

Robots

Part 1

A **robot** is a mechanical or virtual artificial agent, usually an electromechanical machine guided by a computer program or electronic circuitry. When robots are virtual software agents, they are usually referred to as **bots**. The word 'robot' was first used to denote a fictional humanoid in a 1920 play *R.U.R.* by the Czech writer, Karel Čapek but it was Karel's brother Josef Čapek who was the word's true inventor. In an article in a Czech journal, he explained that he had originally wanted to call the creatures featured in the play *laboři* ("workers", from Latin *labor*). However, he did not like the word, and asked for advice from his brother Josef, who suggested "roboti". The word *robota* means literally "serf labor", and figuratively "hard work" in Czech and also (more general) "work", "labor" in many Slavic languages.



Vocabulary Part 1:

Activities

What are the two names of the country where Czech people are from?

What is the capital?

Is the word 'robot' an English word? Answer Y (for yes) or N (for no).

PART 2

The branch of technology that deals with the design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing is **robotics**.

In general robots can be autonomous or semi-autonomous and are now used in different fields. They have replaced humans in performing repetitive and dangerous tasks which humans prefer not to do, or are unable to do because of size limitations, or which take place in extreme environments such as outer space or the bottom of the sea. For instance, robots can now be used in industry, as in car manufacturing, or they can be used in homes to do the housework. Some robots may respond to speech or be even medical operating tools.

Activities. Complete these sentences with one word per space

Robotics is a of technology.
 Robots have humans in some tasks.
 Robots can be used in or in

Vocabulary Part 2:

PART 3

In 2008, Caterpillar Inc. developed a truck which can drive itself without any human operator. Many analysts believe that self-driving trucks may eventually revolutionize logistics. By 2014, Caterpillar had a self-driving truck which is expected to greatly change the process of mining. In 2015. Some analysts believe that within the next few decades, most trucks will be self-driving.

A 'reading robot' named *Marge* has intelligence that comes from software. She can read newspapers, find and correct misspelled words, learn about banks and understand that some restaurants are better places to eat than others.

Baxter is a new robot which is different from other industrial robots because it can learn. A worker could teach *Baxter* how to perform a task by moving its hands in the desired motion and having *Baxter* memorize them. Extra dials, buttons, and

controls are available on *Baxter's* arm for more precision and features. Any regular worker could program *Baxter* and it only takes a matter of minutes, unlike usual industrial robots that take extensive programs and coding in order to be used. This means *Baxter* needs no programming in order to operate. No software engineers are needed. This also means *Baxter* can be taught to perform multiple, more complicated tasks.

There are concerns about the increasing use of robots and their role in society. Robots are blamed for rising unemployment as they replace workers in increasing numbers of functions. The use of robots in military combat raises ethical concerns. The possibilities of robot autonomy and potential repercussions have been addressed in fiction and may be a realistic concern in the future.

Vocabulary Part 3:

Comprehension

True or False? Write T or F

1. *Baxter* is a self-driving dump truck.
2. The use of robots in military combat is not safe.
3. According to the text, most trucks will be driverless in the next decades

Personal opinion. Express what you think using about 20-30 in each space.

1. Give two arguments in favour of the use of robots.
2. Give a minimum of one argument against robots.
3. In what field do you think robots should not be used? (teaching, the military, ...) Say why.