

## Technology in Society

### Ways in which technological innovation has improved everyday life:

- Allows for more efficient work to be done  
i.e. more tasks completed in less time
- Cheaper goods and services available to the public
- Greater amounts of information readily available
- Greater support for those with disabilities
- Constant connectivity with friends and family

### Ways in which technological innovation has added negatively to society:

- Increased pollution and overcrowding
- Rise in online abuse and cyber-bullying
- People have less active lifestyles leading to an increase in medical conditions
- Increased social pressure from social media and online trends
- The invention of newer fuels (nuclear etc) pose threats to the environment and to human life

## Sale of Goods and Supply of Services Act 1980

This act was implemented in 1980 and outlines the rights and responsibilities of the consumers and retailers in the exchange of goods and services.

It states:

- Goods purchased must be of merchantable quality
- Goods purchased must be fit for the purpose intended and do what they are expected to do within reasonable expectation
- The product you get must match what was described by the salesperson and by the wrapping labelling of contents
- When a service is being carried out the craftsman has a responsibility to use materials of merchantable quality and carry out the job to an acceptable standard

## Data Protection

Organisations and individuals must take steps to ensure that all person information regarding clients, employees or otherwise is held securely, only made available to appropriate parties and is accurate. The General Data Protection Regulation (GDPR) of 2016 is the main EU data protection law concerning the protection of all EU citizens.

## Inventors/Entrepreneurs

<u>Inventor/Creator</u>	<u>Invention/Creation</u>
Steve Jobs	Mainly credited with the creation of Apple Inc.
Bill Gates	Mainly credited with the creation of Microsoft Inc.
Steve Wozniak	Co-founder of Apple Inc.
Jeff Bezos	Amazon.com
Elon Musk	SpaceX, Tesla*
Mark Zuckerberg	Facebook Inc.
Evan Spiegel & Bobby Murphy	Snap Inc. (Snapchat)
Alexander Fleming	Penicillin
Edward Jenner	Vaccination
Alexander Graham Bell	Telephone
Nikola Tesla	Design of alternating current supply system
Tim Berners-Lee	World Wide Web

\*Tesla Motors was founded by Martin Eberhard and Marc Tarpinning, but then purchased by Elon Musk and made into the company it is today.

# Genetic Modification

The genome of an organism contains all the genetic information of that organism. Genetic modification refers to the process of removing unwanted genes or adding genes that will code for desirable qualities.

Genetically modified crops can produce more plentiful yields, stay fresher for longer, be resistant to certain disease, be more nutritious and grow in unfavourable environments.

Some individuals and organisations have objected to genetic modification as they believe it may be harmful to the health of those who eat GM crops and that it may damage certain ecosystems.

Examples of Genetically Modified Organisms:

- Golden Rice
- Flavr Savr Tomatoes
- Aqua Advantage Salmon
- Glow in the dark animals

# Improvements in the Car Industry

In recent years people have been moving away from combustion engine cars and instead opted for either fully electric cars, or hybrid engine cars. Hydrogen powered cars are currently in development.

Improvements in Cars:

- Air Bags
- Advanced three point seat belts
- Sat-Nav systems
- Bodies that crumble upon impact, absorbing shock and lessening the force exerted on the driver and passengers
- Anti-Lock braking systems
- More fuel efficient engines

## **Other Areas Technology has Impacted:**

- Food Industry
- Sports and Leisure Industry
- Shopping and Retail Industry
- Computer and Video Games
- Photography & Videography
- Advertising
- Weather surveillance and predictions

## **The Environment**

Technological innovation has also resulted in an increased demand for electricity which has also resulted in an increase in pollution and global warming.

### **Air Pollution**

Fumes from vehicles and aircraft along with deforestation and emissions from power plants have released harmful gasses into the atmosphere.

Air pollution greatly reduces air quality and many large industrial cities now face problems with “smog”.

Air pollution can also damage human health and cause cancers and lung diseases as well as damaging the environment and resulting in phenomenon such as acid rain.

### **Acid Rain**

When sulphur dioxide combines with water in the atmosphere it creates an acidic rain which then falls like normal conventional rain.

Effects of Acid Rain:

- Lower the pH of water bodies which can kill fish
- Damage limestone buildings
- Poison farmland
- Damage and kill trees and grassland

## **Water Pollution**

Water is one of the best solvents on planet earth. Therefore it is very easy for other substances to dissolve in it and pollute it. Marine vessels, agricultural run off, sewage, chemical spills and dumping can all pollute the water ways of a country.

Effects of Water Pollution:

- Reservoirs can become toxic resulting in poisonous drinking water
- Fish can be killed from toxic substances in the water
- Vegetation can die from lack of nutrients
- Humans and animals who enter infected water can become sick and/or die

## **Recycling**

Recycling involved breaking down previously used materials and turning them into raw materials for use in new products. This method causes less pollution than using brand new raw materials in production. It also reduces the demand for the production of new raw materials and reduces waste.

Electronic devices are difficult to recycle, however certain organisations will recycle them for you if you deliver them to designated drop off points. WEEE Ireland are an example of this.

## **The Carbon Trust**

The Carbon Trust is an organisation that was started in 2001 in the UK between businesses and the government. It is now a global organisation. The organisation helps businesses and government bodies become more environmentally friendly and help them create a more sustainable, low carbon economy.

## **The Environmental Protection Agency (EPA)**

The EPA is responsible for ensuring that the environment of Ireland is protected and that any organisation conducting business in Ireland adheres to rules and regulations that ensure the protection of the environment.

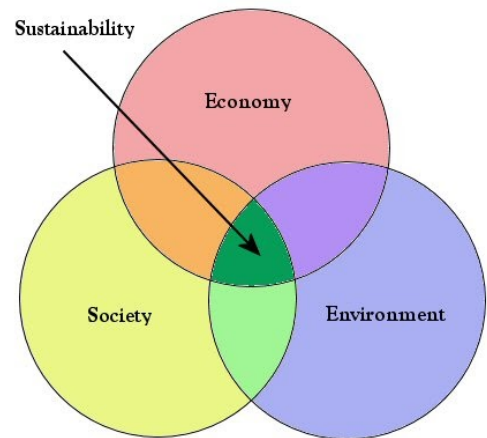
# Sustainability

The concept of sustainability is that development is carried out at a rate that meets the needs of present needs without compromising the condition of resources for future generations.

**Social Sustainability** concerns ensuring that the demands of the society are satisfied in a sustainable and reasonable manor.

These needs and demands include:

- Education
- Living Conditions
- Health Services
- Employment Opportunities



**Environmental Sustainability** refers to using renewable energy resources, limiting fossil fuel usage and trying to reduce and combat pollution where possible.

**Economical Sustainability** concerns generating an economy that is profitable and worthwhile, that does not negatively impact on any other area of the environment.