

## 1 LANGUAGE IN CONTEXT

A Look at the pictures in the article. How are these two things connected? Read the article and check your answers.

## TOP 10 ACCIDENTAL DISCOVERIES

Author Mark Twain said, "Accident is the name of the greatest of all inventions." Scientists carry out all kinds of **research** and face many **challenges** to make great **discoveries** and **breakthroughs**, but sometimes it is pure chance that provides the **solution**.

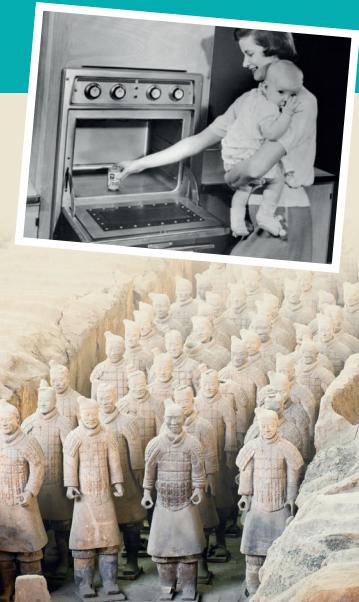
## 1 The Microwave Oven

In 1940, engineer Percy LeBaron Spencer was walking past an active magnetron in his lab when he noticed that the candy bar in his pocket had melted. Spencer was not the first to notice this **phenomenon**, but he decided to investigate it. If the candy hadn't melted, he wouldn't have made the **connection**, and we wouldn't have the microwave oven!

## 2 The Terracotta Army

The famous Terracotta Army was buried in Xian, China, about 2300 years ago. It was discovered by chance in 1974. If farmers hadn't needed to dig a well for water, they wouldn't have found the army. By studying the army, we have gained **knowledge** about ancient Chinese society. It has provided enormous **insight** into how Chinese emperors lived.

[Read on to learn about #3 on the list](#) →



B **PAIR WORK** Which discovery do you think is more important? Why? What other accidental discoveries do you think are on the top 10 list? Use your phone to find other possibilities.

## 2 VOCABULARY: Talking about discoveries

A **2.29** Match the collocations to the correct definitions. Read the article again to help you. Then listen and check.

- 1 find out something important
- 2 prepare to do something that is new and difficult
- 3 find out something important after working a long time
- 4 get more information or understanding about something
- 5 study something formally
- 6 give the answer to a problem
- 7 join things together
- 8 give new understanding about something
- 9 see something that is happening and understand that it is important

- a make a discovery
- b make a breakthrough
- c face a challenge
- d make a connection
- e provide insight
- f gain knowledge
- g notice a phenomenon
- h carry out research
- i provide a solution

B **Now go to page 150. Do the vocabulary exercises for 10.1.**

C **PAIR WORK** Write sentences about issues that affect society today using the vocabulary and collocations above. Discuss the sentences with your classmates.

*They have made breakthroughs in AIDS research, but they haven't found a cure yet.*

### 3 GRAMMAR: Past unreal conditionals

A Read the sentences in the grammar box, and then choose the correct option to complete the rules.

#### Past unreal conditionals

If the candy **hadn't melted**, he **wouldn't have made** the connection.

If farmers **hadn't needed** to dig a well, they **wouldn't have found** the army.

- 1 The sentences are about events from **the present / the past**.
- 2 The sentences are about actions that **really happened / didn't happen**.
- 3 The verb form in the *if* clause is **simple past / past perfect**. The main clause uses *would (not) + have + simple past / past participle*.

B  Now go to page 138. Look at the grammar chart and do the grammar exercise for 10.1.

C **PAIR WORK** Complete the statements with the correct form of the verb in parentheses ( ).

Do you know who or what the sentences refer to? (Answers at the bottom of the page.)

- 1 If he \_\_\_\_\_ (not sit) under an apple tree, he \_\_\_\_\_ (not discover) gravity.
- 2 If Frank Epperson \_\_\_\_\_ (not leave) his soda outside one cold night, the wooden stirring stick \_\_\_\_\_ (not freeze) in the cup, and we might not have these sweet summer treats today.
- 3 If Alexander Fleming \_\_\_\_\_ (not add) bacteria to the petri dish, he \_\_\_\_\_ (not invent) this life-saving drug.
- 4 If George Crum \_\_\_\_\_ (not slice) his potatoes extra thin, he \_\_\_\_\_ (not create) this popular snack.
- 5 If Sylvan Goldman \_\_\_\_\_ (never think of) this helpful grocery store item if his office chair \_\_\_\_\_ (not be) on wheels.

### 4 SPEAKING

A **PAIR WORK** Think about three things that you did earlier this week. Tell your partner and together imagine what would have happened if you hadn't done those things.

I left my house late, and I hit a terrible traffic jam on the way to class. If I'd left my apartment an hour earlier, I wouldn't have hit that traffic jam.

B **GROUP WORK** Do the same thing in groups. Add to the chain of events to create stories. How long can you keep a logical chain of events going?

If my friend hadn't moved to Berlin, I might not have gone to Germany for vacation. I probably would have gone to Australia instead.

If you had gone to Australia, what cities would you have visited?

