Curriculum Overview 2019-2020

Computer Science

Intention

In Computers Science lessons at Beacon High, we aim to equip students with the skills to participate in a rapidly changing world through challenging and engaging topics.

Students will develop and understanding and application in the fundamental principle of Computing/Computer Science by having the opportunity to write programs, design web pages and create professional digital products.

Computing skills are a major factor in enabling students to be confident, creative and independent learners and it is our intention that students have every opportunity available to allow them to achieve this.

In Computing/Computer Science we are dedicated to ensuring our students leave with the skills to fully embrace a future of rapidly advancing computer technology.

Implementation at Key Stage 3

At Key Stage 3, we follow the National Curriculum in years 7, 8 and 9.

 These topics include:

Year 7 - Programming (scratch and python)

      E-safety

      Spreadsheets, presentations, documents

      Introduction to computing

Year 8 - Web design

      Programming in python

      Databases SQL

      Understanding computers

      Ethics

Year 9 - Networks

      Programming projects

      Data representation (binary/logic)

      IDEA project

We aim to engage students learning in Computing/Computer Science through practical work, visits and other opportunities. For example, all year groups will be taking part in workshops run by The soap box each half term. The soapbox will be running a Tuesday club for younger students to help them with coding, designing and other technical skills.

Implementation at Key Stage 4

We follow the OCR GCSE specification for the Computer Sciences.

The majority of students Student completing a GCSE in Computer Science show outstanding problem solving skills and are top set maths. Although there is a chance for students to be selected by their teacher to study Computer Science this is based on attainment, progress and ability.

Overview of Key Stage 4

GCSE Computer Science is assessed through two exams at the end of year 11.

Paper 1 - Computer Systems (50%) 1 hour 30 minutes

Paper 2 -Computational thinking, algorithms and programming (50%) 1 hour 30 minutes

Programming Project - Students complete a project in 20 timetabled hours. This gives students time to complete their Programming Project. The Programming Project does not count towards a students' final grade, but is a requirement of the course.