

Computer Science

Examining Body: OCR

Specification No. A Level H446

Core resources:

You will be provided with the following text books:

- OCR Computer Science for A level by Rouse, Pitt and O'Byrne published by Hodder Education in year 12.
- OCR AS and A Level Computer Science by PN Heathcote and RSU Heathcote published by PG Online in year 13.

All our resources are available via google classroom and you are expected to check this and your school email account regularly. It is expected that you will have access to a computer at home with MS office products (or compatible software) and internet access.

Additional Resources List:

You may wish to download Lazarus (Pascal) onto your home computer, we currently use version 2.0.12 in lessons. This can be downloaded here: <https://www.lazarus-ide.org/index.php>

You are not expected to have prior programming knowledge but it is advisable to practise.

[Pascal Video Tutorials](#)

www.tutorialspoint.com/pascal/pascal_overview.htm

[OCR A level: Theory videos](#)

Summer preparatory tasks: Do each question on a separate sheet of paper.

Task 1: Logic and algorithms

Decide on a simple shape and draw it yourself on a piece of paper.

Then write a set of step by step instructions that you would give to someone to enable them to draw the same shape without them seeing what you drew. These must be precise and in a logical order. Test this on someone at home. You should bring these with you to the first computing lesson and be ready to try this out in pairs. This should take you about 30 minutes.

Task 2: Computational thinking

Complete the question and trace table on the attached sheet.

Task 3: Research

At A Level you are going to be studying a number of different laws relating to the use of Computers. For each of the following find out the main points about them and when they were passed. This should take less than one hour. Bring what you find to your first Computer Science lesson.

- Computer Misuse Act
- General Data Protection Regulations (GDPR) (updated Data Protection Act)
- Copyright Designs and Patent Act
- Regulation of Investigatory Powers Act

Task 4: Essay

Use your research to answer the following exam style question which would be worth 9marks. This should be hand written. The quality of written communication will be accessed in your answer to this question.

A systems analyst has been appointed by a busy city library to produce a new computerised system to track books and borrowers. This analyst has worked on several systems before and for other libraries. In order for the developed system to meet all legal and regulatory requirements what factors should the analyst bear in mind when developing the system?