Year 7 Computing and ICT Learning Pathwat

	Term 1	**Term 2**	**Term 3**	**Term 4**	**Term 5**	**Term 6**
Topic	ICT 101	Introduction to programming (Scratch)	Chippenham Zoo	Data representation – Computing theory	Text based programming – Python Turtle	
Online safety	**Taught at the beginning of each term for two lessons – allows new topics or raised concerns to be covered when required.** Link to knowledge organiser					
Threshold Concept explored	• Digital literacy	• Computational Thinking • Problem Solving • Programming	• Digital literacy • Problem solving	• Computational thinking • Problem solving	• Computational thinking • Problem solving • Programming	
Building on	Primary School ICT lessons	Primary School computing curriculum	Primary School E-safety curriculum	Primary school computing curriculum	- Scratch programming	
Leading to	- ICT Skills - Digital literacy across all subjects	- Text based programming - App development	- Year 8 – Theme Park project	- 'Think like a computer' (Year 9)	- Advanced text based programming - App development	
How will you know what you are doing/how to improve	- OneNote checking - End of unit assessment - Teacher support - Peer support - Self reflection - Meeting lesson objectives					
Experiences to look out for	- Getting logged into the school network - Choosing your password	- Coding your first program at Hardenhuish - Building a 'maze' game - Playing your friends games	- Creating a new, ethical zoo for Chippenham - Creating an interactive augmented	- Learning what binary is - Knowing how to convert a binary number into a letter	- Programming your first text based program - Coding a 'turtle' to move - Learning how to use shapes and colour to make creative patterns	

	- All about me presentation		reality product - Developing a radio advert for Chippenham Zoo			
Reading, Writing, Oracy practice	- All about me presentation (written skills)	- Reading code/algorithms - Using key terms to program (writing)	- Key terms for a range of software packages - Writing a script for the radio advert	- Writing binary and numeric codes - Reading and solving problems	- Writing Python code - Reading code to find errors - Talking your coding problems through (Rubber duck programming)	
Link to the ideas	PowerPoint skills	Link to knowledge organiser	PowerPoint skills Word skills Outlook skills Publisher skills	Link to knowledge organiser	Link to knowledge organiser	Link to knowledge organiser

Year 8 Learning Pathway Computing and ICT

	Term 1	**Term 2**	**Term 3**	**Term 4**	**Term 5**	**Term 6**
Topic	Python programming	Spreadsheets (Excel)	Carousel	App development	ICT Skills	Theme Park Project
Threshold Concept explored	• Problem Solving • Programming • Computational thinking • Data	• Data analysis • Problem solving • Digital literacy	• Online Safety • Problem solving • Programming • Digital literacy	• Problem solving • Programming • Computational thinking	• Digital literacy • Problem solving • Online safety	• Digital literacy • Problem solving • Programming • Computational thinking
Building on	- Year 7 Scratch programming - Year 7 Python Turtle	- Year 7 Maths	- Year 7 Online safety - Year 7 Scratch - Year 8 Python	- Year 7 Scratch - Year 7 + 8 Python - Year 8 Carousel	- Year 7 ICT 101 - General use of digital literacy skills	- Year 8 ICT skills - Year 7 + 8 programming -
Leading to	- Advanced Python programming - Year 9 computing option	- - Year 9 music project	- Year 9 Online safety - Year 9 Zoo project	- Year 9 computing option	- Year 9 music project - Year 9 'Getting GCSE ready' -	- - Year 9 music project - Year 9 zoo project
How will you know what you are doing/how to improve	- OneNote checking - End of unit assessment - Teacher support - Peer support - Self reflection - Meeting lesson objectives					

Experiences to look out for	- Coding your first text based programme to say 'hello world' - Writing a program that responds to your conversation	- Seeing how quickly a computer can do complex calculations - Escaping the 'function jungle'	- Making 'rock, paper, scissors' using the microbits - Changing how a song sounds in audacity - 'Photoshopping' your first image	- Seeing the app your created live on your phone - Generating a random number by shaking your phone	- Learning the power of the 'master slide' - Seeing the benefits of 'touch typing' - Getting a job at 'Chippenham Photography'	- Deciding on a name for your new theme park - Promoting the park through a video - Freedom to explore and showcase your strengths
Reading, Writing, Oracy practice	- Writing code in Python - Reading code and checking for errors - Talking your coding problems through (Rubber duck programming)	- Reading formulas and functions	- Writing microbit code - Reading E-safety help and advice online	- Writing code in Thunkable - Reading code and checking for errors - Talking your coding problems through (Rubber duck programming)	- Reading existing presentations and emails to spot errors - Writing business style documents for 'Chippenham Photography'	- Writing promotional material for the new theme park
Link to the ideas	Link to knowledge organiser	Link to knowledge organiser			PowerPoint skills Word skills Outlook skills Publisher skills	

Year 9 Computing and ICT Learning Pathway

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic	'Think like a Computer'	Music Project	Cyber Security and code breaking AI Curriculum – Technology and Data	Ethics of Computer Science AI Curriculum – AI Skills for school	ICT – Codelandia AI Curriculum – AI Skills for life	'Getting GCSE Ready' 'The apprentice' AI Curriculum – Ethics of AI
Online Safety	**Taught at the beginning of each term for two lessons – allows new topics or raised concerns to be covered when required. Addition of 'AI and Online Safety' as part of the curriuclum**					
Threshold Concept explored	- Problem solving - Computational thinking - Data	• Data • Digital literacy • Problem solving	• Problem solving • Computational thinking • Data • Online Safety	•	• Problem solving • Computational thinking • Data • Online Safety • Digital literacy	• Digital literacy • Problem solving
Building on	- Year 7 data representation	- Year 8 theme park project - Year 8 ICT skills	- Year 9 'think like a computer' - All previous programming languages	- Year 8 Theme park project - Year 9 music project - Year 8 ICT skills	- All previous areas of the curriculum from Year 7 - 9	- Year 8 ICT project - All previous learning for the apprentice
Leading to	- KS4 GCSE Computer Science	- KS4 Cambridge Nationals in IT	- KS4 GCSE Computer Science	- KS4 Cambridge Nationals in IT	- KS4 GCSE Computer Science - KS4 Cambridge Nationals in IT	- KS4 GCSE Computer Science - KS4 Cambridge Nationals in IT

						- Support with all GCSE subjects
How will you know what you are doing/how to improve	- OneNote checking - End of unit assessment - Teacher support - Peer support - Self reflection - Meeting lesson objectives					
Experiences to look out for	- Learning how to add binary numbers together - Understanding how logic circuits work	- Designing your own music festival - Promoting the festival through a variety of ICT skills	- Learning to break Caesar and Pigpen ciphers - Knowing how to spot cyber security risks and scams - Learning about 'Alan Turing' and his work at Bletchley Park	- Opening a new zoo! - Creating a radio advert for your zoo - Designing an interactive map	- Travelling the 'digital world' to revisit areas of learning from the past three years - Able to earn a literal 'digital footprint'	- Learning how to find the specifications for all your chosen GCSE subjects - Working collaboratively to promote a passion - Getting 'hired' or 'fired' by Alan Sugar
Reading, Writing, Oracy practice	-	-	-	-	-	-
Link to the ideas	Link to knowledge organiser Adding in Binary - BBC Bitesize		Encryption - BBC Bitesize	PowerPoint skills Word skills Outlook skills Publisher skills		

	Logic Gates - BBC Bitesize					