

Year 10 Computer Science Learning Programme 4

<p>The LORIC skill focus for this LP is: INITIATIVE.</p> <p>The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.</p> <p>Integrity - Having strong moral principles.</p> <p>Gratitude - Feeling and expressing thanks.</p> <p>What will I be learning about in this Learning Programme? Identifying the advantages and disadvantages of storage types. Using SQL to search for data Using arrays when solving problems.</p> <p>Where have I seen this learning before? Understanding of Boolean Logic and the use of logic gates and operators.</p> <p>What could I use it for? Future learning into CPU performance based on storage types and additional problem solving techniques.</p>		<p>Literacy:</p> <ul style="list-style-type: none"> • Capital letters must be used at the start of sentences and for the first letter of proper nouns • Full stops must be used at the end of a sentence • Question marks must be used at the end of a question • Apostrophes should only be used for possession or omission • Days of the week and months must be spelled correctly • Key words must be spelled correctly
<p>In LP4.1, I will know: 04/03/24 - (WK 1)</p> <p>the use of variables, constants, operators, inputs, outputs and assignments; the use of the three basic programming constructs used to control the flow of a program (Sequence, Selection and Iteration); the common arithmetic and Boolean operators.</p>	<p>Key Vocabulary</p> <p>Programming constructions</p>	<p>Homework</p> <p>Use the following YouTube video on using Redstone in Minecraft to create logic gates and produce a one-page explanation for your peers: https://www.youtube.com/watch?v=B6</p>
<p>In LP4.2, I will know: 11/03/24 - (WK 2)</p> <p>my strengths and areas for development for my learning so far.</p>	<p>Key Vocabulary</p> <p>Retrieval</p>	<p>Homework</p> <p>Work your way through the logic gate puzzler games on the following website: https://www.khanacademy.org/computer-programming/logic-gate-puzzler/1522357785</p>
<p>In LP4.3, I will know: 18/03/24 - (WK 1)</p> <p>the use of data types: Integer, Real, Boolean, Character and String, Casting; the use of basic string manipulation.</p> <p>Extended Task.</p>	<p>Key Vocabulary</p> <p>RAM/ROM</p>	<p>Homework</p> <p>Create a poster on the history of the transistor (or electronics) and the effect on the modern computer. Include a potential 'future of' section as well, to help encourage ideas beyond current</p>
<p>In LP4.4, I will know: 25/03/24 - (WK 2)</p> <p>the use of basic file handling operations: Open, Read, Write, Close; the use of records to store data; the use of SQL to search for data.</p>	<p>Key Vocabulary</p> <p>Operators</p>	<p>Homework</p> <p>Quantum computing - Create a resource that is looking at emerging technologies in processing, linking specifically to replacing Transistor technology. This links in well to CPU learning from last LP.</p>
<p>In LP4.5, I will know: 15/04/24 - (WK 1)</p> <p>the use of arrays (or equivalent) when solving problems, including both one-dimensional (1D) and two-dimensional (2D) arrays; how to use sub programs (functions and procedures) to produce structured code.</p>	<p>Key Vocabulary</p> <p>Arrays</p>	<p>Homework</p> <p>Create a half and full adder circuit. They can then create a guide on how this works, and teach it to the class.</p>
<p>In LP4.6, I will know: 22/04/24 - (WK 2)</p> <p>how to programme random number generation; how to apply programming knowledge to set challenges; how to program microbit robots.</p> <p>Extended Task.</p>	<p>Key Vocabulary</p> <p>Microbit</p>	<p>Homework</p> <p>Complete Primary Storage MCQ sheet.</p>
<p>In LP4.7, I will know: 29/04/24 - (WK 1)</p> <p>the need for primary storage; the difference between RAM and ROM and their purpose in a computer system; what virtual memory is and when it is used.</p>	<p>Key Vocabulary</p> <p>Storage</p>	<p>Homework</p> <p>Complete Secondary Storage MCQ sheet.</p>
<p>In LP4.8, I will know: 06/05/24 - (WK 2)</p> <p>the need for secondary storage and the common types of storage: Optical, Magnetic, Solid state; the suitable storage devices and storage media for a given application; the advantages and disadvantages of different storage devices and storage media relating to these characteristics: Capacity, Speed, Portability, Durability, Reliability, Cost.</p>	<p>Key Vocabulary</p> <p>Optical</p>	<p>Homework</p> <p>Watch the following video to see how a hard drive works and produce a summary sheet for revision: https://www.youtube.com/watch?v=wt eUW2sL7bc</p>
<p>Resources to support learning: https://www.youtube.com/watch?v=7mOJN1c1JEo Knowledge Organiser</p>		
<p>FFET Award Challenge for this Learning Programme: Complete 5 of the Python challenges available from your teacher.</p>		

PRT Task 1

PRT Task 2