Teaching Future Skills Today

Computing is a very dynamic subject - it has to be since technological advances are changing the face of the world we live in.
Computing drives innovation in many sectors such as Mathematics, Science, Engineering, entertainment, education etc...
The Computing curriculum at STAGS is constantly evolving to ensure that our students develop the skills and capability that they will need in the future.

Schemes of work now include areas such as:

- Multimedia applications such as web development and animations
- Understanding Computer architecture and processing
- Computer programming using Logo, Scratch, Python and the BBC micro:bit
- Analysing Big Data using databases and SQL
- Spreadsheet Modelling and Simulations
- How Computers Work

The safety of the students is of paramount importance and all students learn about e-safety.

Computing Staff

The Computing department has three members of staff:

Mr Ghani (Computing & ICT Curriculum Leader)
Mrs Morgan
Miss Pendlebury-Green

All of our team have had careers outside teaching and have experience using ICT and Computing in "the real world".

For further information about Computing @ STAGS please contact Mr Ghani:

mgi@stags.herts.sch.uk
01727 853134

Are you a Computer Scientist?

Ever wondered about the best way to solve a Rubik's Cube or Sudoku Puzzle?

Computer Scientists love puzzles and logical thinking tasks like these.

After all, the ultimate embodiment of a logical thinker is a computer.

COMPUTING & ICT @ STAGS

"Learning to write programs stretches your mind and helps you think better"
Steve Jobs

St Albans Girls' School
Specialist Business and Enterprise Academy

Ofsted Outstanding Provider

KS3

Computing and Multimedia

Computing is taught in mixed ability form groups for one lesson per week.

Year 7 students undertake a series of units which cover the National Curriculum for Computing. These include:

- Our STAGS Network - E-Safety, Cloud computing and Google education.
- Design, creation and modelling of spreadsheets (MS Excel).
- Database design, development and uses (MS Access).
- Data representation - How computers process data in Binary and ASCII
- Computer Programming using Scratch, Python and BBC micro:bits.

In Years 8 and 9 students study a number of areas in more detail, in addition to encountering completely new topics. These new topics include:

- Website Design and Development (Adobe Creative Cloud)
- How Computers Work – under the bonnet look at computer hardware and circuit design
- Programming with Pseudo Code, flowcharts and Python - use of algorithms to build solutions
- Analysing Big Data—looking at weather patterns with databases and using SQL to query data.

The final part of the Year 9 scheme of work involves extended projects in multimedia and programming. Here the focus is on integrating applications and computational thinking skills to find solutions with an increasing level of independence.

KS4

Computer Science and Digital Applications

Computer Science and Digital Applications are both separate optional subjects for students at KS4. These are new courses and are replacing the ICT and Computing courses previously taught. They are timetabled for five lessons of Digital Applications or Computer Science every two weeks.

GCSE Computer Science (9-1)

The GCSE Computer Science qualification focuses on computer hardware and software with a real emphasis on programming and computational thinking.
GCSE Computer Science involves 20 hours of in-school controlled assessment coursework. Worth 20% of the final mark This is a programming project where a real life problem is set by the exam board and students are to program a solution and document its development.

Certificate in Digital Applications (A* to C)

This qualification is equivalent to one GCSE. The focus is on making multimedia products and conveying messages using ICT by combining text, images, sound, video and interactive components to make websites, presentations and games.
CIDA involves completing a project in school worth 75% of the final mark. This project will be on a real life scenario and is set by the exam board and students are to show their work in an e-portfolio.

ICT and Computing results for 2017

ICT	COMPUTING
A* to A: 37%	A* to A: 25%
A* to C: 85%	A* to C: 100%

Post 16

Computer Science and Digital Media

Digital Media and Computer Science are both separate optional subjects for students at Post 16. These are new courses and will be offered to KS4 students.

A Level Computer Science is ideal for students to continue to pursue their passion in computer architecture and programming.

Cambridge Technicals in Digital Media are alternatives to A Levels. They are recognised for UCAS tariff points. The students cover units on media products, pre production and planning.

Facilities

STAGS have six dedicated ICT / Computing Suites. Each suite has an interactive whiteboard, speakers, a laser printer and an extensive range of software including the Microsoft Office 2013 package, Python 3 IDE (programming) and the very latest Adobe Creative Cloud (Web authoring and graphics). The software is used by professionals in the work place. Students also have access to Chromebooks and iPads.

Using these pieces of software in a range of contexts enables students to decide which will be the most appropriate in a given situation outside of their Computing / ICT lessons.

All students have their own school e-mail address and unlimited cloud storage (Google Drive) for work purposes. All lessons and resources can be accessed from Google Classroom.