Head of Department: Mr. M Coldwell
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Why take Computer Science?

GCSE Computer Science

Develops problem solving and analytical thinking that can be applied to many areas in later life.

Includes lots of specific theoretical knowledge for pupils interested in the nuts and bolts.

Previous results:

2019-20: 4+ 90%, 7+ 10%

2020-21: 4+ 91%, 7+ 36%

2021-22: 4+ 85%, 7+ 25%

What will you learn?

Component 1 – Computer Systems.

You'll gain an understanding of:

- CPU's and how they work

- Computer memory and storage

- Modern network layouts, hardware and how they work

- Cyber Security

- Different types of software available

- How computers and computing affect current society: ethical, legal, cultural and environmental issues/considerations

What will you learn?

Component 2 – Computational Thinking, Algorithms & Programming

You'll gain an understanding of:

- Understand some of the fundamental algorithms commonly used in computer science

- Build a firm foundation in programming techniques

- Thoroughly test programs and make them resistant to misuse

- Explore Boolean algebra (AND, OR, NOT)

- Understand how we store data in binary & hexadecimal form

What will you learn?

Programming Projects

- Use newly developed programming skills on a variety of *largely* independent coding projects to solve real-world problems.

How many exams are there?

- There are two exam papers at the end of year 11.

- Each one is 1 ½ hours long and is based on one of the Components mentioned earlier

- Each paper is worth 50% of the final GCSE grade

- The programming projects are not directly assessed, coding skills will be evaluated in paper 2.

Where can I go after this?

A Computer Science GCSE is effective preparation for a range of qualifications including:

- AS Level Computer Science

- A Level Computer Science

It also provides a good grounding for any subject requiring analytical skills and problem solving.

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Why take Digital Information Technology?

BTEC Digital Information Technology

The BTEC Digital Information Technology is a GCSE equivalent qualification that builds on young people's love of digital devices. Pupils who enjoy interacting with computers creatively usually enjoy this course.

With its emphasis on 'doing' rather than just 'writing about' , it helps develop important transferable skills including problem solving, creative thinking and collaborative working in order to create graphics/business products, web content/web pages and spreadsheets.

80% of current jobs have some element of IT use within them, this course provides a foundation for understanding many uses of IT in the workplace.

Previous results:

2021-22: 4+ 85%, 7+ 8%

What will you learn?

Component 1 – User Interfaces & Project Planning.

You'll gain an understanding of:

- Principles of good UI design (and skills required to create them in graphics/web software)

- Project planning techniques – Gantt / Pert / Critical Path Charts, Success Criteria, SMART targets etc.

30% of the total mark - Internally assessed, externally verified

Component 2 – Data & Information

You'll gain an understanding of:

- How companies collect and use 'big data' to target adverts, make company decisions etc.

- Ability to design an use spreadsheets to collect and manipulate data for a range of uses

- Ability to add a 'front end' to a spreadsheet allowing easy access and control over data using macros (and possibly VB programming)

- Read an existing data set and use it to make sensible business decisions

30% of the total mark - Internally assessed, externally verified

What will you learn?

Component 3 – Use of computers in the real world

You'll gain an understanding of:

- Basic network types used in business

- Use of the cloud for storage, collaboration & app access

- System security from a business perspective; attack methods, impact of breach etc.

- Prevention of data theft – access level, passwords, security

- Company policies relevant to computer use

- Legislation regarding computers & data

- Environmental issues

- Notation of system design: flow chart, data flow diagram, system diagram

How many exams are there?

- There is one exam paper in February of Y11 (re-sits available in June).
- 1 ½ hours long and is based on all of the Components mentioned earlier
- Worth 40% of the final grade

Where can I go after this?

A Computer Science GCSE is effective preparation for a range of qualifications including:

- BTEC Level3 Information Technology

- Cambridge Technicals – IT Level3 and Digital Media Level 3

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Why take Business?

NCFE Business

Gives pupils an understanding of what it takes to setup and run a successful Business. Pupils dive deep into the logistics of Business and see the attention to detail on all operations which take place behind the scenes. As they begin to tackle a real-life scenario, pupils are given the opportunity to fully appreciate all the time and effort required whilst adapting the Business' needs.

The theory element equates to 40% of the overall grade via an external examination, whereas the Practical project equates to 60% of the overall grade.

Previous results:

2021-22: 4+ 88%, 5+ 35%

What will you learn?

Component 1 – Knowledge based.

You'll gain an understanding of:

- Entrepreneurs
- Successful objective planning
- Business structures & Stakeholders
- Market research
- Market types – mass and niche
- Operations Management
- Outsourcing
- Customer Service
- Internal & External barriers to growth

What will you learn?

Component 2 – Practical Project

You'll gain an understanding of:

- How to relate the theoretical ideas learnt over the previous year to a real life scenario where the pupil is given a company to run with it's own set of issues.

- Pupils must create and explain the best method they can to ensure continued growth of the company

How many exams are there?

- There is one exam paper in the November of Y11.
- It is 1 ½ hours long and is based on the theory unit
- It is worth 40% of the final grade

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Questions?