Computing Curriculum Long Term Planning

Year 7	HT1	HT2	HT3	HT4	HT5	HT6
Big Idea	Are you safe online when using the internet?	Can you use a database to follow complex lines of enquiry and can you convert denary to binary?	How do robots work and can you create a flowchart?	Do I understand computer hardware components and their uses? Do I know what software and operating systems are?	Can you program a Micro:bit computer?	Can I digitally manipulate a photo in Photoshop?
Assessment	Baseline assessment SMART Rules Homework (SMHW)	BEBRAS CHALLENGE Database Keywords Homework (SMHW) **Assessment 1 (covers last 2 topics)**	Algorithms and programming key word test Homework (SMHW)	**Assessment 2 (covers last 2 topics + Retrieval practice for the 1st HT1 & HT2)** Computer Systems Poster Homework (SMHW)	Hard Learning Revision Homework (SMHW) **Assessment 3 (covers last topic + Retrieval practice for the 1st HT1, 2, 3 & HT4)**	Using Computers Creatively Spellings Homework (SMHW) Final Project Design Homework (SMHW)
Wider Curriculum Links	**iREACT Focus:** SMART Rules, **SMSC** - Online Safety. Anti-Bullying How to report to CEOP. **ABC Oracy & Formality scale** **FBV** - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Mutual Respect Tolerance of others	**iREACT Focus:** EXPLAIN what Binary is. **SMSC** – Police Database, who has your data? **ABC Oracy & Formality scale (keyword quiz)** **FBV** - Rule of Law: Data protection/ GDPR/ Databases.	**iREACT Focus:** APPLY: Apply you knowledge of sequencing to complete a flowchart. **SMSC** – Logical thinking and problem solving. Computers used to explore furthest reaches of the universe. Robotics and Automation in our lives. Ethics associated with this. **Links** to science, technology and engineering. **ABC Oracy & Formality scale (spellings homework)**	**iREACT Focus:** CREATE: Create a computer Systems Poster. **SMSC** – Computer systems in our lives. From washing machine to mobile phone. **ABC Oracy & Formality scale**	**SMSC** – Software development, from Facebook to Netflix. **ABC Oracy & Formality scale** **FBV** - Rule of Law – computer misuse act.	**SMSC** – Photo editing, wellbeing & mental health associated with manipulated images and comparing one's self to them. **ABC Oracy & Formality scale (spellings homework)** **FBV** - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world.
	Resilience, Growth mindset, STEM Club, Minecraft Club and CGDC (Computer Games Development Club), Big Byte Club.					

Computing

Year 8	HT1	HT2	HT3	HT4	HT5	HT6
Computing	**Big Idea**	Are you safe online when uploading videos to the internet?	Can I program a computer using a textural programming language?	Can I recall Binary and how we use Hexadecimal numbers to represent larger numbers?	Do you understand how have the computer scientists of the past shaped computing today?	Can you create your own 3D game in Kodu?	Can you use advanced photoshop skills to create your own mutant animal?
	Assessment	Baseline assessment SMART Rules Homework (SMHW) **Assessment 1 (covers E-safety)**	BEBRAS CHALLENGE Python Programming Homework (SMHW)	Hard Learning Revision Homework (SMHW) **Assessment 2 (covers Data Handling and Retrieval practice for the 1st HT1 & HT2)**	Heroes of Computing Quiz (SMHW)	Game Cover Deisgn (SMHW) Hard Learning Revision Homework (SMHW)	Hybrid Animal Design (SMHW) **Assessment 3 (covers last topic + Retrieval practice for the 1st HT1, 2, 3, 4 & 5)**
	Wider Curriculum Links	**iREACT Focus:** SMART Rules, **SMSC** - Online Safety. Anti-Bullying How to report to CEOP. **ABC Oracy & Formality scale** **FBV** - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Mutual Respect Tolerance of others	**iREACT Focus:** EXPLAIN: What the code does. **SMSC –** Software helping people. Future of technology, programmers are life savers **ABC Oracy & Formality scale** **FBV –** Computer Misuse Ack, Hackers, Viruses etc.	**iREACT Focus:** APPLY: Knowledge of binary. **ABC Oracy & Formality scale (spellings homework)**	**iREACT Focus:** CREATE: Create a questionnaire **SMSC –** Current news and events. **ABC Oracy & Formality scale** **FBV -** Rule of Law: Viruses / Hackers and Computer Misuse Act.	**iREACT Focus:** EVALUATE (Take Apart): Evaluate your Kodu game. **SMSC** – How it all began. Who was responsible? **ABC Oracy & Formality scale** **FBV** – Tolerance of others: Alan Turing.	**SMSC** - Online Safety. Anti-Bullying. **ABC Oracy & Formality scale** **FBV** - Rule of Law: Malicious communications act.
		Resilience, Growth mindset, STEM Club, Minecraft Club and CGDC (Computer Games Development Club), Big Byte Club. Cyber First Girls Competition, BEBRAS Challenge and Oxford Computing Challenge.					

Year 9 (One hour per week)		HT1	HT2	HT3	HT4	HT5	HT6
Computing	**Big Idea**	E-Safety	Presentation Skills		Word Processing Skills	Word Processing Skills	Spreadsheet Skills
	Assessment	Baseline Assessment + E-safety Assessment	Interim Presentation Assessment	End of Topic Test	Interim Word Processing Assessment	End of Topic Test	End of Year Test.
	Wider Curriculum Links	SMSC - Online Safety. Anti-Bullying How to report to CEOP. ABC Oracy & Formality scale FBV - Rule of Law, written in line with DFE guidance: Teaching Online Safety in School and UK council for Internet Safety Guidance: Education for a connected world. Mutual Respect Tolerance of others	LORIC: Anti-bullying week. SMSC – Bigger picture of employability skills and presentation skills. ABC Oracy & Formality scale	iREACT Focus: APPLY knowledge Learnt in Computing to your end of topic test. LORIC: Careers week search.	SMSC – Bigger picture of employability skills and presentation skills. ABC Oracy & Formality scale		
		Resilience, Growth mindset, STEM Club, CGDC (Computer Games Development Club). BEBRAS Challenge and Oxford Computing Challenge. JED Online Careers Search /UniFrog / iDEA (Duke of York)					

Subject: Computing– GCSE Computer Science (CS)
CT – Computational Thinking (skills interleaved throughout curriculum).
Content – Principles of Computer Science (theory interleaved throughout curriculum).

Year 9		HT1	HT2	HT3	HT4	HT5	HT6
Computer Science	**Big Idea (CT)**	Computer Science Basics	Programming basics	Efficient programs	Searching Algorithms	Sorting Algorithms	Drawing in Python
	Big Idea (Content)	Retrieval practice of Data	Negative numbers and Hex	Computers - The basics	Computers - Software	Cyber Security	Networks intro
	Assessment	Assessment 01	Assessment 02	Assessment 03	Assessment 04	Assessment 05	Assessment 06 (end of year)
	Assessment Intent	diagnostic/therapy of gaps in learning					
	Building Character	Cyber Discovery (register)	CyberStart Assess + CyberStart Game		CyberStart Essentials / Matrix Challenge.		+ CyberStart Elite Camps in Summer

Year 10		HT1	HT2	HT3	HT4	HT5	HT6
Computer Science	**Big Idea (CT)**	Sub programs and libraries	Using Trace tables and Bubble Sort and Binary Search	Retrieval practice for Data types / structures.	Advanced programming	Programming Mock Assessment	Improving the programming mock assessment
	Big Idea (Content)	TCP/IP	Issues and Impact and Programming Languages	Data Representation	Testing, Legalities	Programming Mock Assessment	Exam preparation
	Assessment	Assessment 01	Assessment 02	Assessment 03	Assessment 04	Assessment 05	Assessment 06
	Assessment Intent	diagnostic/therapy of gaps in learning				Mock Exam	diagnostic/therapy of gaps in learning / PLC Update
	Wider Curriculum Links	Cyber Discovery / Boosters / Independence / Problem Solving / Logical Thinking.					

Year 11		HT1	HT2	HT3	HT4	HT5	HT6
Computer Science	**Big Idea (CT)**	Programming Recaps / Gap filling from PLC.			Paper 2 practice / mocks		
	Big Idea (Content)	Networks	Computers / Sorting Algorithms	Issues & Impact / Searching Algorithms	Paper 1 practice / mocks		
	Assessment	Assessment 01	Assessment 02	Assessment 03	Mock Exam Papers		
	Assessment Intent	diagnostic/therapy of gaps in learning	diagnostic/therapy of gaps in learning	diagnostic/therapy of gaps in learning	diagnostic/therapy of gaps in learning / PLC Update		
	Wider Curriculum Links	Cyber Discovery / Boosters / Independence / Problem Solving / Logical Thinking.					

BTEC Teach Award in Creative Media Production (Game Making)

Year 9		HT1	HT2	HT3	HT4	HT5	HT6
BTEC Media	**Big Idea (CT)**	Understanding Games	Maze Game	SHMUP Game	Game Promo: Digital Image	Platformer	Final Game project
	Assessment	Technical Game Review Assessment 01	Maze Game Assessment 02	SHMUP Game Assessment 03	Game Cover Assessment 04	Platform Game Assessment 05	Final Project Assessment 06
	Assessment Intent	diagnostic/therapy of gaps in learning					
	Wider Curriculum Links	Computer Games Development Club (CGDC) BAFTA Young Games Designer Award (Creating and Concept) – Using VR and Building 3D games / INDEPENDENT GAME CREATION.					

Year 10		HT1	HT2	HT3	HT4	HT5	HT6
BTEC Media	**Big Idea**	The Media Industry	Media Theory	Component 1 Coursework: Exploring Media Products		Making clicking games	Advanced Game Making Techniques
	Assessment	Game Evaluation Assessment 01	Game Evaluation Assessment 02	UNIT 1 21149K A.2, UNIT 1 21149K B.2, UNIT 1 21149K UNIT GRADE		Clicking Game Assessment 03	Improved Game Assessment 04
	Assessment Intent	diagnostic/therapy of gaps in learning	diagnostic/therapy of gaps in learning	Coursework – Internal Assessment.		diagnostic/therapy of gaps in learning	diagnostic/therapy of gaps in learning
	Wider Curriculum Links	Computer Games Development Club (CGDC) BAFTA Young Games Designer Award (Creating and Concept) – Using VR and Building 3D games / INDEPENDENT GAME CREATION.					

Year 11		HT1	HT2	HT3	HT4	HT5	HT6
BTEC Media	**Big Idea**	Component 2 Coursework: Developing Digital Media Production Skills		Component 3: Create a Media Product in Response to a Brief (EXTERNALLY SET AND ASSESSED)			
	Assessment	UNIT 2 21151K A.2, UNIT 2 21151K B.2, UNIT 2 21151K C.2, UNIT 1 21149K UNIT GRADE		UNIT 3 21153K ACT 1, UNIT 3 21153K ACT 2, UNIT 3 21153K ACT 3, UNIT 3 21153K UNIT GRADE			
	Assessment Intent	Coursework – Internal Assessment.		Coursework – External Assessment (NEA)			
	Wider Curriculum Links	Computer Games Development Club (CGDC) BAFTA Young Games Designer Award (Creating and Concept) – Using VR and Building 3D games / INDEPENDENT GAME CREATION.					