Alcester Academy Curriculum Planning: Key Stage 3 – Year 7 2021-22

Pupils in year 7 have a single (1 hour) lesson of ICT & Computing each week.

Department: *ICT & Computing*							
Term	Topic/Subject	Assessment Objectives	Knowledge Acquisition	Skill building & intent	Wider reading opportunities, including numeracy & SMSC	Assessment Task	SEND & PP
Aut 1	**(0) Network Introduction**	• Understand how to log onto the network, save files in correct folder area.	Pupils learn how to use the network, and how to use Google Classroom & Drive.	Introduction to the network, user names, passwords, logging on. Setting up folder structure, saving files in correct folder area. Use of shortcuts for teaching resources. Use of learning logs.	Resources are introduced, and demonstrated to pupils visually. Appropriate use of school network, and internet. Explanation of user agreement. Keywords: folder & filenames.	n/a	Additional support to be provided where required for both SEND & PP pupils to help access resources.
	(1) Website Design	• Understand how to analyse the success of websites, and function of specific graphics. • Understand how to create a website suitable for a specific target audience. • Understand how to create master page templates to ensure a consistent website design. • Understand how to apply appropriate content, suitable for purpose & target audience. • Understand how to evaluate success of website design.	Pupils learn how to create a website design for a specific purpose & target audience, using Google Sites.	Pupils to conduct research looking specifically at different website graphics (banners, buttons etc) relevant to theme of project. Pupils to plan content and structure of website, by producing planning - sitemaps & visualisation diagrams. Pupils to create master page. Pupils to then setup suitable site structure. Demonstration of use of header design, pupils to create homepage & add appropriate content. Pupils to add other appropriate pages to site, including content relevant to client brief. Pupils to use peer evaluation & self evaluation to analyse success of website design. Identify and act on improvements.	Resources are introduced, and demonstrated to pupils visually. Refer to importance of website design, graphical design industries. Reference to professionally designed examples of websites. Access to technology, websites, devices used to view websites. Keywords – target audience, requirements, site structure. https://edu.gcfglobal.org/en/beginning-graphic-design/layout-and-composition/1/ Comparison of how professional websites have been designed, graphics used, purpose. https://99designs.co.uk/blog/tips/design-composition-and-layout/	Assessed through continual assessment techniques during lessons, and pupils complete multiple-choice quiz at end of the unit on Google Forms. Assessment results & teacher feedback then recorded by pupils on their own online individual learning logs.	Techniques are demonstrated & explained during lessons, highlighting how to use features of software. Additional support to be provided where required for both SEND & PP pupils to help access resources

					Peer evaluation.		
Aut 2	**(2) OSA E Safety Course**	• Understand how to complete the Online Safety Alliance e-safety course requirements.	Pupils learn how to identify appropriate risks of online activity, and how to report these concerns.	Using OSA online e-safety resources pupils will complete a variety of online tests to check understanding & knowledge of topics including online bullying, grooming, live streaming, safe smartphone use, digital footprints, health risks, consequences of poor choices, and how to report concerns.	Resources are introduced, and demonstrated to pupils visually. A Combination of website based based instructions, and tutorial videos are then used throughout. Safe use of internet, dangers to be aware of with other technologies. Topics to be covered include online bullying, use of smartphones, staying safe & healthy, digital citizenship, cybersecurity, consequences, and how to report concerns. Keywords: E-Safety terms, including grooming, streaming, digital footprints. https://certificate.onlinesafetyalliance.org/#home-page-carousel	Pupils will complete online tests for each section of the OSA course, and require a pass rate of at least 80%. They will receive a certificate on completion of this course.	Additional support to be provided where required for both SEND & PP pupils to help access resources.
Spr 1	**(3) Programming Essentials – Scratch part 1**	• Compare how humans and computers understand instructions (understand and carry out) • Recognise that computers follow the control flow of input/process/output • Define a sequence as instructions performed in order, with each executed in turn • Predict the outcome of a simple sequence • Modify a sequence	Pupils learn how to use visual block coding techniques using Scratch software.	This unit is the first programming unit of KS3. The aim of this unit and the following unit ('programming 2') is to build learners' confidence and knowledge of the key programming constructs. Importantly, this unit does not assume any previous programming experience, but it does offer learners the opportunity to expand on their knowledge throughout the unit.	Resources are introduced, and demonstrated to pupils visually. A Combination of website based based instructions, and tutorial videos are then used throughout. Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures (e.g. lists,	Assessed through continual assessment techniques during lessons, and pupils complete multiple-choice quiz at end of the unit on Google Forms. Assessment results & teacher feedback then recorded by pupils on their own online individual learning logs.	Techniques are demonstrated & explained during lessons, highlighting how to use features of software. Additional support to be provided where required for both SEND & PP pupils to help access resources

		• Define a variable as a name that refers to data being stored by the computer • Recognise that computers follow the control flow of input/process/output • Predict the outcome of a simple sequence that includes variables • Trace the values of variables within a sequence • Make a sequence that includes a variable • Define a condition as an expression that will be evaluated as either true or false • Identify that selection uses conditions to control the flow of a sequence • Identify where selection statements can be used in a program • Modify a program to include selection • Create conditions that use comparison operators (>,<,=) • Create conditions that use logic operators (and/or/not) • Identify where selection statements can be used in a program that include comparison and logical operators • Identify where count-controlled iteration can be used in a program • Implement count-controlled iteration in a program • Detect and correct errors in a program (debugging)		The main programming concepts covered in this unit are sequencing, variables, selection, and count-controlled iteration. All of the examples and activities for this unit use Scratch 3. This unit focuses on the development of the following key techniques: • Sequencing • Variables • Selection • Operators • Count-controlled iteration https://docs.google.com/document/d/1axwV6qG5S-zvSpxiWYod_RDBepCnoNdENdUOq0KJuAU/edit?usp=sharing	tables, or arrays); design and develop modular programs that use procedures or functions Understand simple Boolean logic (e.g. and, or, and not) Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability https://scratch.mit.edu/ Introduction to game design, how this can be developed into career choice – discussion of importance of understanding need for computing skills. Keywords: sequencing, selection, variables, operators, count controlled iteration.		
Spr 2	**(4) Modelling**	• Identify columns, rows, cells, and cell	Pupils learn how to use core functions of	The spreadsheet unit for Year 7 takes learners from	Resources are introduced, and	Assessed through continual assessment	Techniques are demonstrated &

	data - spreadsheets	references in spreadsheet software • Use formatting techniques in a spreadsheet • Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /) • Use the autofill tool to replicate cell data • Explain the difference between data and information • Explain the difference between primary and secondary sources of data • Collect data & analyse data • Create appropriate charts in a spreadsheet • Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet • Use a spreadsheet to sort and filter data • Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet • Use conditional formatting in a spreadsheet	spreadsheet software, using Google Sheets.	having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet. The unit uses engaging activities to progress learners from using basic formulas to writing their own COUNTIF statements. This unit will give learners a good set of skills that they can use in computing lessons and in other subject areas. This unit focuses on spreadsheet skills. To teach this unit, you will need to know how to: • Use cell references • Use the autofill tool • Format data • Create formulas for add, subtract, divide, and multiply • Create functions for SUM, COUNTA, AVERAGE, MIN, MAX, and COUNTIF • Sort and filter data • Create graphs • Use conditional formatting https://docs.google.com/document/d/190vxX9zD6bu75lS_sweieXGY35ZXyjUW-O2Mhju8vk/edit?usp=sharing	demonstrated to pupils visually. A Combination of website based based instructions, and tutorial videos are then used throughout. Highlight the uses of spreadsheets, why these are used throughout organisations & businesses worldwide. Keywords: cell, references, format, formulas, functions, graphs, conditional formatting.	techniques during lessons, and pupils complete multiple-choice quiz at end of the unit on Google Forms. Assessment results & teacher feedback then recorded by pupils on their own online individual learning logs.	explained during lessons, highlighting how to use features of software. Additional support to be provided where required for both SEND & PP pupils to help access resources
Sum 1	**(4) Modelling data -**	Continue & complete remaining lessons for unit 4 (above)		.https://docs.google.com/document/d/190vxX9zD6bu75lS_sweieXGY35ZXyjU			

	spreadsheets **(5) Programming Essentials – Scratch part 2**	• Define a subroutine as a group of instructions that will run when called by the main program or other subroutines • Define decomposition as breaking a problem down into smaller, more manageable subproblems • Identify how subroutines can be used for decomposition • Identify where condition-controlled iteration can be used in a program • Implement condition-controlled iteration in a program	Pupils build on their knowledge of core coding concepts, and use of visual block coding software - Scratch.	W-O2Mhju8vk/edit?usp=sharing Programming II follows on from the foundations built in 'Programming I'. It is vital that learners complete 'Programming I' before beginning this unit. This unit begins right where 'Programming I' left off. Learners will build on their understanding of the control structures' sequence, selection, and iteration (the big three), and develop their problem-solving skills. Learners will learn how to create their own subroutines, develop their understanding of decomposition, learn how to create and use lists, and build upon their problem-solving skills by working through a larger project at the end of the unit. To use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; to make appropriate use of data structures (for example, lists, tables, or arrays); to design and develop modular programs that use procedures or functions To understand simple Boolean logic (for example, AND, OR, and NOT) To create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to	Resources are introduced, and demonstrated to pupils visually. A Combination of website based based instructions, and tutorial videos are then used throughout. Importance of computer programming/coding skills, opportunities in career development. Keywords: sequencing, selection, variables, operators, count controlled iteration, Boolean logic.	Assessed through continual assessment techniques during lessons, and pupils complete multiple-choice quiz at end of the unit on Google Forms. Assessment results & teacher feedback then recorded by pupils on their own online individual learning logs.	Techniques are demonstrated & explained during lessons, highlighting how to use features of software. Additional support to be provided where required for both SEND & PP pupils to help access resources

				trustworthiness, design, and usability https://docs.google.com/document/d/1VlIS5ezZIITcweB3-7bdMIxV_a29l0YNzfBBYn9_i9U/edit?usp=sharing			
Sum 2	**(5) Programming Essentials – Scratch part 2 - cont.**	• Evaluate which type of iteration is required in a program • Define a list as a collection of related elements that are referred to by a single name • Describe the need for lists • Identify when lists can be used in a program • Use a list • Decompose a larger problem into smaller subproblems • Apply appropriate constructs to solve a problem	Pupils continue to build on their knowledge of core coding concepts, and use of visual block coding software - Scratch.	Programming II follows on from the foundations built in 'Programming I'. It is vital that learners complete 'Programming I' before beginning this unit. This unit begins right where 'Programming I' left off. Learners will build on their understanding of the control structures' sequence, selection, and iteration (the big three), and develop their problem-solving skills. Learners will learn how to create their own subroutines, develop their understanding of decomposition, learn how to create and use lists, and build upon their problem-solving skills by working through a larger project at the end of the unit. https://docs.google.com/document/d/1VlIS5ezZIITcweB3-7bdMIxV_a29l0YNzfBBYn9_i9U/edit?usp=sharing	Resources are introduced, and demonstrated to pupils visually. A Combination of website based based instructions, and tutorial videos are then used throughout. Importance of computer programming/coding skills, opportunities in career development, Discussion about game design as career choice, importance of game design industry in south Warwickshire area. Keywords: sequencing, selection, variables, operators, count controlled iteration, Boolean logic.	Assessed through continual assessment techniques during lessons, and pupils complete multiple-choice quiz at end of the unit on Google Forms. Assessment results & teacher feedback then recorded by pupils on their own online individual learning logs.	