



Getting Ready for...

KS5 (A Level) ICT

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April 2020

Activities

1. Data errors

Data that organisations hold and process should be error-free so that data integrity can be upheld. Most errors which occur within the storage and processing of data take place within the process of capturing data. To try and prevent errors occurring within this process organisations can implement a range of validation and verification checks.

- Compare and contrast the difference between validation and verification, and give examples of their use.
- To extend this, explain why validation and verification checks do not always prevent errors from occurring within the storing and capturing of data.

2. Computer crime

Computer crime costs individuals and organisations huge sums of money each year.

- Outline the typical types of crime which can occur with the use of technology.
- Research and describe some of the different tools which can be used to try and prevent these crimes from occurring.
- To extend this, explain why it is not realistic or possible to prevent all types of computer crime from occurring.

3. Computer-based shopping systems

As the use of technology in society increases, so does the use of computer-based shopping systems.

- Produce a diagram to demonstrate how a computer-based shopping system works. For each stage identified in your diagram identify the different variables that can influence how a user proceeds to the next stage.
- Can you extend this diagram to highlight which parts of this process are automated and which are determined by users themselves?





4. Computer systems in education

Computer systems within education are a fundamental tool that enable teaching and learning to take place. These systems provide students with lots of new and innovative ways in which they can complete their studies.

- Outline each of the computer systems you have used to complete your studies to date. Explain how each system works and outline the benefits and disadvantages it brings to users.
- To extend this, research other types of systems that can be used for teaching and learning and consider why these systems are not used by all learners.



5. Health issues

As people increasingly use technology to perform a range of tasks, it brings about certain benefits and disadvantages to society. The health industry is one aspect of society in which the use of technology is becoming more and more frequent.

- Outline some of the typical ways in which the health industry uses technology. Consider the benefits and disadvantages of its use.
- Can you extend this to identify why people both in and outside of the health industry may be against the further use of technology?

6. Legislation

Organisations that hold and process data are required by law to abide by different pieces of legislation in the countries in which they operate.

- Find out what is meant by the term 'legislation' and research one piece of legislation which organisations in a particular country must follow. Explain what might happen if an organisation chooses not to follow this piece of legislation.
- To extend this, consider why legislation can have both a positive and negative impact upon organisations.



7. Robotic systems

The use of robotic systems within the real world is becoming more and more commonplace.

- Research the different types of robotic systems that exist and outline the benefits and disadvantages they bring.
- Can you extend this to identify why many individuals fear the increased use of artificial intelligence within robotic systems?

8. Networks

The Internet is an example of a wide area network. Networks are used throughout the digital world to bring users together so that they can communicate and share resources.

- Outline some of the different ways in which a network can be designed.
- Then, research some of the different pieces of hardware that are required for a network to operate.
- To extend this, outline the different factors that can influence the performance of a computer network.

9. Acronyms

Lots of terms within the ICT industry are abbreviated for ease of use. Listed below are some of the common acronyms you will encounter through the study of A Level ICT.

- For each acronym listed below, research what it stands for and explain in simple terms what it means.
- CAD
- CAM
- HCI
- VLE
- OMR
- OCR
- LAN
- WAN
- PAN
- GUI



10. Software packages

Studying A Level ICT will require you to use a range of software packages to perform a variety of tasks.

- Find out which software packages you are going to use on your course.
- For each one, make sure you familiarise yourself with each of the typical features it contains.

