Option Subjects
GCSE Computer Science

Staff Contact: Mr R McKinlay (stmckinlayr@selstonhigh.org.uk)

Outline content:
In GCSE Computing will aim to help you:-
• develop knowledge and understanding of the fundamental principles and concepts of computer science;
• develop and apply computational thinking skills to analyse problems and design solutions across a range of contexts;
• gain practical experience of designing, writing, and testing computer programs that accomplish specific goals;
• develop the ability to reason, explain and evaluate computing solutions;
• develop awareness of current and emerging trends in computing technologies;
• develop awareness of the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues;
• communicate computer science concepts, explain computational solutions clearly, and concisely using appropriate terminology.
This is a well-established course at Selston High School and is a fully recognised GCSE course. It also counts as one of the sciences as part of the EBacc group of qualifications. The course is not looking to make functional programmers. Students will do some computer programming, but it is not 3 years of just programming.

Assessment including terminal examinations and controlled assessments:
There is a practical angle to the course through programming, but there is also 2 exams to sit.
Both exams are worth 50%
These will count for 100% of your final 9-1 grade
The programming project is 20 hours and will test your skills in the Python programming language. As well as prepare you for both exams. You must complete this to gain the qualification.

Examples of learning activities (e.g. offsite visits; group learning; research; use of ICT etc.)
Some lessons will feature coding and you will be invited to investigate code and develop it further by way of learning what it does, you will then be able to apply the skills you have learnt towards your programming project. The theory will be taught in all manner of creative ways with exam technique being an integral part of every topic. There will also be opportunities to do more outside the classroom environment.

Future progression (e.g. what courses might follow on in post-16 education)
A-Level courses in IT, Computing, Computer Science all follow on and build on-top from what is taught on this course.
Possible future careers that this course supports:
This course is great if you have considered or want a career in: Web development, Programming, Bug testing, Game development (as a programmer not designer), Network engineer, Technician, Software developer, App developer
There is a major shortage of people trained to do this in the working world. As a result those who can do it are rewarded financially for being able to do so.

Skills; personal qualities or commitments required to take this course:
You need to be resilient, good at problem solving and have a basic enjoyment of maths. Almost every code you write will fail, the fun comes trying to make it work and then making it work better!

Homework:
This will be mainly based on the exam theory, you will be tested or your existing knowledge and this will inform me where we need to focus our learning, both as individuals and as a class.