

## The robots are coming

In fact, they are already here in many parts of the world. These are 'service' robots and they often go unnoticed. Such robots may clean the windows of very tall buildings, install car parts in a factory or perform difficult surgical tasks in a hospital. In addition, there are now robot fire-fighters and also robots designed to help in natural disasters such as earthquakes.

However, there is a new age of robots which could change our everyday lives directly. Heathrow airport, London, is currently testing a driverless taxi on passengers, for public use later this year. The taxis are small, personal and reliable. They travel on very narrow roads and use half the energy of buses. Passengers give their destination on a touch-screen when they get into their car 'pod', then travel up to 40 km an hour, driver-free, to and from the airport terminal.

Such technology is likely to be very popular and it could change the face of our cities in the future. Some experts believe that by the year 2050 our roads could be full of driverless cars; people will drive themselves only if they want to.

Robots have been used by the military for many years now, mainly for searching enemy areas using UAEs (unmanned aerial vehicles). They are also used in mine clearing, where they save lives. However, there are new robots available which are increasingly 'autonomous': they have no operator and make decisions (semi) independently. As the technology develops, robots are also making more and more difficult decisions: fighting robots now exist, programmed to decide who is the enemy and who is not, before taking action.

In South Korea, one of the leaders in the robot revolution together with Japan, the government has stated that every household will have a robot by 2020. They have already built robot border guards with the power to attack; they are currently developing a robot police force.

For Japan, with its ageing population, robot carers may be the answer. Robots which bathe and feed old people are already in use. In addition, several large companies in this part of the world now make 'robot toys' for children. As well as entertaining the youngsters by singing, dancing, talking and telling jokes, these robots can feed and look after them. They are capable of sending messages to parents or minders. These robots are considered so safe that children can be left for hours in their care.

**1** Read the text quickly and match the headings to the paragraph:

- South Korea and robots
- service robots
- robots in warfare
- the future and robot cars
- robot care
- robot cars at Heathrow airport

## Reading eLesson

2 Read the text again more carefully. Tick (✓) the types of robot which are mentioned in the text.

*There are robots which can...*

save people's lives	stop people coming into the country
wash people	make people laugh
look after a child	take a person out for dinner
go shopping for you	play football
do the household jobs, e.g. cleaning	fight in wars
operate on a person	work in dangerous situations
help to make cars	sell products
clean in difficult places	drive people around

3 Complete the following statements, in your own words where possible

- 1 The Heathrow robot taxis are 'green' because ...
- 2 The public will be able to use the airport taxis ...
- 3 The taxis travel from ...
- 4 Some say that in 40 years time people will drive themselves ...
- 5 In warfare, the main use of robots at the moment is to ...
- 6 There are new military robots which can ...
- 7 The South Korean government would like all Koreans to have ...
- 8 The South Koreans are making ...
- 9 The Japanese robot toys are liked by children because the robots can ...
- 10 Children can be looked after by the robots ...
- 11 Robot carers may be the answer for Japan because ...

4 Think about these questions:

- 1 In what ways might a robot car be better than a human driver? Remember that driver error (mistakes made by drivers) is the main cause of traffic accidents.
- 2 Can you think of any ways that a robot car might not be better?
- 3 What about a robot carer (for the elderly)? Can a robot carer be as good as or better than a real person?
- 4 What do you think about robot childminders? What might the disadvantages might be?
- 5 Some governments are choosing not to use robots for fighting, at least at the moment. Can you think why?

## Glossary

**ageing** (adjective) - an ageing person is becoming old

**carer** (noun) - someone who looks after a person who is ill or unable to look after themselves

**destination** (noun) - the place where someone or something is going

**enemy** (noun) - a country that is fighting another country in a war

**military** (noun) - a country's armed forces, e.g. the army

**mine** (noun) - a bomb that is hidden under ground or water and which explodes when it is touched

**(child)minder**(noun) - someone whose job is to look after children while their parents are at work, usually in his or her own home