaver or serif to create a website for the TV show Python – sequencing, selection, iteration, saving to file, getting user input & output</p>
	<p>Assessments Socratic Assessment on key knowledge Self-assessment on Word, PowerPoint, Graphics, Scratch/Kodu through AE</p>	<p>Assessments Socratic Assessment on key knowledge Self-assessment on Programming, Word, Knowledge of Computing and HTML through AE. Mid-point and End-point teacher feedback and peer assessment</p>	<p>Assessments Socratic Assessment on key knowledge Self-assessment on audacity, graphics, web design, programming through AE</p>