A-Level Computing Bridging Work

1 – Python Coding
Using online tutorials learn how to do the following in Python:

Beginners
Take input from a user
Add a user's numbers together to produce an output
Make decisions using if… elif… else
Use a while loop
Use a for loop
Add an item to a list

Intermediate
Retrieve data from a text file.
Save data to a file.

Advanced
Create classes in Python (look up Object Oriented Programming)
Use Pygame to create a shape that you can move around the screen

2 – Web Design
Learn how to create a basic web page in HTML using a simple editor such as Notepad.

Learn how to use the following tags. You can use HTML and CSS tutorials from the W3 Schools site.

HTML Tags
<html>
<link> to link to a CSS file
<head>
<title>
<body>
<h1> <h2> <h3>
<img>
<a>
<div>
<form>
<input> where the input is a textbox (i.e. has the attribute type="text" and another attribute name to identify it) or a submit button (i.e. has the attribute type="submit")
<p>

<script>

CSS
background-color
border-color
border-style
border-width
color with named and hex colours
font-family
font-size
height
width

3 – Theory
Research what is meant by artificial intelligence. How does it work?
What is training data?
How can AI be created using a programming language like Python?