COMPUTING DEPARTMENT

The Computing Department at Lacon Childe School is made up of the following staff:

Joel Amps	Head of Faculty
Nathan Turner	Subject Leader
Ben Craig	Teacher of Computing

Intent:

At Key Stage 3 the Computing Department aims to embed skills and knowledge in three areas including Computer Science, Information Technology and Digital Literacy. Pupils are expected to develop the capability to program using a range of programming techniques and languages so that they have a solid grounding should they wish to progress to study Computer Science at Key Stage 4 and above. Pupils develop skills in Information Technology by completing various projects and creating various digital artefacts. Pupils will then be able to combine software packages to accomplish given goals for a given audience as required in the Key Stage 4 Creative iMedia programme of study.

It is the aim of the Computing Department that all pupils will be given the opportunity to develop their critical thinking skills, programming skills and the ability to use information technology and digital software both creatively and safely.

Pupils are taught Computing in two well-equipped rooms with at least one Windows PC per and a digital whiteboard. Pupils can also attend a coding club or take part in a GCHQ Cyber Challenge as extra-curricular challenges. Pupils receive one hour of Computing lessons per week in Key Stage 3 and one project is usually completed each half term. In Key Stage 4, pupils receive five lessons in each two-week period.

Programme of Study Overview:

Key Stage 3:

Pupils complete various units of work in Key Stage 3. These focus on the three main areas of Computing: Computer Science, Digital Literacy as well as creative media projects using technology.

Key Stage 4:

In Years 10 & 11 pupils have the opportunity to study one or both of GCSE Computer Science or the Cambridge National in Creative iMedia.

Pupils with a strong background and interest in Mathematics, Technology or Languages would be well-suited to studying the Computer Science qualification at Key Stage 4. There are units of study relating to: Computer Systems, Computational Thinking, Algorithms and Programming as well as a project on Practical Programming

Creative iMedia is a course using IT to provide digital media. Pupils study four separate topics; Pre-production Documentation, Digital Graphics, 2D & 3D Digital Characters and Storytelling with a Comic Strip

½ Term	1	2	3	4	5	6
Year 7	Introduction to systems, rules for responsible computer use then Programming using Scratch	Computer hardware, Networking and introduction to binary number system	Data – Presentation of data, analysis and evaluation of information	Esafety – responsible use of the internet, data sharing and staying safe	Programming using Scratch (Part 2)	Grand designs project – Design for purpose using Google Sketchup to create digital artefacts for a given audience
Year 8	Python programming – Textual programming skills	HTML and Website Development	Esafety revisited, the use of The Web and Networks	Sound Editing – Using Audacity to create a digital advert	Data Representation – Using Binary to understand how text and images can be stored in a binary format	Microbit Madness – Using programming and Boolean logic to control other devices
Year 9	Python programming – Textual programming skills	Animation project	Computer Systems – Using hardware components to build a computer	How the Web Works – Deeper understanding of network infrastructure and the language of the internet	Cryptography. Using encryption in a digital environment.	Computer game project

Computer Science

Year 10 & 11

Computer Systems (01) – introduces students to the parts of a computer and looks at how they work together. Investigations into how computers communicate with each other via networks. What security issues are there surrounding computer systems and technology and what is the impact?

Computational thinking, algorithms and programming (02) – Logic and problems solving is key in this section. Students look at different problems that can be solved using 'computational thinking' and apply this to everyday problems. This will help them with their programming and designing programs.

Programming (03) – Students will learn about programming and different programming techniques.

Creative iMedia

R081 Pre Production Documents
R082 Creating Digital Graphics
R083 Creating 2D & 3D Digital Characters
R084 Creating a Cartoon Strip

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