CURRICULUM INTENT:

"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.

COURSES OFFERED:

KS3 Computing (Year 9)

- Digital Learning including digital citizenship
- User Interfaces
- Bebras Computational Thinking Competition
- Python
- Data Representation
- E-Safety
- Spreadsheets
- Cyber Security
- Skills for Success at GCSE / L2 Pathway

KS4 OCR GCSE COMPUTER SCIENCE

https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/

- System architecture
- Memory and storage
- Computer network connections and protocols
- Network security
- Systems software
- Ethical, legal, cultural and environmental impacts of digital technology
- Algorithms
- Programming fundamentals
- Producing robust programs
- Boolean logic
- Programming language (Python) and Integrated Development Environments

KS4 PEARSON LEVEL 1/2 TECH AWARD IN DIGITAL INFORMATION TECHNOLOGY

https://qualifications.pearson.com/en/qualifications/btec-tech-awards/digital-information-technology.html

- Component 1- Exploring User Interface Design Principles and Project Planning Techniques (Internal Assessment)
  - 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 – Collecting, Presenting and Interpreting Data (Internal Assessment)
  - Data Modelling skills
  - Designing a data model to meet the needs of a target audience
  - Reviewing and evaluating the data model that has been created
- Component 3 - Effective Digital Working Practices (External Assessment)
  - Modern technologies
  - Impact of modern technologies
  - Threats to data
  - Prevention and management of threats to data
  - Policy
  - Responsible use
  - Legal and ethics issues
  - Forms of notation

KS5 OCR COMPUTER SCIENCE A LEVEL (H446)

https://www.ocr.org.uk/qualifications/as-and-a-level/computer-science-h046-h446-from-2015/specification-at-a-glance/

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues
- Elements of computational thinking

- Problem solving and programming
- Algorithms to solve problems and standard algorithms
- The student will also choose a computing problem to solve using:
  - Analysis of the problem
  - Design of the solution
  - Developing the solution
  - Evaluation

KS5 PEARSON BTEC NATIONALS LEVEL 3 DIPLOMA IN IT

- Information Technology Systems (External)
- Creating Systems to Manage Information (External)
- Using Social Media in Business (Internal)
- Programming (Internal)
- Data Modelling (Internal)
- Website Development (Internal)
- IT Project Management (Internal)
- Cyber Security and Incident Management (External)

FEEDBACK POLICY

The primary purpose of feedback from the Computing Department is to move students on with their learning as well as celebrating student success.

Students will receive feedback on their learning in a number of different ways, both formally and informally.
This will include:

- Low stakes tests set as tasks in lessons or homework
- Live marking in lessons
- Verbal feedback
- Questioning
- Peer & self-assessment (Use of a success criteria as needed)
- Examination style questions (For examination classes)
- Whole class feedback
- STAR marking is implemented, alongside other techniques to promote learning and progress. Students are expected to respond to their feedback and make improvements to their work by acting on the feedback they are given.
- For BTEC courses, official marksheets will be used for assessment tasks
- Formal assessments as per the assessment calendar