

## UNIT 6

# DISCOVERY AND INVENTION

## LEARNING OBJECTIVES

### Watch and listen

Watch and understand a video about research scientists.

### Listening skills

Understand references to earlier ideas; understand lecture organization.

### Critical thinking

Summarize information using *Wh-* questions.

### Grammar

Use passive verb forms.

### Speaking skills

Preview a topic; organize ideas; explain how something is used.

### Speaking task

Give a presentation about an invention or a discovery which has changed our lives.







## UNLOCK YOUR KNOWLEDGE

Work with a partner. Look at the photo and answer the questions.

- 1 The photo shows an early computer. When do you think this photo was taken?
- 2 How does this computer compare to modern ones?
- 3 What do you think is the most important invention or discovery in the last 50 years? Why is it important?



# WATCH AND LISTEN



## ACTIVATING YOUR KNOWLEDGE

### PREPARING TO WATCH

1 Work with a partner and answer the questions.

- 1 What are the four 'STEM' subjects?
  - a Science, Technology, Engineering, Mechanics
  - b Science, Technology, Engineering, Maths
  - c Science, Technology, Economics, Maths
- 2 Can you think of any famous people who work in a STEM industry? How did they become famous?
- 3 What do you think makes somebody a good research scientist? What interests and abilities do they have?

## PREDICTING CONTENT USING VISUALS

2 You are going to watch a video about research scientists. Before you watch, look at the photos from the video. Discuss the questions with your partner.

- 1 What is happening in each photo? Which job do you find most interesting? Why?
- 2 What do you think the main topic(s) of the video will be?
- 3 In the video you will hear about three inventions. What do you think these might be?

### GLOSSARY

**fundamental** (adj) more important than anything else

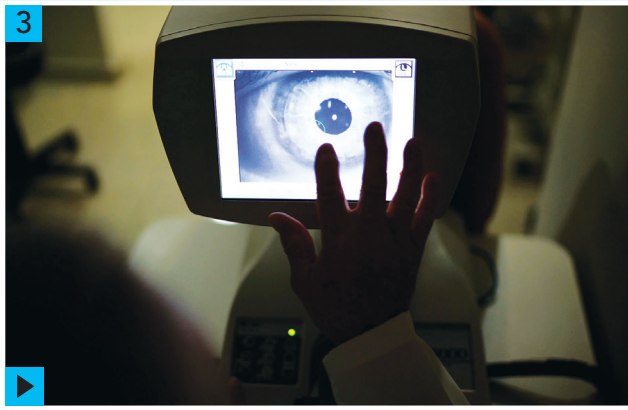
**treatment** (n) the use of medicine to make a sick or injured person healthy

**immune system** (n) the system in the body that protects it against infection

**vaccine** (n) a special substance that you take into your body to prevent a disease

**cataract** (n) a disease which affects somebody's eye so that they can not see clearly

**pandemic** (n) a dangerous disease that infects many people at the same time



## WHILE WATCHING

- 3** ▶ Read the paragraph and try to predict the words you will hear. Then watch the video and complete the paragraph.

Research scientists have a range of skills. They enjoy testing their ideas and assessing <sup>(1)</sup> \_\_\_\_\_ – a fundamental part of science. They also possess <sup>(2)</sup> \_\_\_\_\_ flexibility and know that there is rarely a single <sup>(3)</sup> \_\_\_\_\_. They should be able to accept changes in their working life, because their job can take them to a range of <sup>(4)</sup> \_\_\_\_\_. A research scientist often works in this industry because they want to make a difference to the <sup>(5)</sup> \_\_\_\_\_ of others.

- 4** ▶ Watch again. Circle the correct answer. In some items, more than one answer is possible.

- 1 Which type of thinking does the speaker say is 'fundamental to science'?  
 a critical                                      b logical                                      c practical
- 2 What did James Dyson use during his first attempt at creating a vacuum cleaner?  
 a cardboard                                      b plastic wire                                      c sticky tape
- 3 In which location(s) might a research scientist work?  
 a underwater                                      b in space                                      c in a lecture hall
- 4 Which area did the creators of BioNTech first want to research?  
 a Covid-19                                      b cancer                                      c the immune system

## DISCUSSION

- 5** Discuss the questions below in a small group.

- 1 Which of the people mentioned in the video has had the most positive effect on the world? Why?
- 2 Based on the video, what effects has the work of research scientists had on your life?

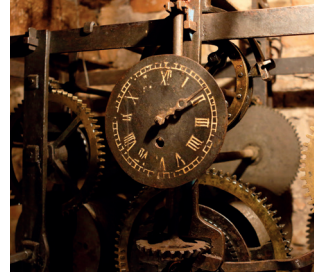
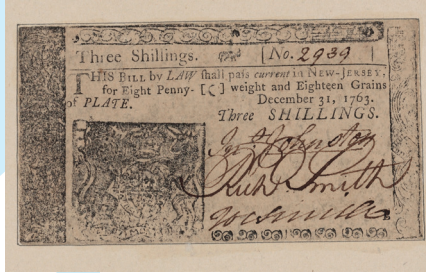
## SUMMARIZING

## UNDERSTANDING DETAIL

# LISTENING

## LISTENING 1

### PREPARING TO LISTEN



1 Work in groups. Look at the photos and discuss the questions.

- 1 Which of these inventions do you think is the oldest?
- 2 Which do you think is the newest?
- 3 Which do you think has been the most useful?
- 4 Where in the world do you think they were invented?  
Why do you think this?

2 You are going to listen to a museum tour about inventions from the Middle Ages. Before you listen, work with a partner and complete each sentence with the correct form of a noun from the box. Use a dictionary to help you.

contribution device diagram discovery  
outcome scholar technology weapon

- 1 In the twelfth century, al-Jazari drew \_\_\_\_\_ and gave detailed descriptions of machines for farming.
- 2 Certain people who have made a huge \_\_\_\_\_ to science and the arts receive an award called the Nobel Prize.
- 3 Iron is a material that people first used to make \_\_\_\_\_ in the twelfth century BCE.
- 4 The \_\_\_\_\_ of electricity in the eighteenth century changed the organization of human society.
- 5 A baby monitor is a \_\_\_\_\_ which lets parents watch their child when they're in a different room.
- 6 Although we believe our company's new invention will be very popular with customers, it is too early to predict the \_\_\_\_\_.
- 7 There are many important \_\_\_\_\_ at universities today whose work will have a huge effect on the world as we know it.
- 8 Modern \_\_\_\_\_, such as computers and mobile phones, has completely changed our lives over the past 50 years.

#### UNDERSTANDING KEY VOCABULARY

3 Work with a partner. Match the inventions (1–4) to the photos (a–d). Tell your partner when you think they were invented.

1 the fountain pen \_\_\_\_\_

3 gunpowder \_\_\_\_\_

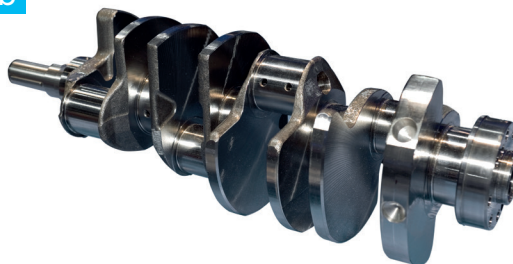
2 glasses \_\_\_\_\_

4 the crankshaft \_\_\_\_\_

a



b



c



d



## WHILE LISTENING

4 6.1 Listen to the museum tour. Number the topics (a–f) in the order they are mentioned.

a \_\_\_\_\_ A problem that fountain pens solved.

b \_\_\_\_\_ How and when glasses were invented.

c \_\_\_\_\_ The inventions of a great engineer.

d \_\_\_\_\_ Where these inventions were brought from and to.

e \_\_\_\_\_ How gunpowder changed the world.

f \_\_\_\_\_ Why the Middle Ages were important in the development of science.

5 6.1 Work with a partner. Complete the notes with the information you can remember. Then listen to the tour again to check and finish completing the notes.

*Fountain pen*

*invented in the year <sup>(1)</sup> \_\_\_\_\_ in <sup>(2)</sup> \_\_\_\_\_*

*people previously wrote with <sup>(3)</sup> \_\_\_\_\_ and they used to get*

*<sup>(4)</sup> \_\_\_\_\_ on their fingers / clothes*

*first fountain pen used a small container to avoid this problem*





### Glasses

invented in <sup>(5)</sup> \_\_\_\_\_ in the <sup>(6)</sup> \_\_\_\_\_ century

people held them in front of their eyes or rested them on their noses

### al-Jazari

a famous <sup>(7)</sup> \_\_\_\_\_ from the Middle Ages, lived in <sup>(8)</sup> \_\_\_\_\_ in the <sup>(9)</sup> \_\_\_\_\_ century

examples of inventions:

- a mechanical clock that needed <sup>(10)</sup> \_\_\_\_\_ and <sup>(11)</sup> \_\_\_\_\_ to work
- the crankshaft – a device that keeps machines going in a <sup>(12)</sup> \_\_\_\_\_ (used today in <sup>(13)</sup> \_\_\_\_\_)

### Gunpowder

invented in <sup>(14)</sup> \_\_\_\_\_ in the <sup>(15)</sup> \_\_\_\_\_ century

the inventors were searching for a way that would allow people to <sup>(16)</sup> \_\_\_\_\_

first instructions for making gunpowder came in the <sup>(17)</sup> \_\_\_\_\_ century  
gunpowder had a big effect on the methods and outcomes of <sup>(18)</sup> \_\_\_\_\_

## POST-LISTENING

### SKILLS

#### Understanding references to earlier ideas

To refer to things they talked about earlier, speakers often use words such as *it*, *he*, *she*, *they*, *then* and *there*. This sounds more natural than repeating the same words. In this sentence, the word *it* refers back to the invention of the telephone:

In 1876, Alexander Graham Bell invented the telephone. ← *It* changed the way we communicate.

#### 6 Read the sentences. Underline the words which the words in bold refer to.

- 1 The first fountain pen was made in 953 in Africa. Before **then**, people used bird feathers and ink to write with.
- 2 As some of you may know, the Middle Ages have often been called the 'Dark Ages'. During this tour, you will find out that **they** were not.
- 3 Glasses were invented in Italy in the thirteenth century. Nobody knows who invented **them**.
- 4 The invention of gunpowder has changed the way we fight wars. **It** changed the outcome of many medieval battles and affected the history of the world.

## PRONUNCIATION FOR LISTENING

### Weak and strong forms

In spoken English, people don't usually stress words which do not carry the main meaning in a sentence, such as *a, an, in, the, do, does, to, from, and* or *of*. When these words are unstressed, they are called *weak forms*.

The unstressed vowel in these weak forms is pronounced /ə/ (*to* = /tə/, *the* = /ðə/, etc.). However, speakers sometimes stress these types of words to make them the main part of their message. When these words are stressed, they are called *strong forms*.

*Andrea is funny and intelligent.* (The speaker is stressing that Andrea has both of these qualities.)

### 7 6.2 Listen for the weak forms and complete the sentences.

- 1 Inventions \_\_\_\_\_ technology from India, China, North Africa, \_\_\_\_\_ Middle East were brought \_\_\_\_\_ Europe.
- 2 \_\_\_\_\_ first glasses were held in front \_\_\_\_\_ the eyes or balanced on \_\_\_\_\_ nose.
- 3 \_\_\_\_\_ crankshaft is \_\_\_\_\_ long arm which allows machines \_\_\_\_\_ move \_\_\_\_\_ straight line.
- 4 As we move along, you'll find one \_\_\_\_\_ most important inventions \_\_\_\_\_ medieval times.

### 8 6.3 Listen to the extracts. Match the extracts (1–3) to the reasons for using strong forms (a–c).

- 1 The Middle Ages **were** an interesting time and they were full of scientific discoveries. \_\_\_\_\_
- 2 Inventions and machines designed by medieval scholars made a great contribution to society and many are still in use today. **And** some of these inventions are very common. \_\_\_\_\_
- 3 Many people think gunpowder is **the** most important invention in history. \_\_\_\_\_

#### Strong forms are used ...

- a to emphasize that there is nothing better or more than this.
- b to contrast with an earlier idea that the Middle Ages were **not** an interesting time.
- c to emphasize that there is more information.





## DISCUSSION

9 Look at the photos of some Chinese inventions. Think about the questions and make notes.

1 How did the inventions make people's lives better?

*The compass made people's lives better by ... After somebody invented paper, people ...*

2 Which inventions were very important in the past but are less important now?

*All of the inventions were important because ...*

3 Which invention was the most important in the past?

Is it the same now?

*In the past, I think paper was the most important invention because ...*

10 Work in a group. Take turns explaining why the invention you chose is the most important.

the compass



making paper



printing



## 👁 LANGUAGE DEVELOPMENT

### USES OF THE VERB MAKE

#### VOCABULARY

The verb *make* has three main meanings: *force*, *cause* or *produce*.

**Force:** *My boss made me work late last night.*

**Cause:** *Water and weights make the mechanical clocks work.*

**Produce:** *The first fountain pen was made in 953.*

1 Work with a partner. Discuss the meaning of *make* in each sentence. Write *C* (cause), *F* (force) or *P* (produce).

1 Gunpowder was first **made** in China.   P  

2 My professor **made** me rewrite my assignment because there were too many mistakes.       

3 Social media **makes** it easy for people to stay in touch.       

4 The new discovery **made** a lot of people very happy.       

5 I **made** myself stay up late to finish the work.

- 2** Work with a partner. Which of the nouns in the box below are used with *make*? Which nouns are not used with *make*? What verb do you use instead?

attempt comparison contribution decision difference  
experiment improvement investment public research

- 3** Complete the sentences with the correct form of *make* and a noun from Exercise 2. Then compare your answers with a partner.

- 1 If you \_\_\_\_\_ between these two TVs, you'll see that this one has a much clearer picture.
- 2 I like both of these bikes a lot. I'm finding it hard to \_\_\_\_\_ about which one to buy.
- 3 Medieval scholars \_\_\_\_\_ to the world by inventing things that allowed societies to grow and become wealthier.
- 4 Inventors \_\_\_\_\_ on many occasions to build flying cars, and they are getting closer to something drivers can buy.
- 5 Ten years ago, Andrew \_\_\_\_\_ in a new technology company. He's now a millionaire.
- 6 The invention of the light bulb \_\_\_\_\_ to people's lifestyles. After it was invented, people could work indoors for longer, even when it was dark.
- 7 This is a good smartphone, but they could still \_\_\_\_\_ to it, like longer battery life.
- 8 The government won't \_\_\_\_\_ who the people are until the police confirm the details.

- 4** Work with a partner. Match the sentences (1–8) in Exercise 3 to the definitions (a–h) of *make* + noun.

- a to try \_\_\_\_\_
- b to choose \_\_\_\_\_
- c to make a situation better for people \_\_\_\_\_
- d to consider the similarities between two things \_\_\_\_\_
- e to change or add to something to make it better \_\_\_\_\_
- f to put money into something to make more money \_\_\_\_\_
- g to share information about something to a wider group of people \_\_\_\_\_
- h to create, give or do something to create more success for something else \_\_\_\_\_

- 5** Write two questions using the correct form of *make* + a noun from Exercise 2. Then ask your partner.

*Do you think planting trees will make a difference to climate change?*



## PASSIVE VERB FORMS

### GRAMMAR

In an *active sentence* we focus on the person or thing that *causes* an effect or a result. In a *passive sentence* the focus is on the person or thing that *experiences* the effect of an action, or what comes as a *result of* an action.

Active: *Alan Turing invented the digital computer.* (focus on the inventor)

Passive: *The digital computer was invented in 1936.* (focus on the invention)

You can use the passive when you don't know who does an action, when it is not important to give that information, or when it is obvious.

*The wooden cannon was invented in the thirteenth century.* (It's not known or not important who invented the cannon.)

*Maria Ressa and Dmitry Muratov were awarded the Nobel Peace Prize in 2021.* (It's obvious that the Nobel Prize organization gave them the award.)

If you want to make it clear who did something, use *by* at the end of a passive sentence.

*The digital computer was invented in 1936 by Alan Turing.*

To form the passive, use *be + past participle*. (Remember: the passive can be used in all tenses, and with regular and irregular past participles).

*All students are invited to attend a talk by one of the country's most successful inventors.*

*Many museum members complained they were not told about the new science exhibition.*

### 6 Work in a group. Time yourselves to see who is quickest to find the correct number of passive verb forms in these extracts from Listening 1.

- 1 The Middle Ages were an interesting time, and they were full of scientific discoveries. During this time, inventions and technology from India, China, North Africa and the Middle East were brought to Europe.
- 2 And some of these inventions are very common. For example, the first fountain pen was made in 953 in Africa.
- 3 Glasses were invented in Italy in the thirteenth century. No one knows who invented them. The first glasses were held in front of the eyes or balanced on the nose. They were developed to help people with bad vision to read.
- 4 His most important invention was the crankshaft. The crankshaft is a long arm which allows machines to move in a straight line. It was first used for watering gardens.

### 7 Compare your answers with a partner and check that you have both underlined the correct verbs.

**8** Find and correct the verb errors in the sentences (one sentence does not have an error). Then compare your answers with a partner.

1 The first smartphone, named Simon, were created by IBM.

---

2 The first newspaper was print in 1605 in Germany.

---

3 The first computer program was wrote by Ada Lovelace.

---

4 Hearing aids were developed to help people hear better.

---

**9** Work with a partner. Write each sentence in the passive form.

1 Apple's first tablet computer – develop – the 1990s

*Apple's first tablet computer was developed in the 1990s.*

---

2 the law of gravity – discover – Isaac Newton – the seventeenth century

---

3 the first computer chip – invent – the 1950s

---

4 the first smartphone – create – after 1997

---

5 penicillin – first discover – 1928 – Alexander Fleming

---

**10** Work with a partner. Take turns reading the sets of words (1–8).

Your partner says a complete sentence with the verb in the correct active or passive form.

**Student A:** *paper discover ancient China*

**Student B:** *Paper was discovered in ancient China.*

1 first email **send** 1971

2 telephone **invent** 1876

3 Edison **develop** first light bulb 1879

4 720,000 hours video **share** social media every day

5 Egyptian architect called Imhotep **design** pyramid of Djoser

6 very early calculator **create** Blaise Pascal

7 millions people **download** smartphone apps every hour

8 letters **write** fountain pens many years now.

**11** Work with a partner. What do you know about the inventions mentioned in Exercises 8, 9 and 10?



# LISTENING 2

## PREPARING TO LISTEN

### PREDICTING CONTENT USING CONTEXT

1 Read the introduction to a lecture about an invention. Answer the questions.

- 1 Can you guess the name of the invention? \_\_\_\_\_
- 2 What two words are used to refer to it? \_\_\_\_\_ and \_\_\_\_\_

*In today's lecture, I want to discuss an invention which has changed our lives. This product has made a huge difference in the way we work, travel, communicate and socialize with friends. Can you guess what it is? I'm talking here about mobile phone [REDACTED]. The word [REDACTED] comes from [REDACTED]. Traditionally, [REDACTED] were used in computers to help them perform better. However, with the invention of smartphones, the word [REDACTED] is used to refer to phone [REDACTED]. In this lecture, we'll start by discussing the very first [REDACTED] and their development. We will then discuss how [REDACTED] have changed our lives. Finally, we'll focus on some of the most popular [REDACTED] used by people today.*



### UNDERSTANDING KEY VOCABULARY

2 6.4 Listen to the introduction. Check your answers to Exercise 1.

3 Work with a partner. Circle the best word to complete each sentence. Then write the words next to the correct definitions (a–g) on page 137.

- 1 I need a password to \_\_\_\_\_ the Wi-Fi connection in this café.  
a access                      b connect                      c enter
- 2 After you download the app, \_\_\_\_\_ it on your smartphone.  
a produce                      b install                      c add
- 3 This software lets you \_\_\_\_\_ your own apps. I have some great ideas I'd like to try to design.  
a create                      b start                      c form
- 4 In a recent study, 45% of American smartphone \_\_\_\_\_ said they would rather give up their holidays than their phones.  
a keepers                      b holders                      c users
- 5 I always read \_\_\_\_\_ reviews before I buy an expensive item.  
a goods                      b equipment                      c product
- 6 IT (information technology) is an extremely fast-growing \_\_\_\_\_.  
a industry                      b custom                      c trade
- 7 Smartphones \_\_\_\_\_ us to stay in touch with each other.  
a mean                      b allow                      c let

- a the people and activities involved in one type of business \_\_\_\_\_
- b somebody who uses a product, machine or service \_\_\_\_\_
- c the right or opportunity to use something \_\_\_\_\_
- d something that is made to be sold \_\_\_\_\_
- e to make something new, or invent something \_\_\_\_\_
- f to make it possible for something to happen \_\_\_\_\_
- g to put a program onto a computer so you can use it \_\_\_\_\_

## WHILE LISTENING


4 Discuss the questions below in a small group.

- 1 How have smartphones and tablets changed our lives?
- 2 What would your everyday life be like without your smartphone?

5 Work with a partner. Read the text and answer the questions.

It's hard to imagine life before smartphone apps! But let's try anyway. Imagine for a moment that you're taking a road trip in the days before smartphones were invented.

- 1 *How can you find information about the place that you want to visit?*
- 2 *Which forms of entertainment could you use in the car while you drive?*
- 3 *How will you find your way to your destination? What will you do if you get lost?*
- 4 *Where are the address and phone numbers of the hotels where you want to stay?*

- 6  6.5 Listen to the lecture. Are your answers to the questions in Exercise 5 similar to the speaker's? Check your notes and add ideas.
- 7 Work in groups of three students, A, B and C. Your teacher is going to give a text to each student in the group. Read your text and underline the key information in it. Then make notes about it.
- 8 Work in your group from Exercise 7. Use your notes to tell each other about the key information in your text.
- 9 Work in your groups again. Use your notes to underline eight mistakes in the notes. Write the correct words or numbers in gaps 1–8 on page 138.

<i>first apps used for:</i>	<i>second generation apps:</i>	<i>another effect of apps:</i>	<i>negative effects of apps:</i>
- accessing the internet	- first app store opened in 2009	- there is a need for skilled IT specialists	- people are more stressed
- check voicemail	people used apps more than internet browsers		- people are less tolerant
- send photos	- by 2018, 180 billion downloads		

USING YOUR KNOWLEDGE

LISTENING FOR MAIN IDEAS




TAKING NOTES: JIGSAW READING



- |         |         |
|---------|---------|
| 1 _____ | 5 _____ |
| 2 _____ | 6 _____ |
| 3 _____ | 7 _____ |
| 4 _____ | 8 _____ |

LISTENING FOR  
DETAIL

- 10**  **6.5** Listen to the lecture again. Check your answers to Exercise 9.

POST-LISTENING

SKILLS

Understanding lecture organization

Lecturers often use special phrases to help the audience follow the lecture. In the introduction, they explain what they'll talk about and in what order.

*First, we'll discuss ... I'd like to start by talking about ...*

They also use special expressions to show transitions from one topic to another.

*Next, I will discuss ... Now I'd like to talk about ...*

Transition phrases like these are very common in academic contexts. Lecturers use them to help you understand the material and to take better notes while you are listening. They are also useful for organizing presentations.

- 11** Read the extracts from the lecture. Underline the expressions the lecturer uses to say what will happen next.

- 1 We'll start by discussing the very first apps and their development.
- 2 We will then discuss how apps have changed our lives.
- 3 I'd like to start by talking a little bit about the first apps.
- 4 I'm going to briefly talk about how these apps have changed our lives.
- 5 Now I'd like to mention another important effect of the invention of apps.
- 6 In the next part of the lecture, I'll discuss some of the most common apps in more detail.

DISCUSSION

SYNTHESIZING

- 12** Think of an app that you use very often. Then work with a partner to answer the questions below.

- 1 What is the app designed to do?
- 2 What do you use it for?
- 3 What are the advantages and disadvantages of the app?
- 4 Who would you recommend it to?

- 13** Write a review of the app you discussed in Exercise 12. Use the language from Exercise 11 and the Skills box. Start by saying what the app is called. Write between 150–180 words.

*An app which I use a lot is called ...*

*This app is designed for ...*

# SPEAKING

## CRITICAL THINKING

At the end of this unit, you will do the speaking task below.

Give a presentation about an invention or a discovery which has changed our lives.

### Summarizing information using *Wh-* questions

When you do research on a topic, try asking yourself the following questions: *Who? What? When? Where? Why?* Many researchers add *How?* to this list.

Then search for the answers to these questions. To organize your research, it is helpful to make an ideas map like the one in Exercise 1. This is a quick and easy way to focus on the key details of a topic.

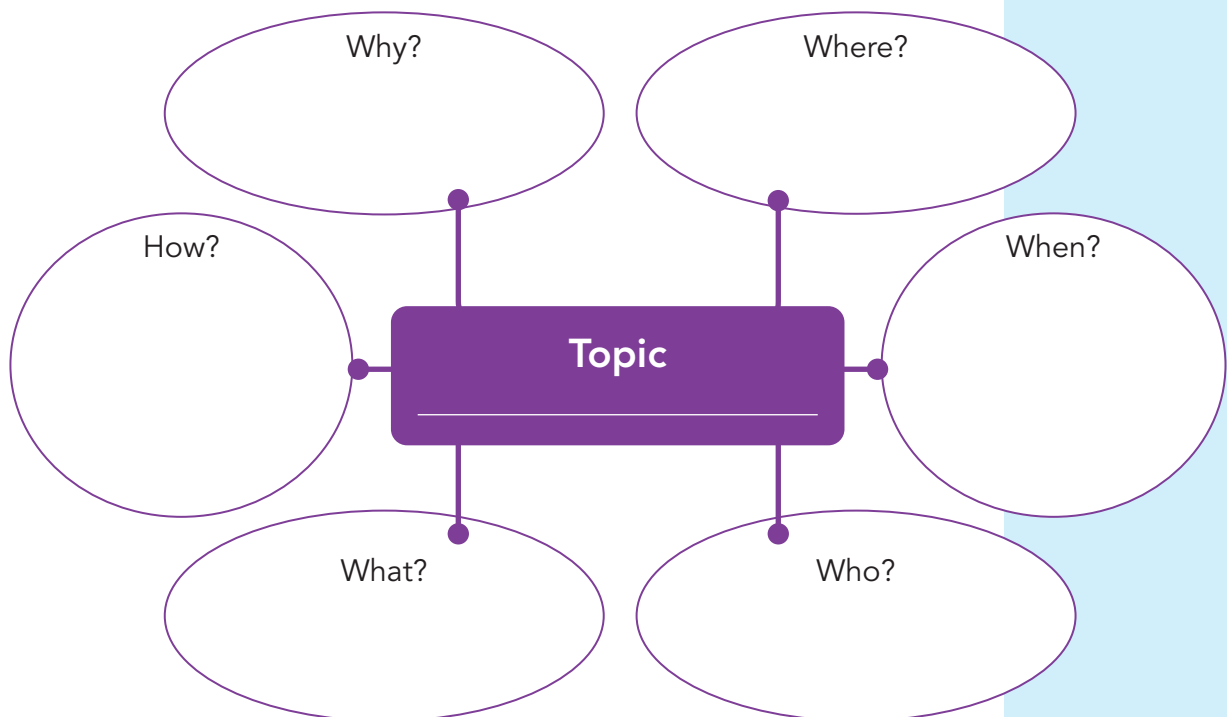
SKILLS

- 1 Choose one of the inventions from Listening 1 or one of the apps from Listening 2. Write this in the Topic box below. Complete the ideas map for the invention or app. Use information from your notes on page 130 or 137. Try answering some of these questions:

UNDERSTAND



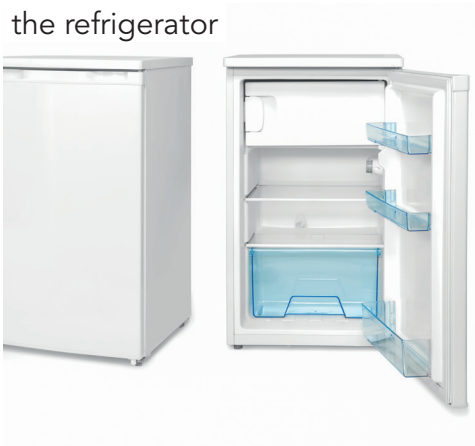
- 1 When was the last time you used this thing?
- 2 What are its uses?
- 3 What would life be like without it?
- 4 How has it affected our lives?



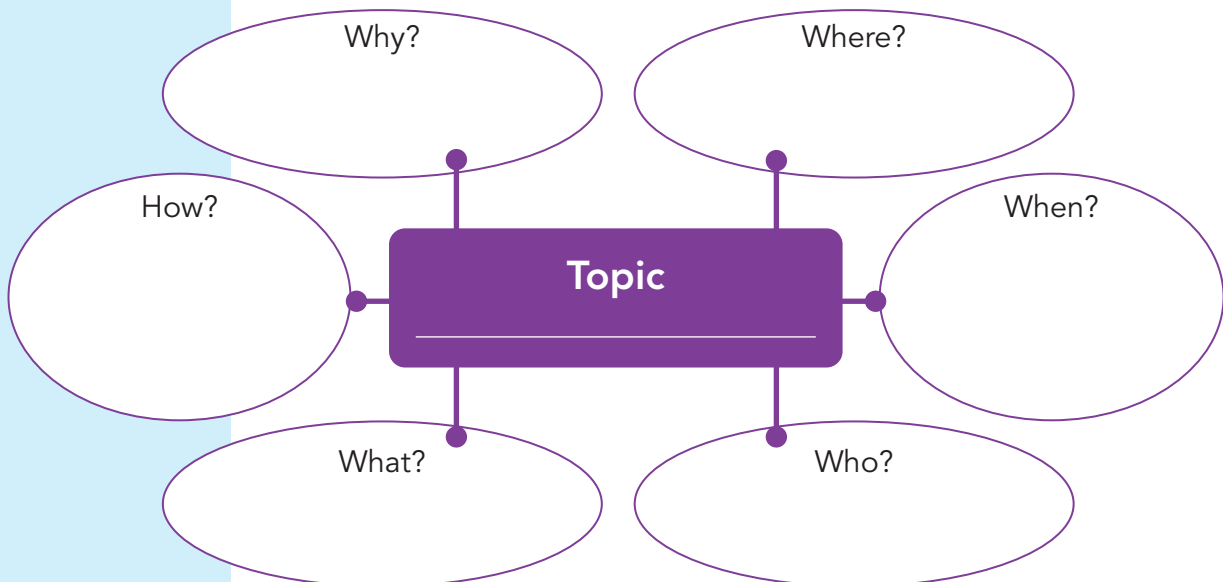




- 2 Work with a partner. Share your ideas map. Make suggestions about information which your partner could add.
- 3 Choose an invention to talk about in the speaking task. You can talk about one of the inventions in the photos below or use your own idea.



- 4 Complete an ideas map about the invention you chose.



- 5 Work with a partner. Share your ideas map. Make suggestions about information which your partner could add.

## PREPARATION FOR SPEAKING

### PREVIEWING A TOPIC

In the introduction to a presentation, give a preview of what you will talk about. This helps your audience follow your talk. Here are some examples of language you can use to preview a topic:


*I'd like to begin my talk by looking at ...*

*After that, I'm going to explain ...*

*Then, I'll discuss ...*

*Finally, I'll explore ...*

SKILLS

- 1  6.6 Listen to an introduction to a presentation which previews what the speaker will talk about. Circle the things that the speaker does.

- 1 mentions the invention's name in the first sentence
- 2 gives a description of the invention
- 3 says how you can use it
- 4 gives specific details of how it was invented
- 5 explains what will happen next in the presentation

- 2 Work with a partner. Practise giving an introduction about a simple invention. Use the preview below to organize your ideas.

**Student A:** give an introduction to a presentation about the **paperclip**.

**Student B:** give an introduction to a presentation about the **ballpoint pen**.



I would like to present an invention which has changed the way we \_\_\_\_\_ . It's a simple invention and we have all used it.

It's the \_\_\_\_\_ .

A \_\_\_\_\_ is \_\_\_\_\_ .

(explain the invention here)

You can \_\_\_\_\_ .

(explain how it is used in general)

First, I am going to talk about \_\_\_\_\_ . Then, I will explain how it has improved our lives.

## ORGANIZING IDEAS

### SKILLS

Before you write a presentation outline, decide in what order you will present your ideas. First, brainstorm some ideas and write them down. Then put them in order to create the framework for your outline. This will help you make sure that your ideas are in a logical order when you start writing. For example, it is logical to tell your listeners background information before you tell them why something is useful. You can use *Wh-* questions to organize your presentation.

**3** Read the next part of the presentation. Number the questions (a–g) in the order they are answered in the presentation. Then compare your answers with a partner.

- a Why do people use them? \_\_\_\_\_
- b Who invented them? \_\_\_\_\_
- c Where can people use them? \_\_\_\_\_
- d Why were they invented? \_\_\_\_\_
- e When were they invented? 1
- f What is the best thing about the invention? \_\_\_\_\_
- g When were they first sold? \_\_\_\_\_

To start with, Post-it® notes were invented in 1974 by Art Fry. Fry needed a bookmark which would stay inside the book and didn't fall out. He used a special type of glue invented by his colleague Spencer Silver. The glue was not very strong and made it easy to remove the notes.

In 1977, the first Post-it® notes were sold in shops. Since then, they have become a global phenomenon. People all over the world recognize the small, yellow sticky notes. We use them at work, at school and at home.

Because the glue does not leave any stains, people can stick Post-it® notes to anything. They allow us to remember important information and take notes. The best thing is that you can stick a Post-it® note anywhere to help you remember something.





## EXPLAINING HOW SOMETHING IS USED

We can use the words and expressions in bold to talk about how something is used.

*Without the crankshaft, car engines wouldn't work.* (without + noun)

*Post-it® notes help people to remember things.* (help + noun/pronoun + to + infinitive)

*The light bulb allows us to see at night.* (allow + noun/pronoun + to + infinitive)

*The microwave makes it possible to cook food quickly.* (make + it + adjective)

*Social media is useful for communicating with friends.* (useful + for + gerund)

### 4 Complete the sentences with phrases from the box.

allows us are useful for helps people to makes it without

- 1 GPS \_\_\_\_\_ to find our way around unknown places.
- 2 The mobile phone \_\_\_\_\_ stay in touch.
- 3 Translation apps \_\_\_\_\_ learning another language.
- 4 Television \_\_\_\_\_ easy to learn about the world.
- 5 \_\_\_\_\_ the computer chip, we wouldn't be able to use laptops.

### 5 Write between two and four sentences about an invention of your choice. Use phrases from Exercise 4. Do not use the same invention that you chose in the Critical Thinking section.

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### 6 Work with a partner. Take turns saying your sentences. Do not say the name of your invention – instead, say 'this invention'. Your partner should try to guess what is being described.

This invention allows us to work or study at home more easily.

Is it a smartphone?

No. I'll give you another clue. Without this invention, we would have to sit in one place to work or study ...

# SPEAKING TASK

Give a presentation about an invention or a discovery which has changed our lives.

## PREPARE

**1** Look at the ideas map you created in Exercise 4 in the Critical thinking section. Add any new information. Decide in what order you will answer the *Wh-* questions and write them below.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_
- 6 \_\_\_\_\_

**2** Make notes about the language you will use. Use language like this:

To preview your topic

*I'd like to start by talking about ...*

*Then, I'll discuss ...*

*Finally, I'll explore ...*

Passive verbs

*The Post-it® note was invented in ...*

To explain how something is used

\_\_\_\_\_ *helps people to ...*

*Without \_\_\_\_\_, ...*

\_\_\_\_\_ *makes it \_\_\_\_\_ to ...*

References to earlier ideas

*After it was invented ...*

**3** Refer to the Task checklist below as you prepare your presentation.

TASK CHECKLIST	✓
Use phrases with <i>make</i> correctly.	
Clearly preview a topic and explain how something is used.	
Logically organize your ideas and make references to earlier ideas with words such as <i>this, it</i> , etc.	
Use passive verbs correctly and appropriately.	

## PRACTISE

**4** Work with a partner. Take turns practising your presentation.

## PRESENT

**5** Work in small groups. Take turns giving your presentations. Discuss which one of your inventions or discoveries has had the biggest influence.

*The laptop computer has had a huge effect on our lives, because it has allowed us to ...*

# OBJECTIVES REVIEW

1 Check your learning objectives for this unit. Write 3, 2 or 1 for each objective.

3 = very well   2 = well   1 = not so well

**I can ...**

watch and understand a video about research scientists. \_\_\_\_\_

understand references to earlier ideas. \_\_\_\_\_

understand lecture organization. \_\_\_\_\_

summarize information using *Wh-* questions. \_\_\_\_\_

use passive verb forms. \_\_\_\_\_

preview a topic. \_\_\_\_\_















organize ideas. \_\_\_\_\_

explain how something is used. \_\_\_\_\_

give a presentation about an invention or a discovery which has changed our lives. \_\_\_\_\_

2 Use the *Unlock Digital Workbook* for more practice with this unit's learning objectives.

## WORDLIST

access (v) 	make a comparison (v phr)	make attempts (v phr)
allow (v) 	make a contribution (v phr)	make improvements (v phr)
app (n)	make a decision (v phr)	make public (v phr)
contribution (n) 	make a difference (v phr)	outcome (n) 
create (v) 	make an investment (v phr)	product (n) 
device (n) 		scholar (n) 
diagram (n) 		technology (n) 
discovery (n) 		user (n) 
industry (n) 		weapon (n) 
install (v)		

 = high-frequency words in the Cambridge Academic Corpus