

Accidental Inventions



1 TOPIC PREVIEW

A Read the list of five inventions from the last 150 years. Which do you think is the most important and why? Number your choices in order from 1 to 5. Share your answers with your classmates.

- ___ the computer
- ___ the television
- ___ the telephone
- ___ the refrigerator
- ___ the car

B Read the title of this chapter, look at the picture, and discuss the following questions.

- 1 What are some other inventions from the last 150 years? Why do you think they are important?
- 2 What does *accidental* mean? Which inventions in the picture do you think were accidental?
- 3 What do you think the reading is going to be about?

2 VOCABULARY PREVIEW

- A** Read the word lists. Put a check (✓) next to the words that you know and can use in a sentence. Compare your answers with a partner. Then look up any unfamiliar words in a dictionary.

Business	Academic Word List	Science
brand manufacturer market (v.) product	enormous global	discover laboratory melt radar

The chart shows selected words from the reading related to business, science, and the Academic Word List (AWL). For more information about the AWL, see page 121.

- B** Write the word from Part A next to its definition.

- 1 Very, very large: _____
- 2 Change to a liquid: _____
- 3 A company that makes large amounts of things: _____
- 4 Something that people make in order to sell it: _____
- 5 A system for tracking things, such as airplanes or ships:

- 6 A type of product that a particular company makes:

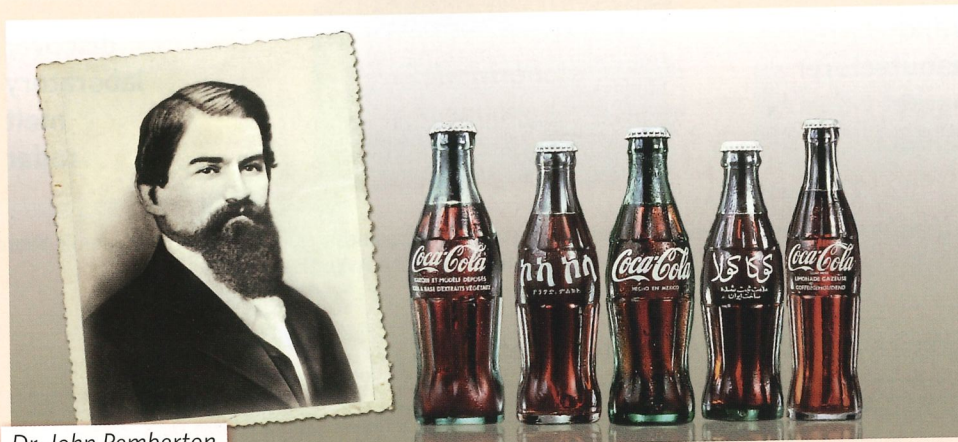
- 7 Including the whole world: _____
- 8 Find something for the first time: _____
- 9 Try to sell something: _____
- 10 A room or building where scientists work: _____



3 READING

Preview the questions in Reading Check Part A on page 78. Then read the story.

Accidental Inventions



Dr. John Pemberton

- 1 Did you know that many inventions began as accidents? Some of these accidents even became big business ideas. They gave us products that people all over the world use every day.
- 2 In 1886 in the United States, a pharmacist¹ named Dr. John Pemberton tried to invent a medicine. Pemberton wanted a cure for headaches. He mixed several ingredients together. No one knows exactly what he did. The mixture was a mystery, but it tasted delicious!
- 3 Pemberton took the mixture to a drugstore. The drugstore sold the medicine as a drink for a few cents a glass. Pemberton and a partner started a company to make and sell the drink. However, the business didn't make much money. Then a smart businessman named Asa Candler bought the company. Candler made the business much more successful. The company grew, and it sold the drink around the world.
- 4 What happened to the mysterious headache cure? It's now a global product. It's one of the most famous brands in the world: Coca-Cola®. The Coca-Cola Company markets the drink in 200 countries. It sells more than 1.6 billion drinks every day.
- 5 An accident with a candy bar became another business idea in the United States. It happened in 1946. Percy Spencer, an

¹ pharmacist: a person who prepares and sells medicines

engineer, put a candy bar in his jacket pocket. Then he went to work. That day, he was testing a magnetron in his company's laboratory. The company used magnetrons to make radar systems. A magnetron is a device² that produces microwaves. These are short waves of energy that cause things to heat up.

Spencer stood near the magnetron. He turned it on. Suddenly, something very strange happened. The candy bar in his pocket melted! Spencer thought, "Maybe I could try this with other foods." First, he put little pieces of dried corn near the magnetron. Soft, white, puffy popcorn flew all around the room. Then he put an egg next to the magnetron. It heated up quickly and exploded. Spencer got hot yellow egg yolk all over his face! Some of Spencer's experiments were messy, but he discovered a new way to cook. What did he invent? The microwave oven.

The early microwave ovens were enormous. They were about 5½ feet (1.7 meters) tall, and they weighed over 750 pounds (340 kilograms). They cost about \$5,000 each. They were only good for restaurant use. Today, manufacturers make small, lightweight microwave ovens that are much cheaper than the early ones. These days, over 80 percent of homes in the developed world have a microwave oven.



Percy Spencer

Coca-Cola® and the microwave oven were lucky accidents. There are other examples, too. Did you know that the invention of plastic was an accident? The Post-it® note is another example. Now people use millions of these small sticky pieces of paper in offices and homes around the world.

Will other accidents bring us successful business ideas in the future? Who knows? Maybe a lucky scientific accident is happening somewhere in the world right now!

² device: an object that people make for a special use

4 READING CHECK

A Match the person to the action.

- 1 Pemberton _____ **a** He discovered a new way to cook.
2 Candler _____ **b** He wanted a cure for headaches.
3 Spencer _____ **c** He made Coca-Cola® a successful company.

B Circle the letter of the best answer.

- 1 Dr. John Pemberton was _____.
a an engineer **b** a pharmacist **c** a drugstore owner
- 2 Who bought Pemberton's company?
a a drugstore owner **b** Asa Candler **c** John Pemberton's partner
- 3 What happened to Pemberton's invention?
a It's now a famous drink.
b It's now a famous headache cure.
c No one knows what happened to it.
- 4 What was Percy Spencer doing one day at work in 1946?
a He was testing radar.
b He was testing airplanes.
c He was testing a magnetron.
- 5 What happened to Spencer's candy bar?
a It melted.
b It exploded.
c It flew around the lab.
- 6 What did Spencer do after he saw the melted candy bar?
a He sold the machine to a restaurant.
b He did experiments with other foods.
c He made lunch.
- 7 How were early microwave ovens different from today's microwave ovens?
a They were bigger.
b They cost less.
c Restaurants didn't use them.
- 8 What was another accidental invention?
a candy bars
b popped corn
c plastic

5 VOCABULARY CHECK

A Retell the story. Fill in the blanks with the correct words from the box.

brand	enormous	global	laboratory
markets	melted	radar	

Coca-Cola® started as an invention for a headache medicine. Dr. John Pemberton invented it right in his home, not in a _____¹. Today, everyone knows the famous _____² named Coca-Cola®. The Coca-Cola Company _____³ the drink around the world. In other words, the company is a/an _____⁴ business.

Percy Spencer's invention was also accidental. Spencer worked with magnetrons. His company used them in _____⁵ systems. When Spencer stood next to a magnetron, the candy bar in his pocket _____⁶! Spencer did more experiments with food, and he found a new way to cook – with a microwave oven! At first, microwave ovens were _____⁷ and expensive. Later, manufacturers made smaller, cheaper ones for home use.

B Circle the correct form of the word in each sentence.

Verb	Noun
discover	discovery
produce	product
manufacture	manufacturer

- 1 The (discover / discovery) of the microwave's use for cooking was the first step.
- 2 Then companies tried to (manufacture / manufacturer) a microwave oven for people to use at home.
- 3 Now many (manufactures / manufacturers) make microwave ovens.
- 4 The microwave oven is a very successful (produce / product).
- 5 Companies (produce / product) many different styles of microwave ovens.

6 APPLYING READING SKILLS

Understanding the order of events in a reading means that you know what happens first, second, third, and so on. A good idea is to make a list of the events in order, and number the first event 1, the second event 2, and so on.

A Complete the list to show the history of Coca-Cola®. Write the events in the correct order from 1 to 5.

- Pemberton started a business.
- Today, Coca-Cola® markets the drink around the world.
- Candler bought the business and made it successful.
- Pemberton invented a headache cure.
- Pemberton took his cure to a drugstore.

1 *Pemberton invented a headache cure.*

2

3

4

5

B Read these events in the history of the microwave oven. Write them in the correct order on a separate piece of paper.

- a Spencer tested a magnetron.
- b Spencer discovered a new way to cook.
- c Spencer experimented with other foods.
- d Spencer went to work with a candy bar in his pocket.
- e The candy bar melted.

7 DISCUSSION

Discuss the following questions in pairs or groups.

- 1 Why do you think Coca-Cola® and the microwave oven became successful products?
- 2 What kind of people are inventors? For example, why did Spencer do more experiments with food after his chocolate bar melted?
- 3 What new product do you want to invent? Describe it. What will you name it?