

KS4-KS5 Transition Activity

Activity 1

Complete this Microsoft Form with questions about Binary calculations:

<https://forms.office.com/e/2QKKJYGSWx>

Activity 2

Create a program that analyses a passage of text from a file and then counts:

- How many words
- The average length of a word
- How many times each word occurs
- How many words start with each letter of the alphabet?

The aim of this exercise is to test your ability to develop algorithms.

To help you do this:

W3 Schools Python File Handling - [Python File Open \(w3schools.com\)](#)

W3 Schools Python String Methods - [Python - String Methods \(w3schools.com\)](#)

W3 Schools Python While Loops - [Python While Loops \(w3schools.com\)](#)

W3 Schools Python For Loop – [Python For Loops \(w3schools.com\)](#)

W3 Schools Python Dictionaries - [Python Dictionaries \(w3schools.com\)](#)

Your program does not need to fully work; however, you are expected to have made a reasonable attempt. You may work with others and request help with this work!

Email your program with your name to: Johnson.S@myton.co.uk

Activity 3

Write an essay that is at least **half a page long** about the impact of AI on one of the following sectors:

- Health
- Education
- Military
- Entertainment
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You should include:

- A brief description of how AI works
- References to real world applications of AI
- A discussion on both the positive and negative effects of AI
- A conclusion

Can you please email me your completed tasks 2 and 3 to Johnson.S@myton.co.uk