Computing

Curriculum Overview

At Dixons Kings we develop students to lead successful and happy lives and make a positive contribution to their community. Our curriculum in each year is designed to provide experiences, opportunities, knowledge and skills that enrich and challenge our students. We understand that the curriculum is key to determining the life chances and choices for our students and therefore we will not compromise on providing the very best. We achieve this in Computing through the below:

Knowledge, skills and understanding to be gained at each stage:

		Cycle 1	Cycle 2	Cycle 3
Year 7	**Knowledge Introduced**	E-Safety & Spreadsheets	PowerPoint skills (endangered animals) & Scratch	Hardware & Software & Python programming
	Knowledge Revisited	Primary knowledge on online safety, staying safe whilst using technology.	Using basic PowerPoint tools & awareness of animals who are endangered around the world. Primary knowledge taught on scratch programming.	Software used in year 7 IT. PowerPoints and Word tools to create the documents of evidence. Programming from scratch where we looked at moving the sprite in different directions
	Skills Introduced	How to ensure private settings are enabled on devices and social media platforms. Building basic formulas, formatting on a worksheet in a spreadsheet, creating charts and formula functions	Understand why animals are becoming endangered. Using master slides to set up the PowerPoint. Use of appropriate house styles to make use of images and text in PowerPoint. Programming concepts on using blocks to control more than one programme in a sprite. Use of IF and ELSE to again more variations.	Knowing the components used inside a computer. Students knowing the different aspects of computer systems such as storage, network and applications. Knowing their use in hardware. Using programming language to control the turtle. Programming to create basic and complex shapes.
	Skills Revisited	Students being able to save their work. Saving work using appropriate filenames and folders. Basic online measures to be aware of whilst using being online Formula operators used to create a basic calculations.	Being able to save the work in the correct folder. Using tools similar to MS Word to add images and format text in PowerPoint instead. Using formula operators to create variables in the scratch programming.	Use of MS Word and MS PowerPoint application tools. Programming concepts from scratch used to move an object in programming.
Year 8	**Knowledge Introduced**	HTML and Spreadsheets	Flowol & Python	Data representation & Comic Creation
	Knowledge Revisited	Debugging errors from code in HTML which was looked at in Python code. Formula equations. Formatting of the spreadsheets and functions in formulas.	Basic python commands which control the start and end of the programme. Debugging of code to fix errors.	Use of programmes used inside a computer systems so each component communicates with each other. Use of house styles and image creation to suit its target audience.
	Skills Introduced	In HTML students are taught to use basic HMTL code to create webpages and linking the webpages together. For spreadsheets students are introduced to advanced formulas functions such as IF function, conditional formatting and VLOOKUP's.	In Flowol being able to use sequence of instructions to control the programme. Use of Shapes in Flowol to control the sequence. Creating AI to allow the programme to respond to answers typed in. Creating quizzes to show if the user has answered the question correctly.	Mathematical working out of binary numbers. Use of nibble, bit and byte to help understand the data communication in a programme. Use of panels to build the comic. Use of new software, comic life 3 to build the comic. The tools used in storyboard that to help build the characters and background for the comic.
	Skills Revisited	Debugging is the skills revisited in HTML & in Spreadsheets it is basic formula creations, formatting of the worksheets and also simple functions such as MAX, MIN, AVERAGE & SUM.	In Python it's the use of key tools such as F5 to run the programme, use of IF and ELSE which was also used in the scratch Y7 SOW.	Basic maths calculations and methods used to find the binary number. Use of PowerPoint tools to evidence research of comic history.
Year 9	**Knowledge Introduced**	Graphics & R082 graphic creation:LO1 research of graphics	RO82 graphic creation:LO2 planning & LO3 creation of graphic	R082 graphic creation LO3: graphic creation & LO4 review of graphic
	Knowledge Revisited	Target audience influence on the creation of products. House style use in creation of products. Software use of creation and format saved for best use of graphic.	Target audience purpose in the product creation. Evidencing work though screenshots to show creation of product.	Graphic use and file formats to be saved in. Discussing the graphics creation with mentioning strengths and weaknesses.
	Skills Introduced	Editing tools to create a suitable graphic. Report writing structure with the support of suitable referencing.	Visualisation drawing of product and annotations to explain choices. Using project planning in excel to estimate time of completion of coursework. Using advanced tools in graphic software.	Using advanced tools in graphic software. Creation of a successful report structure to evidence the final piece of work created.

	Skills Revisited	Graphic software tools to create and edit images. Use of advanced tools Adobe Photoshop. Referencing of sources to include in report evidence.	Using graphic advanced software tools. Tools which edit graphics and allow graphics to be saved in a suitable file format.	Taking screenshots to evidence the final product created with annotation to help support the written work. Saving the graphic in a suitable file format.
Year 10	**Knowledge Introduced**	R087 interactive multimedia product LO1 research interactive multimedia & LO2 Planning	R087 interactive multimedia product: LO2 planning & creation of product	R087 interactive multimedia product LO4:Review & R084 Comic creation: research comics
	Knowledge Revisited	Target audience influence on the creation of products. House style use in creation of products. Software use of creation and format saved for best use of Multimedia product.	Target audience purpose in the product creation. Evidencing work though screenshots to show creation of product. Previous unit work done in R082 LO2. Planning of the product.	Graphic use and file formats to be saved in suitable format to be used in Multimedia product. Discussing the Multimedia product creation with mentioning strengths and weaknesses.
	Skills Introduced	Editing tools to create an effective multimedia product. Report writing structure with the support of suitable referencing.	Visualisation drawing of product and annotations to explain choices. Using project planning in excel to estimate time of completion of coursework. Using advanced tools in graphic software for images and tools in MS PowerPoint.	Using advanced tools in graphic software and MS PowerPoint. Creation of a successful report structure to evidence the final piece of work created.
	Skills Revisited	Graphic software tools to create and edit images for use in Interactive product. Use of advanced tools MS PowerPoint. Referencing of sources to include in report evidence.	Using graphic advanced software tools. Tools which edit graphics and allow graphics to be saved in a suitable file format to be used in the Multimedia product.	Using advanced tools in graphic software and MS PowerPoint. Creation of a successful report structure to evidence the final piece of work created.
Year 11	**Knowledge Introduced**	R081: Pre- Production (exam unit)	R084 Comic Creation: LO2 Planning & LO3 Comic Creation	R084 Comic Creation: LO4 Review & R081: Pre- Production (exam unit) revisit.
	Knowledge Revisited	The content covered in LO2 for each piece of coursework undertaken. Going through content such as target audience, legislation, Moodboard, mindmaps & Health and safety.	Target audience purpose in the product creation. Evidencing work though screenshots to show creation of product. Previous unit work done in R082 & R087 LO2. Planning of the product.	File formats to be saved in suitable format for the comic for online use and print use. Discussing the comic creation, mentioning strengths and weaknesses.
	Skills Introduced	Health and safety precautions, looking at measures in place to support IT equipment and workforce using the IT equipment.	Storyboard of the comic with descriptions to go with each panel. Using scripts to help with the development of the storyboard. Comic life 3 software introduced to students. Tools of the software shown to students.	Using advanced tools in the comic software to develop the comic. Editing panels and creation of speech bubbles.
	Skills Revisited	LO2 content from R082, R084 & R087. Looking at theory aspect of the LO2.	Drawings of the visualisation diagram from LO2 for R082.	Taking screenshots to evidence the final product of the comic with annotations to help support the written work. Saving the comic in suitable file format for online use and print use

A powerful, knowledge-rich curriculum teaches both declarative knowledge (facts; knowing that something is the case; what we think about) and non-declarative or procedural knowledge (skills and processes; knowing how to do something; what we think with). There are no skills without bodies of knowledge to underpin them. In some subjects, a further distinction can be made between substantive knowledge (the domain specific knowledge accrued e.g. knowledge of the past) and disciplinary knowledge (how the knowledge is accrued e.g. historical reasoning). Please refer to the DAT Curriculum Principles, published on our website, for further information about how we have designed our curriculum.