Lady Manners School

Curriculum Area of Computing

OVERVIEW OF THE DEPARTMENT

In Years 7 to 9 we teach a blend of Computer Science, Digital Literacy and ICT. Our aim is to develop student confidence in the use of computers through hands-on experience of a wide range of software.

We have a good number of dedicated computer rooms that are well laid out and utilise desktop computers and wide screen monitors.

We are supported by a Network Manager and skilled, professional technicians. They provide us with a reliable, fast network that is regularly reviewed and up-dated. The school provides a good level of funds to ensure that computer rooms are refurbished with new hardware, as needed, to keep them reliable.

Positive relationships between students and staff lead to lessons which encourage students to be creative and challenge them to achieve their best.

Including the Curriculum Leader there are four full time teachers in the curriculum area.

Throughout school programming is taught using Python.

THE CURRICULUM

Key Stage 3
All students in Key Stage 3 have timetabled Computing lessons.

Years 7 and 9 have a one hour lesson each week and Year 8 has two one-hour lessons.

Currently, students are taught in all ability form groups in Years 7 to 9. The curriculum is sequenced with five strands: Digital Literacy, Computer Systems, Problem Solving and Programming, Data Handling and E-Citizens which are built-on in each year throughout Key Stage 3. Resources are regularly updated and comprise a mixture of in-house, PG Online and NCCE schemes of work. All staff contribute to the creation and maintenance of resources and distribution via our learning platform, Moodle.

Key Stage 4
Computer Science and ICT courses are optional at KS4. Students can choose OCR GCSE Computer Science and/or Cambridge National in Creative iMedia Level 1 and 2 Certificate from OCR. Students have five lessons across Years 10 and 11 (two lesson in one year and three in the other).

Cambridge National in Creative iMedia Level 1 and 2 Certificate
This vocational qualification is aimed at creative learners with an interest in digital applications. The modules we have selected to study cover artwork and imaging and developing web products. The course suits students who are interested in further developing practical ICT skills. The course is consistently a very popular option choice and we have two classes in each of Years 10 and 11.

OCR Computer Science GCSE
Students develop knowledge of a range of computer science topics, including computer networks, cyber security, and computer systems and databases. Significant time is devoted to developing programming ability using Python 3. Students have a choice of programming integrated development environments including Mu and Repl.it, an online platform that allows students to code at home and school, without the need to download and install their own IDE.

Key Stage 5
Cambridge Technical Level 3 Introductory Diploma in ICT (Emerging Digital Practitioner Strand)
A mixture of examination (3) and coursework (2) units, this subject covers a wide range of IT related content. It covers the Fundamentals of ICT, Global Information systems, Virtual and Augmented Reality, Cyber Security and Mobile Technology.

OCR Computer Science A Level
Advances in computing are transforming the way we work. The course focuses on the knowledge, understanding and skills students need to progress to higher education and thrive in the work place. Computer Science enables students to acquire subject knowledge, programming skills and soft skills in computational thinking and problem solving.

FACILITIES AND SUPPORT

Computers
The school has over 500 computers available for teaching and learning use. They are all networked and have Internet access over a 1Gb fibre-optic connection. All teaching rooms have at least one computer for teacher use with a projector and whiteboard or a smart board.

Specialist computer rooms are located around the school. There are five used predominately for delivery of Computer Science/ICT courses. Machines all have widescreen monitors and are replaced regularly when nearing the end of their useful life.

In addition, there are computer facilities across a range of subject areas and also in the school library, the Sixth Form study area, Learning Support and the Vocational Centre.

Two class set of 30 Windows laptops/Chromebooks are available for use by departments, as needed. These utilise the school's recently refurbished Wi-Fi system.

Software
Workstations are running Windows 10. These are rebuilt every 2 years to upgrade the operating system. Microsoft Outlook is used for staff and student email combined with an on-premises Exchange server.

DrawPlus, PhotoPlus and WebPlus from Serif are used extensively for graphical work in all years.

Microsoft Office 2019 is available on all PCs and students can download the software for free for use at home.

ABTutor is used in the ICT suites and on the mini-laptops to control and audit the student machines.

All teaching staff are provided with a school laptop. Staff can access school resources from home, using either FOLDR or through Remote Desktop.

School-wide printing is available via a 'follow me' printing system linked to ID cards.

Learning Platform
We make use of a Moodle implementation for our virtual learning environment. This holds well-developed and resourced teaching material that is accessible in and out of school. The server is held at school.

Technical support
The school has benefited greatly in its ICT development through the support of a highly experienced and skilled technical support team. Based in the ICT Support area we have two technicians and the school's ICT Manager, who has overall responsibility for the network and its associated hardware and software.

Student Access
Students use Foldr to access their school work from home and have access to Moodle, the virtual learning environment.