



Staff

Computer Science is taught by the following members of staff:

Miss V Deavall	Subject Leader Computing
Mrs P Atkin	Teacher of Computing
Mrs E Moss	Teacher of Computing / Assistant Headteacher
Mr M Scarratt	Teacher of Computing
Mrs L Sharrock	Teacher of Computing

Department Vision

“Those who can imagine anything, can create the impossible.” Alan Turing

Our aim in the Computing department is centred around equipping students for their future, regardless of the individual pathway they may decide to choose, ensuring that students are prepared for the challenge of a rapidly developing and changing technological world. We will equip learners with the key technical skills to support their learning across the curricula, for future studies and ultimately for their chosen career pathway. We believe in delivering a mixture of both ICT and Computer Science in our curriculum to develop core employability skills, such as problem solving and critical thinking. We also develop ‘Internet Citizens’ who understand the importance of being responsible in the digital world. Our curriculum is mapped from KS3 to KS5 ensuring that students have the opportunity to grow both their knowledge and technical skills. We will provide a variety of extra curricula activities including entering national competitions, providing opportunities for students to acquire further technical qualifications and conferences/ visits to inspire students to follow a future in technology.

KEY STAGE 3 – YEAR 9

We cover a variety of Computer Science and ICT topics, in order to ensure that students can make an informed decision on KS4 pathways.

Topics that we cover include:

- Digital Citizenship
- Python Programming
- Computational thinking
- Interface Design
- Photo editing
- Data Representation
- Data Modelling

KEY STAGE 4

We have 2 pathways. OCR Computer Science GCSE and Pearson BTEC Level 1/2 Tech Award: Digital Information Technology.

GCSE COMPUTER SCIENCE

The Computer Science course is 100% examination and includes a mixture of practical programming and theory. Topics that we cover are:

- Computational thinking and python basics
- Errors, testing and iteration
- Searches, strings and arrays
- Data representation
- 2D arrays
- Data types and string manipulation
- CPU
- LMC
- Internet
- Network topologies
- Operating systems and threats
- Threats
- Utility Software
- Ethical Considerations

BTEC DIGITAL INFORMATION TECHNOLOGY

The BTEC course is a mixture of exam and controlled assessment components. Topics that we cover are:

Component 1:

- Research and evaluation of user interfaces
- Designing a user interface to meet a purpose, client and target audience needs
- Creating a user interface
- Reviewing and evaluating the interface that has been created

Component 2:

- Data modelling skills

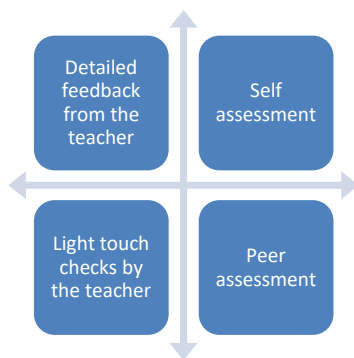
- Designing a data model to meet the needs of a target audience
- Creating a data model
- Reviewing and evaluating the data model that has been created

Component 3:

- Modern technologies
- Impact of modern technologies
- Threats to data
- Prevention and management of threats to data
- Policy
- Responsible use
- Legal and ethical
- Forms of notation

COMPUTING EXAMINATION CLASSES FEEDBACK POLICY FOR STUDENTS

What should you expect in Computer Science?



(*diagram adapted from Dylan Wiliam’s four-quarters marking model in “What does this look like in the classroom” by Carl Hendrick and Robin MacPherson)

What?	How Often?	Feedback how?	What are <i>you</i> responsible for?
--------------	-------------------	----------------------	---

Class work	Where appropriate during the lesson	Verbal feedback	Asking for support when needed. Making immediate improvements to your work, as identified by the teacher.
Knowledge Organiser homework completed in Practice Books	Fortnightly	Teacher does a light touch check for quality and quantity	Completing homework weekly – one page in Practice Books
Low Stakes test based on Knowledge Organiser	Fortnightly	Peer- or self- marked. Scores are recorded on your tracking sheet	Identifying your areas of weakness and completing further practice as needed
Exam style questions or exercises completed in class on the current topic studied	Twice per half term	Pre-feedback / modelling by teacher Peer- or self- marked using mark scheme	Improvement /re-draft / extension work in purple pen
Class exercise books	Once per half term	Teacher does a light touch check for quality and quantity of note taking and presentation of work.	Catch up on notes if you are absent Completing intervention if asked by teacher
Exam style questions for homework	Once per half term	Teacher gives detailed feedback, which could include: <ul style="list-style-type: none"> ▪ Individual comments on each student's work ▪ Extension questions ▪ Whole class feedback 	Completing homework termly Improvement /re-draft / extension work in purple pen
Full- assessment / test	At the end of each topic	Teacher gives detailed feedback, which could include: <ul style="list-style-type: none"> ▪ Individual comments on each student's work ▪ Extension questions ▪ Whole class feedback 	Improvement /re-draft / extension work in purple pen

**COMPUTING CONTROLLED ASSESSMENT STUDENT FEEDBACK
WHAT SHOULD YOU EXPECT IN BTEC DIGITAL IT**

What?	How Often?	Feedback how?	What are <i>you</i> responsible for?
Class work	Where appropriate during the lesson	Verbal feedback	Asking for support when needed. Making immediate improvements to your work, as identified by the teacher
Class exercise books	Once per half term	A light touch check for quality and quantity of note taking and presentation of work	Catch up on notes if you are absent. Completing intervention if asked by teacher
Practice assessment questions	Twice per half term	Teacher gives detailed feedback, which could include: <ul style="list-style-type: none"> • Individual comments on each student's work • Extension questions • Whole class feedback 	Improvement /re-draft / extension work in purple pen
Assignment Feedback	At the end of each Assignment	Use of official mark sheet to identify <ul style="list-style-type: none"> • Which assessment criteria you have achieved and what you have done well • Which assessment criteria you have not achieved and what was missing 	Making corrections based on mark sheet and resubmission of work

Opportunities and Visits

- Barclays 'Girls Allowed' event
- Barclays Technology Open Day
- Barclays Technology Innovation Challenge
- Cyber Discover Challenge including guest speakers
- Bebras Computational Thinking Challenge
- FIRST Tech challenge (Robotics Competition)
- iDEA Award (Inspiring Digital Enterprise Award)
- PWC Careers in Computer Science Workshop
- Young Professionals Conference: Women in Technology

“Working together to achieve our personal best”