

# HIGHFIELDS SCHOOL

OVERVIEW - SCHEME OF WORK 2021-2022



[www.hswv.co.uk](http://www.hswv.co.uk)

**SUBJECT: A LEVEL COMPUTER SCIENCE**

**EXAMINATION BOARD: OCR**

AUTUMN TERM - YEAR 12	SPRING TERM - YEAR 12	SUMMER TERM - YEAR 12
<p><b>Algorithms and problem-solving Unit 02</b></p> <ul style="list-style-type: none"><li>• What is meant by computational thinking (thinking abstractly, thinking ahead, thinking procedurally etc.)</li><li>• Problem solving and programming – how computers and programs can be used to solve problems</li><li>• Algorithms and how they can be used to describe and solve problems</li></ul>	<p><b>Computer principles Unit 01</b></p> <ul style="list-style-type: none"><li>• The characteristics of contemporary processors, input, output and storage devices</li><li>• Types of software and the different methodologies used to develop software</li><li>• Data exchange between different systems</li><li>• Data types, data structures and algorithms</li><li>• Legal, moral, cultural and ethical issues</li></ul>	<p><b>Programming Project Unit 03</b></p> <ul style="list-style-type: none"><li>• Programming techniques</li><li>• Analysis</li><li>• Design</li><li>• Development</li><li>• Testing and evaluation and conclusions</li></ul>
<p><b>Standard Assessment</b> Unit 2 assessment</p>	<p><b>Standard Assessment</b> Unit 1 assessment</p>	<p><b>Standard Assessment</b> Mock NEA</p>
<p><b>ASSESSMENT</b> Algorithms and problem solving (02*) 1 hour and 15 minutes written paper (no calculators allowed)</p>	<p><b>ASSESSMENT</b> Computing principles (01) 1 hour and 15 minutes written paper (no calculators allowed)</p>	<p><b>ASSESSMENT</b></p> <ul style="list-style-type: none"><li>• Analyse a problem (10 marks)</li><li>• Design (15 marks)</li><li>• Develop and test (25 marks)</li><li>• Evaluate and document (20 marks) a program. The program must be able to solve it written in a suitable programming language</li></ul>

# HIGHFIELDS SCHOOL

OVERVIEW - SCHEME OF WORK 2021-2022



www.hswv.co.uk

**SUBJECT: A LEVEL COMPUTER SCIENCE**

**EXAMINATION BOARD: OCR**

AUTUMN TERM - YEAR 13	SPRING TERM - YEAR 13	SUMMER TERM - YEAR 13
<p><b>Programming Project Unit 03</b> Students will need to:</p> <ul style="list-style-type: none"><li>• Programming techniques</li><li>• Analysis</li><li>• Design</li><li>• Development</li><li>• Testing and evaluation and conclusions</li></ul>	<p><b>Computer systems Unit 1</b></p> <ul style="list-style-type: none"><li>• The characteristics of contemporary processors, input, output and storage devices</li><li>• Types of software and the different methodologies used to develop software</li><li>• Data exchange between different systems</li><li>• Data types, data structures and algorithms</li><li>• Legal, moral, cultural and ethical issues.</li></ul>	<p><b>Algorithms and programming Unit 2</b></p> <ul style="list-style-type: none"><li>• What is meant by computational thinking (thinking abstractly, thinking ahead, thinking procedurally etc.)</li><li>• Problem solving and programming – how computers and programs can be used to solve problems</li><li>• Algorithms and how they can be used to describe and solve problems</li><li>• Problem solving and programming – how computers and programs can be used to solve problems</li><li>• Algorithms and how they can be used to describe and solve problems</li></ul>
<p><b>Standard Assessment</b> Mock NEA</p>	<p><b>Standard Assessment</b> Unit 1 assessment</p>	<p><b>Standard Assessment</b> Unit 2 assessment</p>
<p><b>ASSESSMENT</b></p> <ul style="list-style-type: none"><li>• analyse a problem (10 marks)</li><li>• design (15 marks)</li><li>• develop and test (25 marks)</li><li>• evaluate and document (20 marks) a program. The program must be able to solve it, written in a suitable programming language</li></ul>	<p><b>ASSESSMENT</b> Computer systems (01) 140 marks 2 hours and 30 minutes written paper (no calculators allowed)</p>	<p><b>ASSESSMENT</b> Algorithms and programming (02*) 140 marks 2 hours and 30 minutes written paper (no calculators allowed)</p>