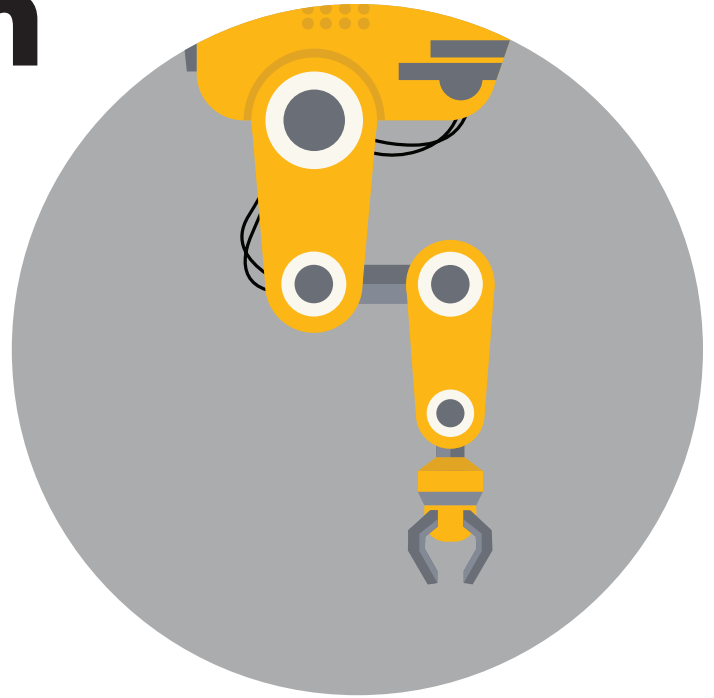# Automation

Pre-Reading

A. Warm-Up Questions

1. Which machine do you use the most in your daily life?

2. From where you are sitting right now, how many machines can you see?

3. Can you think of a task that can only be performed by humans? (In other words, robots cannot do it.)

B. Vocabulary Preview

Match up as many words and meanings as you can.
Check this exercise again after seeing the words in context on page 2.

____	1. industry	a)	fragile, easily broken
____	2. coin	b)	real, valid
____	3. conveyor belt	c)	a continuously moving band that moves objects from one place to another place
____	4. robot	d)	a process or set of rules that a computer follows
____	5. delicate	e)	to include
____	6. imitate	f)	to name something new
____	7. encompass	g)	a person who supports an idea
____	8. algorithm	h)	a machine that copies human movements and tasks
____	9. legitimate	i)	to copy
____	10. proponent	j)	one category of business activity or production

Reading

AUTOMATION
Are humans on their way out?

1. Since the beginning of the Industrial Revolution in the late 18th century, automation has changed the way most **industries** operate. The word "automation" refers to the use of technologies to perform tasks that humans used to do or that humans are not able to do. An engineering manager at Ford Motor Company first **coined** the term in 1946 to describe the increased use of mechanical devices on assembly lines, such as the **conveyor belt**.

2. The development of automated material handling (AMH) came several years later. AMH involves the utilization of **robots** and other computerized devices for tasks like loading materials onto trucks and packaging individual products. In addition to AMH, the evolution of robotic arms, which can do anything from lifting heavy machinery to performing **delicate** surgeries, has become one of the most exciting aspects of automation.

3. When people think about automation, often the first thing that comes to mind is an image of robots **imitating** human labor. But automation **encompasses** much more than that. For example, artificial intelligence (AI) is a rapidly growing field of automation. In AI automation, machines are able to learn by using **algorithms**, and they can make decisions based on past situations they have analyzed. For instance, many companies have replaced customer service representatives with AI software. This software can recognize a customer's request by matching the words in the request with previous requests that have been resolved.

4. Although there are many positive aspects to automation, there are some negative aspects too. Many people worry about losing their jobs to robots or other forms of automation. This is a **legitimate** fear in many industries since using machine labor is cheaper than paying human employees. However, **proponents** of automation insist that it makes processes more productive, consistent, and efficient, allowing humans to focus on more challenging and less repetitive work.

"There's a lot of automation that can happen that isn't a replacement of humans, but of mind-numbing behavior."

—Stewart Butterfield,
Canadian businessperson

Comprehension

Discuss these questions in pairs and write the answers in your notebook.

1. What is automation?

2. What are robotic arms able to do?

3. How does AI automation work?

4. How is AI software used for customer service?

5. What negative aspect of automation is mentioned in the reading?

6. What do proponents of automation argue?

Vocabulary Review

A. Write Sentences

Choose five words from the Word List and write sentences with them.

<div style="border:1px dotted">

Word List:

- industry
- coin
- conveyor belt
- ~~robot~~
- delicate
- imitate
- encompass
- algorithm
- legitimate
- proponent

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1. *A robot can do dangerous jobs, and it never gets sick or tired.*

2.

3.

4.

5.

6.

Vocabulary Review cont.

B. Complete the Sentences

Complete each sentence with a word from the box on the right.
Each word can only be used once. You may need to change the word form.

1. Surgeons use tiny robots to perform surgeries that are too _____ for human hands.

2. The automobile _____ has changed a lot since the early 20th century.

3. Joanne wrote all the _____ for the new software program.

4. Isabel's little brother looks up to her and tries to _____ her. For example, he always wears red sneakers because she does.

5. Your fear of having your job replaced by machines is totally _____ .

6. The _____ is one of the most important parts of the assembly line.

7. Michael's boss is a _____ of automation. He thinks it's a great way to save the company a lot of money.

8. A _____ can perform human tasks efficiently, but can it hold an interesting conversation?

9. Shakespeare _____ more than 400 new words and phrases in the English language, including "assassination" and "break the ice."

10. His job _____ a variety of tasks such as washing dishes and mopping floors.

Grammar Review

A. Review

Review the usage of a common modal of *used to*,
get used to, and *be used to*.

	Used To	Get Used To	Be Used To
Meaning	to have done something repeatedly in the past, but to no longer do it (= it was done often)	to start to become accustomed to doing something (= it is becoming familiar)	to be accustomed to doing something (= it is familiar)
Pattern	**used to + base verb**	**get used to + -ing verb** or **get used to + noun**	**be used to + -ing verb** or **be used to + noun**
Example (Positive)	I **used to study** Spanish when I was in high school.	I **am getting used to living** in a big city. (I moved here one month ago.)	I **am used to living** in a big city. (I've been living here for two years.)
Example (Negative)	She **didn't use to eat** meat, but now she eats it every day.	She **didn't get used to snowboarding** because she gave up after one lesson.	Even after six months of lessons, she **is not used to speaking** English yet.
Example (Question)	**Did** he **use to work out** at this gym when he lived in this city?	He sold his car three weeks ago. **Has** he **gotten used to taking** the bus yet?	**Is** he **used to playing** the guitar? He's been practicing for weeks.

Grammar Review cont.

B. Practice

Complete the following sentences with *used to*, *be used to*, or *get used to*.
Forms may vary, so pay attention to the verb tense needed in each
sentence. Negative forms may also be used.

1. Before conveyor belts, people in factories _____ carry all the materials by hand from one
    place to another.

2. I moved to an apartment above a bar three weeks ago. I have trouble going to sleep because of all the noise.
    I _____ it.

3. Priya performs surgeries using robots. It took months of training, but now she _____ it.

4. Colin _____ write algorithms. Before working with computers, he was a dentist!

5. Did your sister _____ work at Ford Motor Company before she started her current job?

6. Most people have had a smartphone for several years. They _____ having a computer and
    camera at their fingertips wherever they go.

Discussion

1. In your opinion, what is a task that will never be automated?

2. If you could choose one task in your daily life to be done by a machine,
    which one would you choose?

3. Do machines always perform tasks better than humans? Can you think
    of an example of a task that humans do better than machines?

4. How is technology different from when you were a kid? Has it been
    difficult to get used to?

Listening

Fill in the blanks as you listen to the recording.

AUTOMATION
Are humans on their way out?

1. Since the beginning of the Industrial Revolution in the late 18th century, automation has changed the way most _____ operate. The word "automation" refers to the use of technologies to perform tasks that humans used to do or that humans are not able to do. An engineering manager at Ford Motor Company first _____ the term in 1946 to describe the increased use of mechanical devices on assembly lines, such as the conveyor belt.

2. The development of automated material handling (AMH) came several years later. AMH involves the utilization of robots and other computerized _____ for tasks like loading materials onto trucks and packaging individual products. In addition to AMH, the evolution of robotic arms, which can do anything from lifting heavy machinery to performing _____ surgeries, has become one of the most exciting aspects of automation.

3. When people think about automation, often the first thing that comes to mind is an image of robots _____ human labor. But automation encompasses much more than that. For example, artificial intelligence (AI) is a rapidly growing field of automation. In AI automation, machines are able to learn by using algorithms, and they can make decisions based on past situations they have analyzed. For instance, many companies have replaced customer service representatives with AI software. This _____ can recognize a customer's request by matching the words in the request with previous requests that have been resolved.

4. Although there are many _____ aspects to automation, there are some negative aspects too. Many people worry about losing their jobs to robots or other forms of automation. This is a legitimate fear in many industries since using machine labor is cheaper than paying human employees. However, _____ of automation insist that it makes processes more productive, consistent, and efficient, allowing humans to focus on more challenging and less repetitive work.

Answer Key

LESSON DESCRIPTION:

In this lesson, students learn about the history of automation and discuss how it could affect the job market. This lesson also includes a review of *used to*, *be used to*, and *get used to*.

TEACHING TIPS:

See Discussion Starters Teaching Guide (https://esllibrary.com/courses/72/lessons/1242) for a variety of ways to use the reading.

LEVEL: Int

TIME: 1.5–2 hours

TAGS: discussion, automation, technology, robots, industry, factories, work, business, machines, IT, used to, be used to, get used to

Pre-Reading

A. WARM-UP QUESTIONS

Have students work in small groups or discuss as a class.

B. VOCABULARY PREVIEW

1. j
2. f
3. c
4. h
5. a
6. i
7. e
8. d
9. b
10. g

Reading (and/or Listening)

Read individually, in small groups, or as a class. Discuss the quote. You can also play the listening as your students read along. A gap-fill version of the reading is available on page 7. Help your students with vocabulary and expressions that they are unfamiliar with.

Comprehension

1. Automation is the use of technologies to perform tasks that humans used to do or that humans are not able to do.
2. Robotic arms can do anything from lifting heavy machinery to performing delicate surgeries.
3. In AI automation, machines are able to learn by using algorithms, and they can make decisions based on past situations they have analyzed.
4. In customer service, AI software is able to recognize the words in a customer request by matching them with previous requests that have been resolved.
5. One negative aspect of automation is that machines could take away humans' jobs since using machine labor is cheaper than paying human employees.
6. Proponents of automation argue that it makes processes more productive, consistent, and efficient, allowing humans to focus on more challenging and less repetitive work.

Vocabulary Review

A. WRITE SENTENCES

Answers will vary.

B. COMPLETE THE SENTENCES

1. delicate
2. industry
3. algorithms
4. imitate
5. legitimate
6. conveyor belt
7. proponent
8. robot
9. coined
10. encompasses

Answer Key cont.

Grammar Review

Go over the information and examples in the chart. After doing the practice work, invite your students to try to make their own sentences with *used to*, *get used to*, and *be used to*.

If you need a full lesson on this target, try our Grammar Resources lesson: https://esllibrary.com/resource_categories/103/resources/2830

1. used to
2. haven't gotten used to / am not used to
3. is used to
4. didn't use to
5. use to
6. are used to

Discussion

Answers will vary. Can be done in small groups or as a class.

Listening

1. industries, coined
2. devices, delicate
3. imitating, software
4. positive, proponents

SPELLING NOTE:

This lesson shows the American spelling of the words *Labor, Behavior,* and *Practicing.* Most other English-speaking countries spell these words this way: *Labour, Behaviour,* and *Practising.* Make it a challenge for your students to find these words in the lesson and see if they know the alternate spellings.