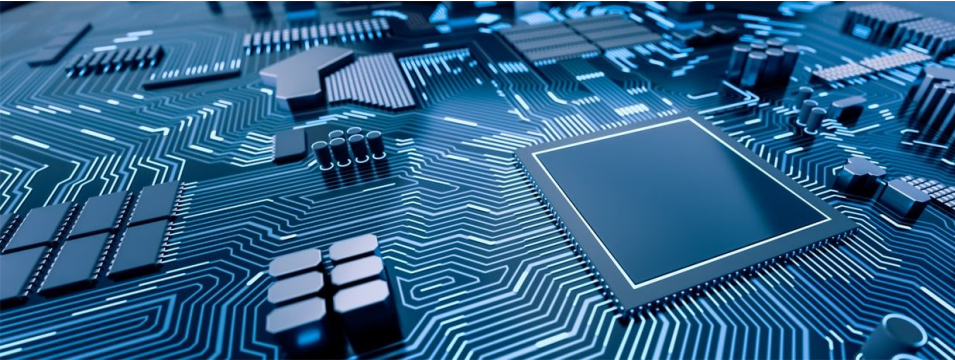




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# Welcome to the Computer Science & IT department



- Ms Kaur, Subject Leader
- Ms Hussain
- Mr Kohli
- Miss Sim Kaur
- Mr Singh



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# Our Year 7 Curriculum

In Year 7 Vyners students will study the following topics:

- Using Computer Safely, Effectively and Responsibly
- Control Systems with Flowol
- Understanding Computers
- Networks
- Computational Thinking
- Python programming
- Artificial intelligence





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**Do you  
like.....?**

Maths  
Creating  
Programming  
**Logic**  
Hacking

Technology  
Internet



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# Our Key Stage 4 Curriculum

At GCSE students are entered for GCSE qualifications with OCR. Students will:



- develop computational thinking skills
- have practical opportunities – students will be encouraged repeatedly to design, implement and test programs
- learn programming languages – Python
- apply the fundamental principles and concepts of Computer Science



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# GCSE Computer Science J277 (OCR)

<https://www.ocr.org.uk/Images/558027-specification-gcse-computer-science-j277.pdf>



## BTEC Tech Award in Digital IT (KS4)

This is a vocational course which has three components

- An controlled assessment on 'User Interface design and project planning'
- An controlled assessment on 'collecting, presenting and interpreting data'
- An exam on 'effective digital working practices' with IT topics such as hacking, legal and ethical issues and how IT is used in business (worth 40%)





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# Our Key Stage 5 Curriculum

At A Level students have the opportunity to study towards qualifications with OCR. Students will learn about:



- The internal workings of the (CPU), data exchange, software development, data types and legal and ethical issues
- Problem solving and programming – how computers and programs can be used to solve problems
- Algorithms and how they can be used to describe and solve problems



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# Our Key Stage 5 Curriculum

We offer the following two course at A level:

**OCR**  
Oxford Cambridge and RSA

**OCR A Level  
Computer  
Science H446**



 **Pearson**  
**BTEC**

**BTEC Nationals  
Information Technology  
(2016 and 2017)**





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# Our Key Stage 5 Curriculum

At A Level students have the opportunity to study towards qualifications with **OCR A Level Computer Science H446**. Students will learn about:

- The internal workings of the (CPU), data exchange, software development, data types and legal and ethical issues
- Problem solving and programming – how computers and programs can be used to solve problems
- Algorithms and how they can be used to describe and solve problems





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# Our Key Stage 5 Curriculum

At A Level students have the opportunity to study towards qualifications with **BTEC Nationals Information Technology (2016 and 2017)**. Students will learn about:



This qualification is designed for learners who are interested in an introduction to the study of creating IT systems to manage and share information, alongside other fields of study, with a view to progressing to a wide range of higher education courses, not necessarily in IT.



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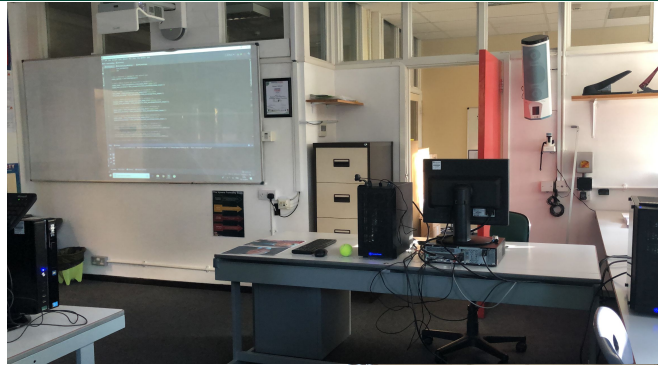
Design **Robotics** Systems engineer  
**Future careers** electronics  
Games **Web** Cyber-Security  
Data **Entrepreneur** App  
analysis UX/UI Programming  
Consultant





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# Our Co-curricular Offer

- Students are invited to join **Coding Club**, we have several robots (**Kitronik**) that are programmable with a computer or an iPad, examples on right.
- Students can opt for The Tech Club which looks more widely at areas such as **micro:bit**, **Game Development**, **Cyber Girls club**, which is intended to encourage girls to engage more in the subject.
- Past **trips** have included visit to Thorpe park, The Science Museum and National Cyber Security Centre.





## Frequently Asked Questions

1. **What is the equipment like?** Students have access to dedicated Computer Labs, which are Windows machines.
2. **What programming languages are taught?** Students are taught a variety of languages ranging from Scratch (block programming language) and Python from Year 7, to HTML in Year 9.
3. **Is it all programming?** No. We cover the full KS3 National Curriculum for Computing between Years 7 and 8. This includes important areas such as e-Safety and Cyber Security. With access to the full Adobe Creative Suite, students also experience the more creative aspects of the subject, such as producing Animations, Digital Graphics and Game Development. Students can opt to continue studying the subject through GCSE Computer Science or IT course from Year 10.



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**We look forward to meeting you in  
September 2024!**