

# Science and technology

A

You are probably familiar with the traditional branches of science e.g. chemistry, physics, botany and zoology. But what about these newer fields?

**genetic engineering:** the manipulation of genetic material (DNA) of living things to alter hereditary traits

**ergonomics:** the study of the design of physical working spaces and how people interact with them

**molecular biology:** the study of the structure and function of the organic molecules associated with living organisms

**cybernetics:** the study of the way information is moved and controlled by the brain or by machinery

**information technology:** the study of technology related to the transfer of information (computers, digital electronics, telecommunications)

**bioclimatology:** the study of how climate affects living things

**geopolitics:** the study of the way geographical factors help to explain the basis of the power of nation states

**nuclear engineering:** the study of the way nuclear power can be made useful

**cryogenics:** the study of physical systems at temperatures less than 183°C

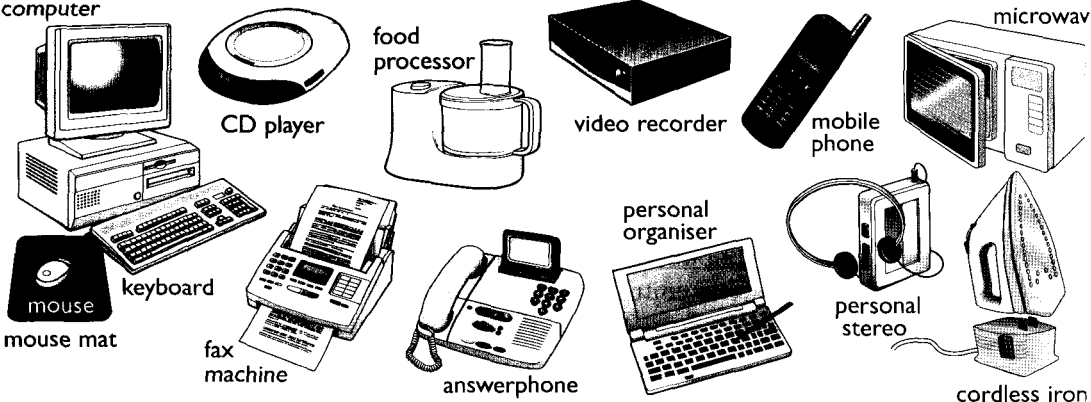
**astrophysics:** the application of physical laws and theories to stars and galaxies

**voice technology:** technology which enables machines to interpret speech

B

Here are some of the modern inventions which we are now becoming quite used to.

computer



C

The verbs in the sentences below are all useful in scientific contexts.

He **experimented** with a number of different materials before **finding** the right one.

The technician **pressed** a button and lights started **flashing**.

When she **pulled** a lever, the wheel began to **rotate**.

The zoologist **dissected** the animal.

When they were **combined**, the two chemicals **reacted** violently with each other.

After **analysing** the problem, the physicist **concluded** that there was a flaw in his initial hypothesis.

James Watt **invented** the steam engine and Alexander Fleming, another Scot, **discovered** penicillin.

After **switching** on the computer, insert a floppy disk into the disk drive.

You must **patent** your invention as quickly as possible.

See Unit 58 for words relating to Computers and the Internet.