1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Binary and HEX								**PY**						
Week 1	Week 2	Week 3	Week 4	Week 5	Week6	Week 7		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
3.1 Understanding Binary	3.2 Binary Addition	3.3 Binary to HEX	3.4 Hex to Binary to Denary	3.5 Images & Binary	ASSESSMENT	DIRT	HALF TERM	Basics	Number	Selection	Iteration	ASSESSMENT	DIRT	
Students are assessed on their ability to convert Denary numbers to Binary and then on to hexadecimal, and all the way back. They will also be able to complete binary addition. At the end of the unit students will: 1. Understand conversions using denary, binary and hex. 2. Be able to add binary and identify any overflow values. 3. Understand how computers interpret images as binary numbers.								At the end of the unit students will be able to: 1. Understand the use of strings and variables. 2. Understanding python code, including indentation and key words. 3. Be able to produce a calculator program. 4. Understand loops, selection and Boolean operators.						
Homework:								Homework:						
Week 2: Make a leaflet or poster to explain binary addition								Week2: To annotate the code provided. Can you identify comments, variable, inputs or other elements? What does the program do?						
Week 3: make a leaflet or poster to explain binary to hex conversion.								Week 4: Write Pseudocode for a 3 question quiz						

Key Vocab: Binary, Hexadecimal, Conversions, Overflow	Key Vocab: Strings, variables, casting (integer, float), IF, ELSE and ELIF, input, output
Connected Knowledge: OCR GCSE C.S Paper 1 exam content – Algorithms and problem solving. A Level CS – core knowledge. HEX links to all Photoshop and Dreamweaver work because of the html colour codes.	Connected Knowledge: Python next steps unit later this year. OCR GCSE C.S Paper 2 exam content – Algorithms and problem solving. A Level CS core principle

16	17	18	19	20	21	22	23	24	25	26	27	28	29
THON PROGRAMMING													**A**
CHRISTMAS	Week 1	Week 2	Week 3	Week 4	Week 5	HALF TERM	Week 6	Week 7	Week 8	Week 1	Week 2	EASTER	
	Sub routines	Extension and skills catchup	Calculator project					ASSESSMENT	DIRT	Linear Search	Binary Search		
	At the end of the unit students will be able to: 1. Understand the use of strings and variables. 2. Understanding python code, including indentation and key words. 3. Be able to produce a calculator program. 4. Understand loops, selection and Boolean operators.									At the end of the unit students will be able to understand the meaning of the terms. understand the methodology of the sorts and able to anser exam			

	Key Vocab: Strings, variables, casting (integer, float), IF, ELSE and ELIF, input, output	Key Vocab: Linear, binary, insertions, me
	Connected Knowledge: 1st Python unit, OCR GCSE C.S Paper 2 exam content – Algorithms and problem solving. A Level CS core principle	Connected Knowledge: GCSE Cor

30	31	32	33	34	35	36	37	38	39	40	41	42	43	44

lgorithms

Week 3	Week 4	Week 5	Week 6	Week 7
Insertion Sort	Merge Sort	Bubble Sort	ASSESSMENT	DIRT

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l searched.

style questions on the 5 topics

1.

2.

3. Be

HALF TERM

Understanding Computers

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
2.1 Elements of a Computer	2.2 The CPU	2.3 Understanding Binary	2.4 Storage Devices	2.5 New Technologies	ASSESSMENT	DIRT

At the end of this Unit all pupils should be able to:

1. Distinguish between hardware and software
2. Give examples of computer hardware and software
3. Draw a block diagram showing CPU, IOand storage devices
4. Name different types of permanent storage device
5. Suggest appropriate input and output devices for a scenario
6. Explain what RAM and ROM are used for
7. Show how numbers and text can be represented in binary
8. Explain the impact of future technologies

Homework:
Week1: Parts of the PC worksheet OR Parts of PC Quizizz
Week 3: Binary worksheet OR Binary Quizizz
Week 5: Revision for end of topic assesment

rge, bubble, compare, value, delete, stop, algorithm		Key Vocab: Input, process, output, device, hardware, software, fetch, decode, execute, binary, conversion, memory, RAM, ROM, denary, ASCII
nputing paper 1, A Level Computing paper 1		Connected Knowledge: Binary & Hex Unit (Y7) GCSE Topics 1.1 – Systems architecture, 1.2 – Memory and storage, 1.5 – Systems software A level (H446) Topics 1.1 & 1.2

45 46 47 48 49 50 51 52