Summer Transition Work

Computer Science

Hoe Valley Sixth Form

Dear student,

Over the summer we want you to complete the following tasks below to help you make a successful transition from GCSE to Sixth Form study. Our summer transition work includes the following 3 elements to help you feel like a pro when your sixth form journey begins!

Preparation

Below are some tasks that will help to introduce you to knowledge required for the start of the course or to consolidate key GCSE level material.

	The Basics (Prior Knowledge)
1	Write commands using Python.
2	Explain the purpose of variables and the use of Iteration loops
3	Create basic programs using Python
4	Create professional looking programs (maintainability)
5	Use if statements to make decisions in the code.
6	More on if statements
7	Use computational thinking skills to draw images using Python.
8	Write functions to repeat code in a program.
9	Use libraries in your programming.
10	Practise programming in Python
11	Create, edit and print lists in Python.
12	Save and retrieve data from external data sources (txt)
13	Save and retrieve data from external data sources (csv)
14	Draw algorithms to help plan programs.
15	Algorithms and Coding
16	String Manipulation

Reading

Below is some essential reading material or some titles that will help you to read around your subject and develop a deeper understanding of the subject, a crucial skill for success in the Sixth Form.

Problem Solving with Algorithms and Data Structures, Brad Miller, David Ranum

Tkinter - Python
arrays, stacks, queues

Organisation

Below are tasks to help you to be organised with your work when you start in September. You will be completing a huge amount of work and to be successful you must keep on top of everything!

Screenshot of how your work will be organised (with links already incorporated)

OCR specification link	Topic	Activity for Topic	Retrieval for Topic	Keywords for Topic	Mind map for Topic	R
1.1.1 Structure and function of the processor	1) Computer Architecture	Activities	Google Form	Glossary	Mind map	
1.1.1 Structure and function of the processor	2) Functions and characteristic of CPU	Activities	Google Form	Glossary	Mind map	
1.1.2 Types of processor	3) Types of processor	Activities	Google Form	Glossary	Mind map	
1.1.3 Input, output and storage	4) Input Devices	Activities	Google Form	Glossary	Mind map	
1.1.3 Input, output and storage	5) Output Devices	Activities	Google Form	Glossary	Mind map	
1.1.3 Input, output and storage	6) Data Storage	Activities	Google Form	Glossary	Mind map	
1.2.1 Systems software	7) System Software	Activities	Google Form	Glossary	Mind map	
1.2.2 Applications Generation	8) Categories of software	Activities	Google Form	Glossary	Mind map	
1.2.2 Applications Generation	9) Translators	Activities	Google Form	Glossary	Mind map	
1.2.3 Software development	10) Software development lifecycle	Activities	Google Form	Glossary	Mind map	