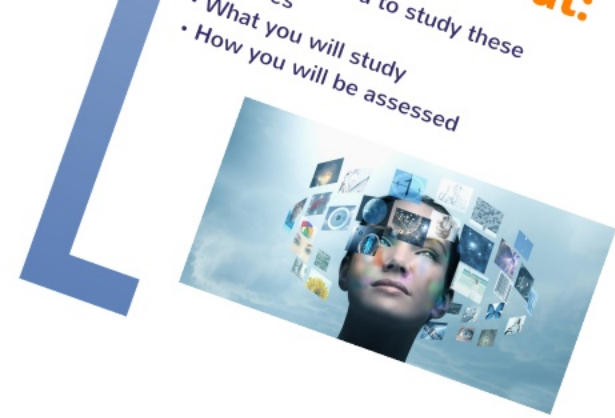
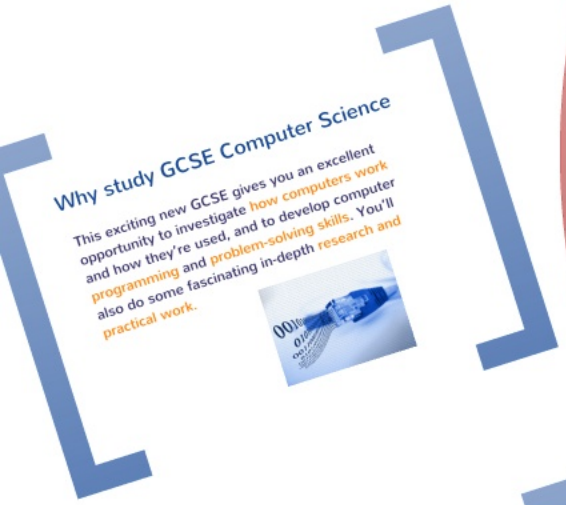
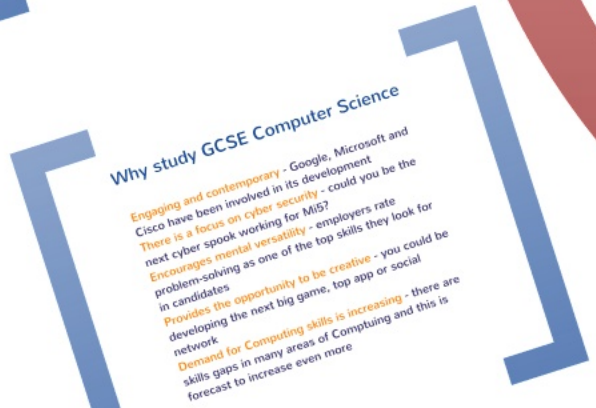
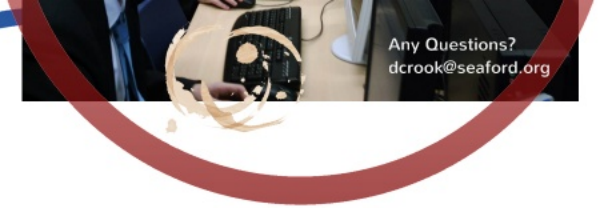








Seaford College

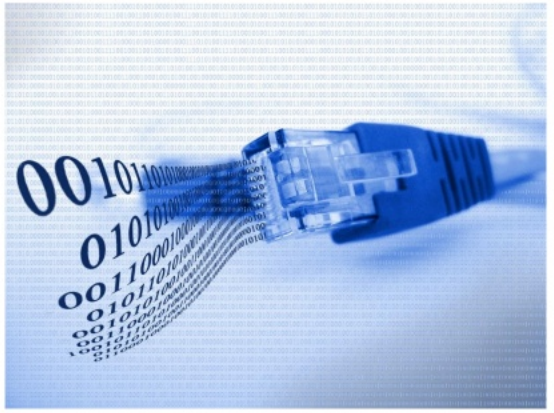
GCSE in Computer Science & BTEC ICT

I will talk about:

- Why it is good to study these courses
- What you will study
- How you will be assessed

Why study GCSE Computer Science

This exciting new GCSE gives you an excellent opportunity to investigate how computers work and how they're used, and to develop computer programming and problem-solving skills. You'll also do some fascinating in-depth research and practical work.



Why study GCSE Computer Science

Engaging and contemporary - Google, Microsoft and Cisco have been involved in its development

There is a focus on cyber security - could you be the next cyber spook working for Mi5?

Encourages mental versatility - employers rate problem-solving as one of the top skills they look for in candidates

Provides the opportunity to be creative - you could be developing the next big game, top app or social network

Demand for Computing skills is increasing - there are skills gaps in many areas of Comptuing and this is forecast to increase even more

Content and Assessment

Paper 1: Principles of Computer Science This paper will assess Topics 1 to 5.	
• Computational thinking • Data • Computers	• Networks • Issues and impact
Assessment overview	
This paper consists of five compulsory questions, each one focused on one of the topic areas. The questions consist of multiple-choice, short-, medium- and extended-open-response, tabular and diagrammatic items.	

Content and Assessment

Paper 2: Application of Computational Thinking
This paper will assess Topic 6: Problem solving with programming.

The main focus of this paper is:

- understanding what algorithms are, what they are used for and how they work in relation to creating programs
- understanding how to decompose and analyse problems
- ability to read, write, refine and evaluate programs.

Assessment overview

This paper is practical in nature and requires students to design, write, test and refine programs in order to solve problems.

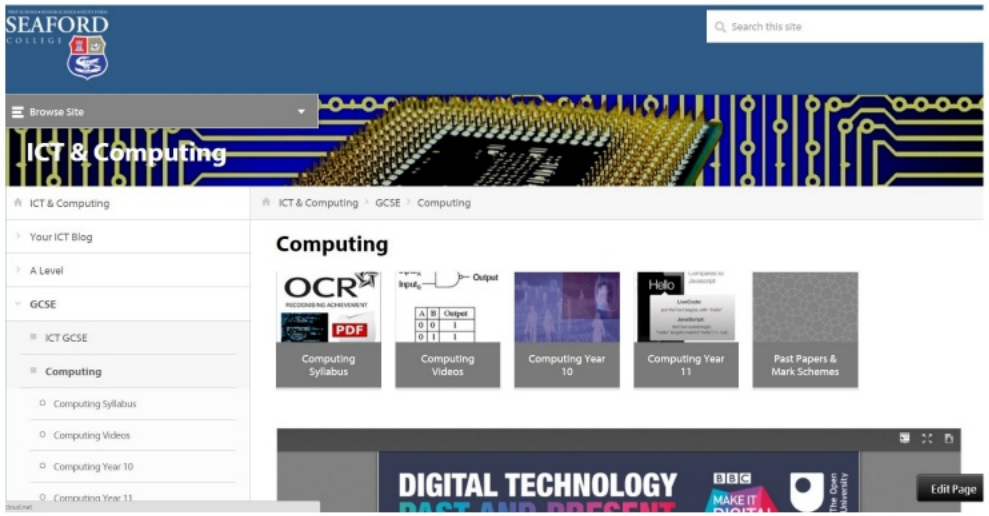
Students will complete this assessment onscreen using their Integrated Development Environment (IDE) of choice.

They will be provided with:

- coding files
- a hard copy of the question paper
- Programming Language Subset (PLS) - as an insert in the question paper and an electronic version.

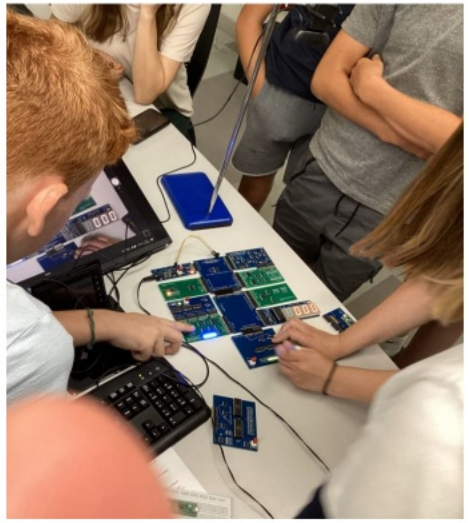
Students should then answer the six compulsory questions onscreen using Python 3.

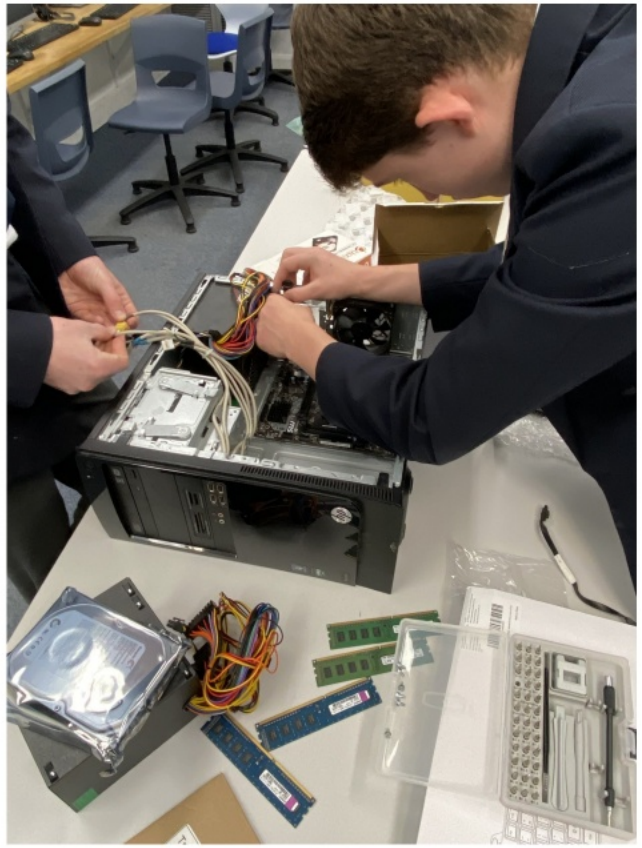
Resources



JS

ARDUINO





Practical

Software Development

Pseudo Code

```
//background subroutine
Global diceChoice, output
Start background
   variable output=random select(0-diceChoice)
   print output
End
//4 dice button subroutine
Start
   variable diceChoice=4
   run background
End
//6 dice button subroutine
Start
   variable diceChoice=6
   run background
End
//12 dice button subroutine
Start
   variable diceChoice=12
   run background
End
```

This is the Pseudo code for each individual component of the application. Put in line. I the final app, the code will be broken up and put in the areas it needs to be in. e.g within a button or in the background.

Pseudo Code

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//background subroutine
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Start
   variable diceChoice=6
   run background
End
//12 dice button subroutine
Start
   variable diceChoice=12
   run background
End
```

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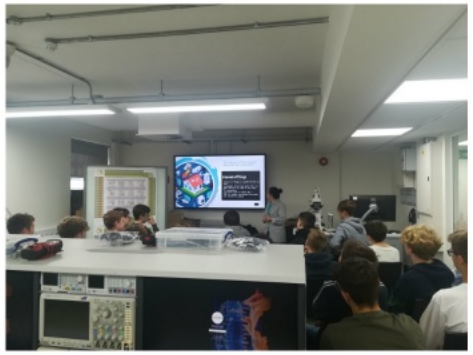
Trips

Bletchley Park

San Francisco



University of Southampton

IBM

Why study BTEC ICT

Provides students with the opportunity to develop a range of skills and techniques essential for successful performance in the digital industry and working life in general.

It also helps students to develop further functional skills that may help support them in other subjects.

Students learn about the online world and with the majority of the final grade determined by practical units such as digital video, spreadsheets and web design it provides a great choice for those students who prefer coursework as a mode of assessment.

What will I Study?

The Online World (25% of course, I hour on-screen assessment)

- Online services and online communication
- Components of the internet and how digital devices exchange and store information
- Issues with operating online

The image shows an example of an online shopping website.

Online shopping is an example of which of the following? (1)

Click on **one** of the boxes.

- Pay-per-click
- Entertainment
- Instant messaging
- Commerce

Creating Digital Video (25% of course, practical assessment)

- Understand the applications and features of digital video products
- Design digital video products
- Create, test and review digital video products

Spreadsheet Development (25% of course, practical assessment)

- Understand the uses of spreadsheets and the features available in spreadsheet software packages
- Design a spreadsheet
- Develop and test a spreadsheet
- Review the finished spreadsheet.

A Digital Portfolio (25% of course, practical assessment)

- Design a digital portfolio
- Create and test a digital portfolio
- Review the digital portfolio

UNIT 3: DIGITAL PORTFOLIO

THIS UNIT IS ABOUT CREATING OUR OWN BLOGS, BUT IN A PROFESSIONAL STANDARD, producing our coursework, about me, the purpose of my portfolio and the justification. This setup based on apply for an IT job for a certain local company. We have covered the basic project life-cycle, digital portfolio structure, digital portfolio user interface, digital portfolio content, what should go in the design, prepare

How will I be assessed?

Unit	Core	Assessment
1	The Online World	External
2	A Digital Portfolio	Internal
	Specialist	
3	Creating Digital Video	Internal
4	Spreadsheet Development	Internal

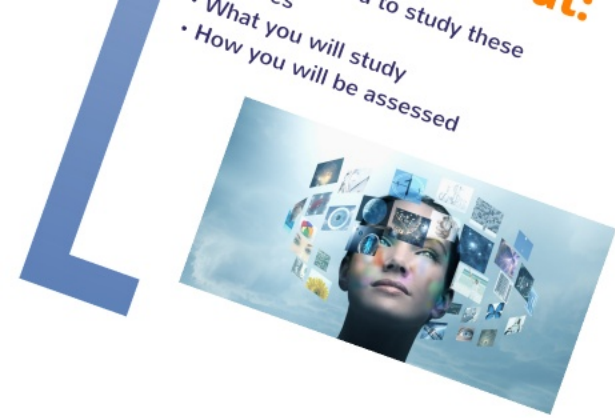
Level / Qualification Grade	Grade Equivalent
Level 2 / Distinction*	**8.5**
Level 2 / Distinction	**7**
Level 2 / Merit	**5.5**
Level 2 / Pass	**4**
Level 1 / Distinction	**3**
Level 1 / Merit	**2**
Level 1 / Pass	**1.25**

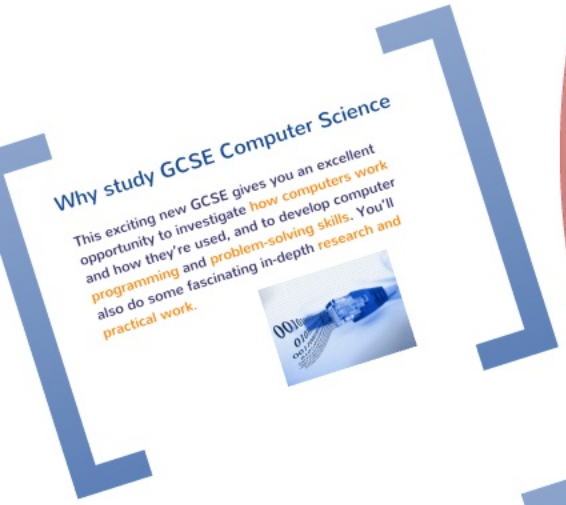
Future Careers

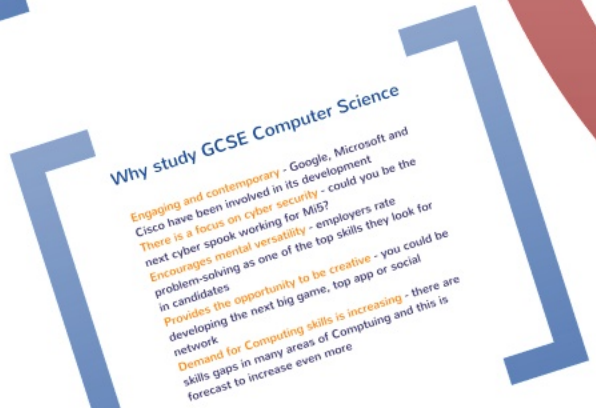
Top 10 fastest growing jobs

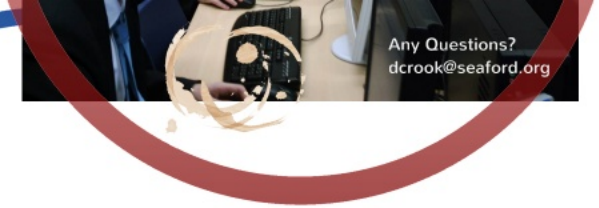
1. AI and Machine Learning Specialists
2. Sustainability Specialists
3. Business Intelligence Analysts
4. Information Security Analysts
5. Fintech Engineers
6. Data Analysts and Scientists
7. Robotics Engineers
8. Electrotechnology Engineers
9. Agricultural Equipment Operators
10. Digital Transformation Specialists

Source
World Economic Forum, Future of Jobs Report 2023.









Seaford College

GCSE in Computer Science & BTEC ICT

Soft

Pse

```
//backgroun
Global dice
Start backg
   variable
   print ou
End
//4 dice bu
Start
   variable
   run back
End
//6 dice bu
Start
   variable
   run back
End
//12 dice b
Start
   variable
   run back
End
```

Thank you for your attention!