Year 9: ASK Yourself!

Subject: Computer Science

Unit: Term 3

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
Skills				
String Functions	I can concatenate strings.	I can slice a string.	I can replace parts of a string.	I can split strings.
Encryption techniques	I can generate the ASCII/Unicode value of a character.	Can generate a character for a given ASCII/Unicode value.	I can use ord() and chr() to encrypt/decrypt a message.	I can use the brute force method to decrypt a message.
Dictionaries	I can recognise when a dictionary could be used to store data.	I can store data in a dictionary.	I can search a dictionary to find a paired value.	I can edit dictionary values.
Knowledge				
Ciphers and Encryption	I know the difference between ciphers and encryption. [L]	I know how computer systems use encryption to ensure data security. [L]	I know to create and decode a simple cipher. [S]	I know how to evaluate the effectiveness of a cipher. [L]
Input & Output Devices	I know the difference between hardware & software and can identify input and output devices.	I can identify input & output devices in embedded systems.	I can describe relationship between the device and the related interface.	I can explain the use and benefits of wearable technology.
Memory	I know the difference between memory and storage.	I know the differences between RAM and ROM.	I can describe how cache memory works.	I can explain the benefits of larger RAM in a computer system.

Storage	I know why secondary storage is required.	I know the different types of secondary storage.	I can describe the operation of solid state, optical, magnetic and cloud storage.	I can discuss the advantages and disadvantages of solid state, optical, magnetic and cloud storage.
CPU	I can state the purpose of the components of the CPU.	I can explain the role and operation the main components of the CPU.	I can explain the effect of the following on CPU performance: Clock speed; number of cores; cache size; cache type.	I can understand and explain the Fetch-Decode-Execute cycle.
Python	I can use Python with support.	I can use Python with some support.	I can use Python to solve a problem.	I can explain how to solve a problem using Python.