

# Computing Y11 – Ethical, Legal, Cultural and Environmental Concerns



## Ethical and cultural vocab

<b>Driverless cars</b>	A vehicle that is capable of sensing its environment and navigating without human input.
<b>Manufacturing</b>	Computer technology is used to produce items faster, more accurately and cheaper than can be done by hand.
<b>Shopping</b>	Online shopping has led to the closing of many high street stores. It has also helped people who find it difficult to get to a supermarket for their food shopping.
<b>Communication</b>	Advancements in technology now make it much easier to communicate all over the world using social media, email, texting and phone calls. Information is spreads at a much faster rate.
<b>Employment</b>	The advancement of computer technology has made many new jobs, but has also put many people out of work in a number of industries (for example, manufacturing). Some jobs are now automated or controlled by robots.
<b>Developments in software</b>	Computer software is becoming substantially more developed as time goes on – this is especially visible within the field of artificial intelligence.
<b>Artificial Intelligence</b>	The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.
<b>Healthcare</b>	Technology is used to monitor patients, administer drugs and diagnose illnesses. Health apps are used more regularly on smartphones than ever before.
<b>Social networking</b>	Many people of all ages use social networking sites to keep in touch with others. It is much easier to communicate in this way than it would be to send a card, for example.
<b>Rating culture</b>	Services use star or score-based rating systems to judge people’s performance. For example, the taxi company Uber does this to assess the performance of their drivers, based on what their passengers suggest.
<b>Privacy</b>	According to a recent study, Google is within a few years of having sufficient information to be able to track the exact movements and intentions of every individual, via Google Earth and other software they are developing. Greater advancements in technology could further risk our privacy.
<b>Cookies</b>	File, often unique identifiers, that are sent by web servers to web browsers and which may then be sent back to the server each time the browser request a page from the server. Can be used to recognise computers when they revisit a website, track users navigating the site, etc.

## Legal vocab

<b>Data Protection Act 1998</b>	This Act states that anyone who stores personal details must keep them secure. Companies with computer systems that store any personal data must have processes and security mechanisms designed into the system to meet this requirement. Made up of 8 principles.
<b>Freedom of Information Act 2000</b>	This Act gives people access to data held by public authorities, including state schools, police forces, local authorities and the NHS. It does not give access to personal data about people, but it means, for example, that anyone can ask for a list of all of the state schools in a certain area.
<b>Computer Misuse Act 1990</b>	This Act has three main principles, primarily designed to prevent unauthorised access or ‘hacking’ of programs or data. These are: unauthorised access to computer material; unauthorised access with intent to commit or facilitate a crime; unauthorised modification of computer material.
<b>Copyright Designs and Patents Act 1988</b>	This Act is designed to protect the creators of books, music, video and software from having their work illegally copied.
<b>Creative Commons Licensing</b>	When an author is willing to give people the right to share or use a work that they have created. The creator can choose to allow only non-commercial use, so that their work cannot be copied and distributed for profit.

## Environmental vocab

<b>Carbon footprint</b>	The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organization, or community.
<b>Pollution</b>	The presence in or introduction into the environment of a substance which has harmful or poisonous effects.
<b>Computer-aided manufacturing</b>	The use of software to control machine tools and related ones in the manufacturing of workpieces.
<b>Sensors</b>	A sensor is a device that detects and responds to some type of input from the physical environment. The specific input could be light, heat, motion, moisture, pressure, or any one of a great number of other environmental phenomena.