



# Holly Lodge High School - OCR A level Computer Science (2021-2023)

The course will give students an understanding and ability to apply the fundamental principles and concepts of computer science, including: abstraction, decomposition, logic, algorithms and data representation. Students will be able to analyse problems in computational terms through practical experience of solving such problems, including writing programs to do so. This in turn will allow them to think creatively, innovatively, analytically, logically and critically. It will enable students to develop the capacity to see relationships between different aspects of computer science whilst applying mathematical skills.

## A LEVEL

### Computer Science

Grade	Points
A*	56
A	48
B	40
C	32
D	24
E	16
U	0

## Cultural Capital

- Cognitive and Problem Solving Skills
- Interpersonal Skills
- Employee workshops
- University Visits

## Course Outcomes

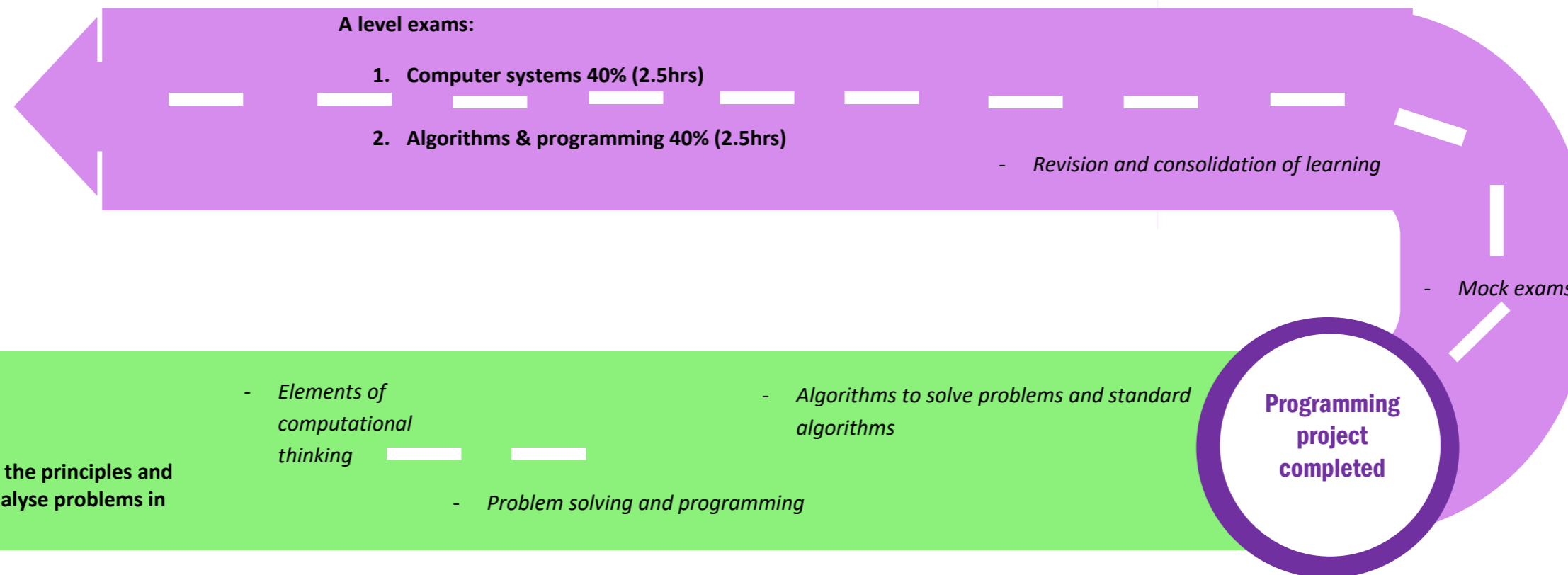
This course will enable learners to progress to higher study or to progress directly to employment. This qualification is suitable for learners intending to pursue any career in which an understanding of technology is needed. The qualification is also suitable for any further study as part of a course of general education.

## Size and Structure

A level (2 year course)

3 Components for study:

1. Computer systems (40%)
2. Algorithms & programming (40%)
3. Programming project (20%)



**AO2: Apply knowledge and understanding of the principles and concepts of computer science including to analyse problems in computational terms**

- Elements of computational thinking
- Algorithms to solve problems and standard algorithms
- Problem solving and programming

## YEAR 13

**AO3: Design, program and evaluate computer systems that solve problems, making reasoned judgements about these and presenting conclusions**

- Analysis of the problem
- Design of the solution
- Developing the solution
- Evaluation

**Programming project starts**

- Data types, data structures and algorithms

## YEAR 12

**AO1: Demonstrate knowledge and understanding of the principles and concepts of computer science, including abstraction, logic, algorithms and data representation**

- Software and software development
- Exchange data
- The characteristics of contemporary processors, input, output and storage devices

**Transition Activity: Programming task & Exam based assessment**

**SIGN ME UP**

