

# GCSE Computing

## Topic 1.8 Issues

**ETHICAL ISSUES:** what is considered right or wrong by society.

**LEGAL ISSUES:** what is considered right or wrong in the eyes of the law.

**CULTURAL ISSUES:** how different cultures may be affected.

**ENVIRONMENTAL ISSUES:** how the planet is affected.

**PRIVACY ISSUES:** how our personal data is used and what risks to our privacy this poses.

**STAKEHOLDER:** someone or groups of people who have an interest in OR are affected by a particular scenario.

The **Digital Divide:** unequal access to computer science technologies due to financial, health or cultural issues.

**DATA SUBJECT:** someone who has data stored about them.

**DPA:** the act applies to all personal data held by organisations in paper or electronic form.  
The Act was put into place to prevent the misuse of personal data.

**CDPA:** this act prevents peoples' original work being used without their consent.  
The person who creates the work owns the copyright and is **the only** person who has the right to reproduce, adapt or sell it.

### Data Protection Act Principles:

1. Keep data safe & secure.
2. Not ask for more data than necessary.
3. Not keep the data longer than necessary.
4. Keep the data accurate and up to date.
5. Not use the data for any other purpose without our consent.

### Data Subject Rights:

1. Inspect and check the data held.
2. Demand that incorrect information is amended.
3. Demand that the data is not used in any way that could harm or distress.
4. Demand that any data held by the organisation is not used for direct marketing.

**FOIA:** the act creates a right of access to information held by public authorities including:

- Central and local government.
- The health service.
- Schools/colleges/universities.
- The police and courts.

Anyone can make a request for information. If the holder refuses, an appeal can be made to the Information Commissioner.

**CMA:** the Act was put into place to prevent the unauthorised access or modification of data. This law deals with hacking and cyber crime.

There are 3 levels of this law:

1. Unauthorised Access.
2. Unauthorised Modification.
3. Unauthorised Access *with intent*.

**Create commons licenses** give the public permission to share and use work under certain conditions without having to legal ask for permission from the creator. *People use CC licences when they want other people to share or build upon their work.*

**Attribution** - work can be shared, copied or modified but the creator has to be credited.

**Non-commercial** - nobody can use the work for profit.

**No derivative** - the work can be copied and distributed but cannot be edited or built upon.

**Share alike** - if you modify someone's work, you must share it under the same license terms as the original.

**PROPRIETARY:** software that is commercially produced, by an organisation, for profit. Only the compiled code is released. The source code is protected and there are restrictions on copying, modifying and redistributing.

- ✓ Professionally and carefully tested.
- ✓ Support is provided to keep customers happy.
- ✓ Regular updates and bug fixes.
- ✓ Come with warranties.
- ✗ Restrictions on how the software can be used and distributed.
- ✗ The source code cannot be accessed or modified.
- ✗ It is developed for a large audience, so may not suit individual needs.
- ✗ It has to be paid for, it is not free.

**OPEN SOURCE:** software whose source code is freely available to be modified / enhanced by anyone. Users can use the source code to create their own 'spin off' copies which can be shared under the same license as the original.

- ✓ Users can study the source code to see how the software works.
- ✓ Users can change and upgrade the software.
- ✓ Can share the software with other users for no charge.
- ✓ Software can be adapted to meet user's needs.
- ✓ A community of enthusiasts will provide support.
- ✗ May not seem as professional or have as friendly user interface.
- ✗ Specialist knowledge may be needed.
- ✗ Small projects may be buggy or have security holes.
- ✗ No warranties if anything goes wrong.
- ✗ There may be limited user documentation.



# GCSE Computer Science - Topic 1.8 Issues

## What I need to know:

- Define ethical issues.
- Define legal issues.
- Define environmental issues.
- Define cultural issues.
- Define privacy issues.
- Define stakeholder?
- State what is meant by the digital divide.
- Define data subject?
- Outline the Data Protection Act (DPA).
- Name the 5 DPA principles.
- Outline the rights of the data subject under the DPA.
- Outline the Copyright, Designs and Patents Act (CDPA).
- Outline the Freedom of Information Act (FOIA).
- Outline the Computer Misuse Act (CMA).
- Outline the purpose of Creative Commons Licensing.
- Describe the 4 types of Creative Commons license.
- Explain what is meant by proprietary software.
- List the pros and cons of proprietary software.
- Explain what is meant by open-source software.
- List the pros and cons of open-source software.

	Censorship	Surveillance
A business monitors what their employees view online.		
A country's government blocks access to Facebook®.		
A government agency intercepts emails containing certain words.		
A school restricts access to harmful websites.		
An Internet Service Provider collects data on browsing habits.		

Define the term e-waste.  
 .....  
[1]

Identify **two** ways that electronic devices waste electricity.

1 .....  
 2 .....  
[2]

Explain how hardware manufacturers can limit the amount of electricity wasted by electronic devices.  
 .....  
 .....  
[2]

Identify **two** health risks caused by using technology. State how each could be prevented.

Health risk: .....  
 Prevention: .....  
 Health risk: .....  
 Prevention: .....  
[Total 4 marks]