Subject	Computer Studies

Curriculum Intent

The Computer Science department aims to equip students with the skills and knowledge to enable them to function and live in the 20th century digitalised global environment. Our vision is to enable our students to use and design the digital technology whilst inspiring them to be leaders in the various careers that make up the digital world. Ultimately, we want students to be responsible, competent, confident and creative in the field of computer science. We want pupils to know the function and purpose of computers, to understand computation, and ensure that they have digital literacy skills.

The computer sciences curriculum places students in a position to continue their journey from key stage two to investigate, to be curious and most importantly to be creative. Our aspiration is to enable students to build resilient, as they become **confident creative critical thinkers**. Student who can apply their skills and knowledge to solving real world problems using programming.

What do we want our student to learn? Our intent is that students receive a broad and balanced curriculum. In key stage three (year7 to 9) our intent is to build on their knowledge of algorithms constructs, and give them access to new technologies, information technology and complex programming skills.

In key stage four, we provide a two-year GCSE Computer Science course in line with the national computing curriculum of England. This enables students to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. This leads the student to develop analytical skills and enhance their computational knowledge to solve real life problems, whilst being exposed to practical programming experiences to write their own programmes. In key stage five - sixth form (year 12 and 13) we provide A level Computer Science course that allow them to develop their skills and knowledge at a higher level to provide the stepping stone to university

Computer science exposes students to all the occupations and every career; as the digital world is prevalent through everything that we use, do or interact with. Through Computer Science and the topics, it covers; we are able to explore all of Heron Hall Strive values and secure the growth of our student's characters.

Curriculum Implementation

The Computer Science department has a wide range of digital assets available to communicate ideas and information to the students. The lessons are of a high standard and assessment in line with the school standards.

Key stage three students are provided with one hour of computer science each week We provide a schemes of work that enable us deliver five to six units per. Some units have practical and theoretical parts where students receive taught lessons by the teachers using a variety of resources and where they are able to complete tasks using the computers. We implement the curriculum first unit *'Using Computers Safely, Effectively and Responsibly'* first unit – to ensure student safety and provide initial challenges. Key stage four

and five students receive five lesson over a two-week period; of practical and theoretical lessons Key stage five student also have.

To support students learning in a positive and encouraging way we conduct in class assessment to help the students retain and apply the knowledge taught.   Class questioning, recapping previous topics and using AfL assessment for learning. We help our student to retain knowledge by teaching practical and theoretical lesson simultaneously. We use a rigorous assessment cycle of mid unit assessment. Knowledge checks and applications checks.

Using data accumulated from testing and assessments enable us to use informed planning of new teaching material. Throughout the department, we use centralised resource to ensure quality and that key concepts are focussed on across the department. There are also learning walks, observations and book scrutiny to maintain standards at Heron Hall Academy.

In computer science we encourage the students to identify, read and notice (through underline/highlighting) key words and command words. Understand these words and using this process help student acquire better grades. This is established from year seven and the students school life; this help students across their curriculum subjects and gives them confidence for their GSCE exams.   We have a literacy wall in all computer science rooms and in key stage, four students are provided with a vocabulary book. Our aim being to fully make computer Science accessible for all students; whilst helping them to retain the information taught.

Feedback to students is shared and delivered by the student, their peers and verbally within the lessons. The formal What Went Well (WWW) and Even Better If (EBI) is given to students, formative and summative work.

Student receive homework – approximately once a week and end of unit assessments. Using these assessments enables informed planned, task re-visits and the identification of students who need further support in (small group) intervention. Three times a year we collate and compare data; followed by outcome reports sent to the students guardians

Computer Science is implemented through a planned, sequential spiral curriculum to meet the learning needs of the students; their GCSE and their future A level studies. Each year we aim to positively build on and accumulate the skills and knowledge they acquire has they pass through their formative years from year 7 to year 13.

Curriculum Impact

Having acquired the computer science GCSE from a solid and thorough curriculum, means students can secure an A level computer science course in any higher educational establishment of their choice.

The acquired skills and knowledge over the five-year curriculum will assist the student across all their subjects and provides a sound base for any career they choose for their future educational or career pathway.

The impact of computer sciences links students to real life opportunities in the real world. Enabling them to transfer their learnt skills and knowledge from the school to the world environment as **confident creative critical thinkers** who can read, interpret and write their own programming code.

We believe computer science will change our student characters in a positive way. Leading to students with strong character traits that will display logical thinkers, teamwork, and problem solvers. These characteristic will enable our students to play a role on a local, national and international platform in the real and technological world.