

# Computer Science Preparatory work 2024

This course provides you with an opportunity to study for and gain an academic qualification in the field of Computer Science. In addition to learning about computer science topics and programming concepts, this course also utilises industry standard tools, such as Visual Studio and C#, to enable you to gain firm foundations for either further study or employment.

80% of the course is assessed through external examinations taken at the end of the second year.

20% is assessed through coursework which commences during the Summer term of the first year and is usually submitted during April of the second year.

The following tasks are to help get you organised, set-up and ready to start learning Computer Science. Please complete the tasks listed and hand in any work at the start of your first Computer Science lesson.

#### Task 1 Folders and Dividers

Get organised by obtaining two lever arch files along with 10-part dividers to organise your work. You have to carry these to and from every lesson. You may find it convenient to carry something smaller to and from college and then you can transfer your notes into the relevant folders on a regular basis.

#### Task 2 COMPUTER SCIENCE explained in 17 Minutes

Watch this video - https://youtu.be/CxGSnA-RTsA?si=QJE027ZUTDc6HOI

### Task 3 Please complete the following questionnaire

You are not expected to have programmed before however it is useful to know what experience (if any) you do have. Please answer all

#### Task 4 Algorithms

An algorithm sets out a sequence of steps, that, when executed, will carry out a specific task. Please complete the following algorithms questions, which are examples of GCSE examination questions.

Note: We are not trying to see if you can gain full marks, but rather how you approach and whether you enjoy this style of questions. Hopefully, it will help you to confirm that this is the right course for you!

1. A programmer has written an algorithm to output a series of numbers. The algorithm is shown below:

```
01 for k = 1 to 3
02 for p = 1 to 5
03 print (k + p)
04 next p
05 next k
06 m = 7
07 print m * m
```

(a) Give the first three numbers that will be printed by this algorithm.

(b) State how many times line 03 will be executed if the algorithm runs through once.

[1]

2.	During the implementation of an algorithm, a programmer attempts to swap over the
	value of two variables. The code used is shown below:

```
x = input("enter first number : ")
y = input("enter second number : ")
//swap values over
x = y
y = x
```

(a) The values 12 and 20 are inputted into this algorithm as the first and second number. Give the values of x and y once this program has been executed.

Х		
у		
	I	[2]

(b) Complete the program below so that the numbers are successfully swapped over.

```
x = input("enter first number : ")
```

# Task 5 - Operating Systems

# Answer the following question:

In your opinion, which is the best brand of operating system and why?

Please write no more than 100 words!