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# 9 Health and safety

**A**

The average person finds it difficult to assess **risks**. For this reason, work practices need to be **regulated**. Examples of **dangerous** activities are:

- welding or grinding without **goggles**
- working on a construction site work without a **hard hat**
- working in **noisy** factories, cabs, on airport tarmacs and with other machinery without ear **protection**
- working in chemical areas without **protective** clothing
- **smoking** near hazardous **substances**

Without regulation some employees will take risks.

Health and safety is a part of employment (labour) law. It covers several matters such as:

- **occupational health**
- **accident** prevention regulations
- special regulations for hazardous occupation such as mining and building
- provisions for risks such as **poisons**, **dangerous** substances, **dust**, **noise**, **vibration**, and **radiation**
- the full range of dangers arising from industrial processes, for example the widespread use of chemicals

**B**

The key concerns for health and safety is to assess the **risks and hazards** by identifying and quantifying the **effects** so that appropriate **protective measures** can be taken.

## Risks and hazards

combustion • contamination • draught • dust • explosion  
flammable • friction • fumigation • gas  
harmful • shock • spraying • toxic • vapour

## Effects

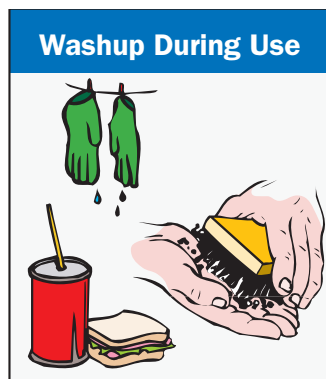
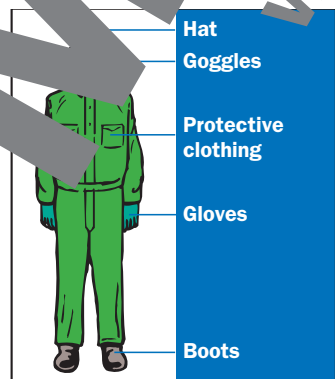
adverse effect • birth defect • burn • cancer • dizziness  
drowsiness • eye damage • impaired fertility • irreversible effect • vomiting

## Protective measures

avoid contact • dispose of • dry • handle • keep  
precautionary • protect • remove • rinse • seal  
tightly • wash • well-ventilated

**C**

Following health and safety notices show some protective measures that can be taken:



# 17 Electronics 1

**A** Electronics is a branch of engineering and physics. It deals with the **emission**, behaviour, and effects of **electrons** for the **generation**, **transmission**, **reception**, and **storage** of information. This information can be **audio signals** in a radio, **images** (**video signals**) on a television screen, or numbers and other data in a computer. **Electronic systems** are important in communication, **entertainment**, and **control** systems.

Electronic circuits consist of interconnections of electronic components, at the heart of which are **semiconductors**. **Transistors**, which are made of **silicon**, **transistors** are made from semiconductors. Commercial products range from **cellular radios** and **video cassette recorders** to high-performance **supercomputers** and sophisticated **weapons systems**. In industry, electronic devices have led to dramatic improvements in productivity and quality. For example, **computer-aided design** tools facilitate the design of complex parts such as aircraft wings, or intricate structures, such as **integrated circuits**.

**B** The development of microelectronics has had a major impact on the electronics industry. *Electronic components* are expected to deliver ever higher performance while electronic circuits continue to benefit from miniaturization.

## Function of electronic circuits

amplification • demodulation • electronic processing • generation  
information extraction • modulation • radio wave • recovery (of audio signal)

## Electronic components

absorb • active • battery • capacitor • diode • energy • generator • inductor  
passive • resistor • transistor • vacuum tube (AmE) • valve (BrE)

## Impacts

device size • digital • efficiency • high speed • increased reliability  
manufacturing cost • storage capacity • storage system • ultrahigh image definition

**C** One way of increasing your vocabulary is to learn the associated words from a key word. Look at the word table below, which shows words related to the key words presented above:

Noun	Verb	Adjective
activation	activate	active
amplification	amplify	amplified
emission	emit	emitted
entertainment	entertain	entertaining
extraction	extract	extracted
generation	generate	generative
integration	integrate	integrated/integrative
reception	receive	receptive
recovery	recover	recovered
reliability	rely	reliable
storage	store	stored
transmission	transmit	transmittable/transmissible