



The Thomas Hardy School

Summer Preparation Task

A Level Computer Science

Purpose of task:

Task 1 involves you programming as you will need to be much more fluent in your understanding of programming at A level. We program in Python and so this task will support your understanding of this language and challenge you no matter what your current level is.

Task 2 introduces you to some of the key terminology you will come across in A level Computer Science.

Task:

Task 1 – Work your way through the levels on Mission Encodable. Each level will guide you through some key programming theory that you will require for A Level Computer Science. Record your progress in a programming diary where you can say what you did and how you got on. You should save your code as you go by screenshotting into a word document.

Task 2 – Complete the Keywords Document – Write a definition for each of the computer science keywords. Resist the urge to “Copy and Paste”.

We will get you to hand these in on TEAMS when we start in September 2024

Recommended resources:

missionencodable.com

[Ada Computer Science](#)

[Isaac Computer Science](#)

[AQA 7517 Specification](#)

Additional Information:

Required Stationery and Equipment for

Pens, Paper, a folder and a Calculator.

Laptop / Desktop Computer – Although helpful, this is **NOT** essential. Everything can be completed on school network and/or pretty much any device (phone, tablet, Chromebook etc...) Any questions please contact Mr Price.

Recommended Viewing

[The Lesson Hacker](#) - Craig 'n' Dave – Watch some of the following clips that asks some of the questions you will consider in Computer science course

Deadline for Task: First lesson in the week commencing 16th September 2024

Activities Additional Information

Programming Diary Structure:

Date	Description	Issues?	Code snippet
03/08/2024	Mission Encodable: SuperHero Name Generator – Level I	no space between adjective and animal	<pre> # A program to generate a superhero name # ----- # Subprograms # ----- def generate_name(animal, adjective): name = adjective + animal return name # ----- # Main program # ----- # Add a comment here to explain what the below line does print("Welcome to the Superhero Name Generator!") # Add a comment here to explain what the below line does user_adjective = input("Enter an adjective (describing word): ") user_animal = input("Enter your favourite species of animal: ") superhero_name = generate_name(user_animal, user_adjective) print(superhero_name) </pre>
...

Key Words

Control Unit	Register	Busses
Von Neuman Architecture	Optical Storage	Operating System
Intermediate Code	Device Driver	Compiler
Assembly Language	Machine Code	Lossy Compression
Hashing	Normalisation - Database	TCP/IP Stack
Packet Switching	ASCII	Problem Decomposition

Example:

Keyword	Definition	Sentence
Algorithm	A sequence of instructions that can be followed to complete a task	<i>"When I search a word on Google, the search engine uses a searching algorithm to find suitable results"</i>
...

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