


What is electronics?

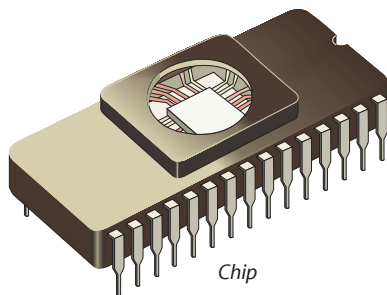
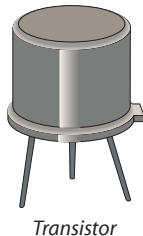
- 1  Read the following text and identify the main topic of each paragraph by choosing from the ones listed below.

- Par. 1: ☐ a. The device which speeded up the development of electronic technology.
 Par. 2: ☐ b. Modern telecommunication devices whose invention and utility improved the study of electronics.
 Par. 3: ☐ c. A technology which affects the way we live more than any other.
 Par. 4: ☐ d. A short definition of electronics.
 Par. 5: ☐ e. Electronics and electricity.
 Par. 6: ☐ f. The telecommunication revolution.

Par. 1 – Electronics can be easily defined as the science and technology which allows us to control electron flows, which have been suitably modified in order to **convey** information.

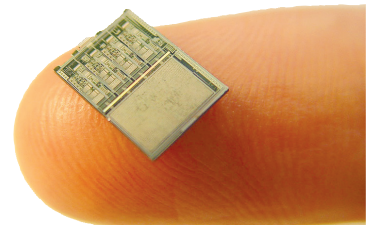
Par. 2 – It is closely related to electricity and deals with electric current mostly in the form of signals. Electric current flows through devices (e.g. the **vacuum tube**) that change its behaviour to make it work as a signal.

Par. 3 – This led to the development of useful radio systems, making electromagnetic waves travel great distances. The invention of radar (radio detection and ranging) during the Second World War meant a further step in theory, so the study of electronics progressively became an important subject on its own right.



Par. 4 – Then the development of television **brought about** one of the most massive social revolutions that have ever taken place and electronic systems became useful in some branches of industry.

to bring about:
portare con sé
to convey:
trasmettere
to handle: gestire
nail: unghia
sliver: scaglia
something of
a curiosity:
qualcosa di strano
far reaching: ad ampio raggio
to speed up:
accelerare



Par. 5 – It was only in the early 1960s that electronics technology “came of age” thanks to the work of three scientists Bardeen, Brattain and Shockley at the Bell Laboratories in the U.S.A. They assembled the first working transistor in 1957.



The invention of the **transistor** had such a great impact because it replaced the use of valves, which were quite inconvenient devices for **handling** electrons. They were large, of difficult production on large scale and wasteful of power. The transistor could be made small, used little power; it was cheap to be made and could be produced on large scale. Since then the evolution of electronics as a branch of technology has been very fast.

The transistor was soon followed by the **silicon chip** in the early 1960s. The silicon chip or integrated circuit may contain up to several thousand transistors and other devices, all formed on a **sliver** of silicon, so small that you could lose it under your finger **nail**.

Par. 6 – The miniaturisation of electronic circuits in this way is called **microelectronics** and has had **far reaching** effects on our way of life. It has influenced and improved the way information is stored, processed and distributed, it has revolutionised the way we design and manufacture goods; it has **speeded up** financial and business transactions, it has made it possible to diagnose illnesses more effectively and has affected a wide range of social, educational and political activities.



An old transistor radio

- 2  The text above contains about 450 words. Try to summarise it in no more than 250 words by eliminating all those phrases, sentences and paragraphs that do not supply essential information. Use topics 1-6 as a guide.
- 3  Report orally about the main topic of each paragraph of the reduced text.

