Computing 3B: Programme of Study 2018-2019

Term	Wk	W/C	Theme	Topic	Assessment Objectives	Notes
Autumn 1	1	3/9/18	**Theme 1** **Ambition** (decision making/ leadership skills)	**Internet Safety (Communication and Networks)**	**All** Navigates the web and can carry out simple web searches to collect digital content Demonstrates use of computers safely and responsibly Knows a range of ways to report unacceptable content and contact when online **Most** Understands the difference between the internet and internet service e.g. world wide web Shows an awareness of, and can use a range of internet services e.g. VOIP Recognises what is acceptable and unacceptable behaviour when using technologies and online services. **Some** Understands how to effectively use search engines, and knows how search results are selected, including that search engines use 'web crawler programs' Selects, combines and uses internet services. Demonstrates responsible use of technologies and online services and knows a range of ways to report concerns.	Monday: Training Day Tuesday: New students in Wednesday: All students in
	2	10/9/18				
	3	17/9/18				
	4	24/9/18				
	5	1/10/18	**Theme 2** **Rule of Law** (responsibility)			
	6	8/10/18				
	7	15/10/18				Friday: Training Day
	8	22/10/18				
				Half Term		

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Autumn 2	9	5/11/18	**Theme 3** **Optimism** (learning from mistakes)	**How computers work** **(Hardware and Processing)**	**All** Recognises that a range of digital devices can be considered a computer Recognises and can use a range of input and output devices Understands how programs specify the function of a general-purpose computer **Most** Knows that computers collect data from various input devices Including sensors and application software. Understands the difference between hardware and application software Understands their roles within a computer system. **Some** Understands why and when computers are used. Understands the main functions of the operating system Knows the difference between physical, wireless and mobile networks	
	10	12/11/18				Friday: Data Point Deadline
	11	19/11/18				
	12	26/11/18				
	13	3/12/18	**Theme 4** **Tolerance** (political and cultural awareness)			
	14	10/12/18				
	15	17/12/18				Friday: Christmas Holidays
				Christmas		
Spring 1	16	7/1/19	**Theme 5** **Devotion** (work ethic)	**Databases** **(Data and Data Representation)**	**All** Recognises different types of data: text, number. Appreciates that programs can work with different types of data	
	17	14/1/19				

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	18	21/1/19			Recognises that data can be structured in tables to make it useful. **Most** Understands the difference between data and information. Knows why sorting data in a flat file can improve searching for information Uses filters or can perform single criteria searches for information **Some** Performs more complex searches for information e.g. using Boolean and relational operators Analyses and evaluates data and information recognises that poor quality data leads to unreliable results, and inaccurate conclusions.	
	19	28/1/19				
	20	4/2/19	**Theme 6** **Versatility** (flexibility and adaptability)			
	21	11/2/19				
Half Term						
Spring 2	22	25/2/19	**Theme 7** **Compassion** (communication skills)	**Planning programs (Algorithms)**	**All** Understands that algorithms are implemented on digital devices as programs Designs simple algorithms using loops, and selection i.e. if statements Uses logical reasoning to predict outcomes Detects and corrects errors i.e. debugging, in algorithms. **Most**	Monday: Training Day
	23	4/3/19				Careers Week
	24	11/3/19				Friday: Data Point Deadline
	25	18/3/19				

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	26	25/3/19			Designs solutions (algorithms) that use repetition and two-way selection i.e. if, then and else Uses diagrams to express solutions Uses logical reasoning to predict outputs, showing an awareness of inputs. **Some** Shows an awareness of tasks best completed by humans or computers Designs solutions by decomposing a problem and creates a sub-solution for each of these parts (decomposition) Recognises that different solutions exist for the same problem.	
	27	1/4/19	**Theme 8** **Innovation** (problem solving/ critical thinking skills)			
				Easter		
Summer 1	28	22/4/19		**Creating computer games in Scratch** **(Programming And Development)**	**All** Uses arithmetic operators, if statements, and loops, within programs. Uses logical reasoning to predict the behaviour of programs Detects and corrects simple semantic errors i.e. debugging, in programs. **Most** Creates programs that implement algorithms to achieve given goals Declares and assigns variables.	Monday: Bank Holiday
	29	29/4/19				
	30	6/5/19	**Theme 9** **Democracy** (listening and teamwork skills)			Monday: Bank Holiday Tuesday: Training Day
	31	13/5/19				
	32	20/5/19				

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					Uses post-tested loop e.g. 'until', and a sequence of selection statements in programs, including an if, then and else statement. **Some** Understands the difference between, and appropriately uses if and if, then and else statements. Uses a variable and relational operators within a loop to govern termination Designs, writes and debugs modular programs using procedures Knows that a procedure can be used to hide the detail with sub-solution (procedural abstraction).	
				Half Term		
Summer 2	33	3/6/19	Theme 10 Respect (networking and interpersonal skills) Theme 11 Individual Liberty (independence)	As Summer 1	As Summer 1	
	34	10/6/19				Wednesday: Data Point Deadline
	35	17/6/19		Creative Project (Information Technology)	**All** Uses technology with increasing independence to purposefully organise digital content Shows an awareness for the quality of digital content collected Uses a variety of software to manipulate and present digital content: data and information Shares their experiences of technology in school	
	36	24/6/19				
	37	1/7/19				Thursday: Transition Day 1
	38	8/7/19				Thursday: Transition Day 2

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	39	15/7/19			and beyond the classroom Talks about their work and makes improvements to solutions based on feedback received. **Most** Collects, organises and presents data and information in digital content Creates digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience e.g. blogging Makes appropriate improvements to solutions based on feedback received and can comment on the success of the solution. **Some** Makes judgements about digital content when evaluating and repurposing it for a given audience Recognises the audience when designing and creating digital content Understands the potential of information technology for collaboration when computers are networked Uses criteria to evaluate the quality of solutions, can identify improvements making some refinements to the solution, and future solutions.	Activity Week
	40	22/7/19				Wednesday, Thursday, Friday: Holiday Club

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Term	Wk	W/C	Theme	Topic	Assessment Objectives	Notes
			Theme 12 **Happiness** (stress and conflict management)		Summer	

Notes
Information Technology objectives will also be assessed throughout each project where appropriate