

10

Discoveries and Inventions

Module 4

Before you read Think, Pair, Share

Informative Text

- 1  Look at the pictures. Name the inventions and discuss why people need them.



- 2  Read the text and complete the table that follows:

1 There were inventions in the past that were even more important than TVs and cars. In fact, people started inventing stone tools about 2.5 million years ago. About 100,000 years ago, people invented the wheel, machines for digging, pots and metal tools.

2 The ancient Egyptians were skilled glassmakers. As far back as 2500 BC, the first glass objects they made were probably **beads**, for jewellery. The ancient Romans **spread** the skill of glass making from Egypt to the rest of the world. They made glass bottles and cups, and **they** also discovered how to make clear glass. They were the first people to use glass windows.

3 The Chinese invented fast food about 3,500 years ago. **They** made noodles from flour and water and sold them, with delicious sauces, in cities around China.

4 Today you can buy chewing gum everywhere in the world. Until 1870, however, it was only known in Mexico. Chewing gum comes from the Sapodilla tree. If you cut in the tree, a thick, milky liquid comes out. This liquid becomes gum and tastes very good. The Mexicans made chewing gum for **themselves**. While searching for sapodilla trees, they found the **ruins** of many cities from the past.

Place	Invention	Order
Egypt	Glass	1st
Mexico	Gum	
China	Fast food	

3 Read the text again and answer the following questions:



1. When did people start inventing stone tools?
2. How was chewing gum discovered?
3. In your opinion, what are the **consequences** of what the Chinese invented?

4  **What words would you use to replace the underlined pronouns in the text:**

1. **'they'** in the 2nd paragraph The ancient Egyptians, and the ancient Romans.....
2. **'They'** in the 3rd paragraph The Chinese.....
3. **'themselves'** in the 4th paragraph The Mexicans.....

5 Grammar in context Reflexive Pronouns

a. Read the last paragraph and answer the following question:

- Who made the chewing gum for the Mexicans?

Subject pronouns	Reflexive pronouns
I	myself
you	yourself
he	himself
she	herself
we	ourselves
they	themselves
you	yourselves

b. Complete the following sentences:

1. You can walk to school by yourself.....
2. The **president** himself..... came to our school.
3. My sister made a delicious cake by herself.....
4. I did the homework by myself.....



Speaking

6  **In pairs, choose an invention and discuss the following questions:**

- Why was it invented? **To multi-task our lives.**
- Who uses it? **Over 90% of the world's population.**
- How did it change our lives? **It drastically did.**
- How would you like to improve it?
I would work on protecting users' data.

The Internet!



(3) Read and answer questions:-

1. They started inventing stone tools about 2.5 million years ago.
2. Chewing gum comes from the Sapodilla tree.
3. The fast food causes fatness, and health problems, although it helps people to avoid wasting time.

(5) a. The Mexicans made chewing gum for themselves.



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Greatest Inventions of all time

Listening

1 Sort the following inventions according to their importance to you:



electric light



fridge



television



car



internet



computer

2 10.1 a. Listen to the dialogue which took place between Nada and Fatima many years ago, and fill in the table with what they thought were the five most important inventions:

No.	Inventions	Reasons
1
2
3
4
5

b. If you met Nada and Fatma today, what would you tell them about today's 5 most important inventions? How about in 2050?

3 Grammar in context *a few/a little/many/much*

many/ a few + a countable noun → There are *a few* books about the history of inventions in our school library.

much/ a little + an uncountable noun → I save *a little* money every month.
much is **mainly** used in negative sentences and questions.

a. Fill in the table with words from the list:

kilos – butter – shoes – money – months – photos – sand – milk – rice – dinars

a few	kilosshoes.....	...months....	...photos.....	...dinars.....
a little	rice	...butter.....	...sand.....	...milk.....	...money.....

(2) b. Here are the 5 most important inventions of all time which have truly made their effects on our lives.

Telephone

The name of the inventor should surely ring a bell. Alexander Graham Bell thought of how to communicate even from afar by converting the human voice into electric signals. He was the proponent of long-distance communication, and his development of the telephone had been the forerunner of the communication convenience we all experience today.

Electricity

There is no single man who can be truly credited for the discovery of electricity, but some of the names which would pop up in the list include Benjamin Franklin and his kite experiment, and Nikola Tesla who is often dubbed as the father of electricity because of his understandings of this force behind most of the everyday items which we use today. From home entertainment to the lights outside the road, electricity is behind it.

Airplane

Traveling by ship was okay. But traveling by air has proved to be much better. To get to other foreign destinations faster, the best way today is by plane and we owe it to the Wright brothers who had invented it back in 1903 when they had successfully made the first sustained flight. Abbas Ibn Firnas back in the 9th century had made his own attempts but they weren't able to last. Only the Wright brothers were able to give way to the birth of the modern winged aircraft.

Light bulb

Imagine being in a room. A dark room. Candles can give you light but that light just isn't enough in the dead of night. Thankfully, Thomas Edison did not give up even if it had taken him almost a hundred tries before he had perfected his invention of the light bulb back in 1879. Joseph Swan made a light bulb in 1860 but since it glowed only for just a few hours, Thomas Edison is the one credited for the invention of the light bulb as we know it.

The Worldwide Web

You wouldn't be reading any of this if not for the invention of Sir Tim Berners-Lee's invention – the worldwide web. Accessing the websites you know today traces its origins back to the British engineer's invention!



b. Complete the following sentences with **a few / a little / much / many**:

1. I haven't got **much** time, we'll have to talk fast.
2. There will be **a little** rain this week.
3. I have **a few** close friends. It's hard to find a true friend.
4. There aren't **many** extra chairs in our classroom, we need more.

Speaking and Writing

4



a. Work in groups to decide on an invention that you cannot live without.

- Name the invention and explain how important it is for you.
- Discuss how the world would be different without it.
- Take notes, then tell the class about your decision.



b. Write an opinion paragraph explaining why you think your invention is important.

Electricity is important for a large number of reasons. Here are 11 reasons (in no particular order) for why electricity is important. It is a universal energy source and can be created from a variety of methods. For example, electricity can be based on the production methods just listed, electricity can be produced from a variety of renewable sources. It is a versatile energy source. Electricity is weightless. It is easy to transport and distribute.

At the "point of use" it suffers from very little energy loss. It converts easily into other energy types like light (to brighten rooms and illuminate homes/business at night), sound (in things like speakers), and motion (electric motors for cars and toys). It can be stored (batteries). It can be used to communicate (Morse code). Electric charge can be created/transmitted through connected wires (conduction) or wirelessly through the air (induction). It's clean (dependent on how it is produced in the first place).

Checklist:

- Did I include a topic sentence stating my main idea?
- Did I add supporting details to develop the topic sentence?
- Did I end with a strong concluding sentence?
- Did I edit my paragraph?

(4) a. It's easy to take electricity for granted, but the next time you recharge your phone or turn on your computer, stop for a moment and think about what you'd do without electricity. From the rapidly spoiling food in your fridge to the pile of unwashed laundry in your washing machine, the impact on your new life minus the electricity is profound. Today electricity is readily available and it's hard to imagine life without it. People managed quite well without electricity, but no electricity meant more time spent on chores, inconvenience, and manual labour. Nearly all aspects of everyday life were more inconvenient, whether it was sitting in a dimly lit living room after sunset, salting and drying meat so it wouldn't spoil, or washing the laundry by hand.

Kerosene lamps, candles, fireplaces, and gas lamps were some of the ways you could light up your home after dark. If you were eating, reading a book, or taking a bath after sunset, you needed to carry your lamp or candle with you to make sure you didn't trip over or end up fumbling in the dark. These lighting sources were dimmer than light bulbs - one 60-watt lightbulb gives you the same amount of light from 100 candles. Food spoiled quickly in the world before electricity-power refrigeration, but these societies still had ways to keep food fresh for longer. For example, meat safes and cool pantries kept meat and other food cool while keeping flies and insects away. These were placed in the coolest places in the house, away from direct sunlight. Smoking, salting, and drying food were also good ways to extend the shelf life of produce.

Without electricity, you had to cook over an open fire, such as on a metal stovetop or over a fireplace. There weren't any appliances either, so bakers relied on labour-saving devices like manual mixers to make batter and dough. Ovens, for making bread and other baked goods, relied on firewood-powered fires.

Electricity powers every area of our modern lives, so it's no surprise how much labour and time savings it brings. Without electricity keeping our food fresh and our homes warm and well lit, we would end up losing a lot of comfort and convenience.

Inventors who changed the world

Informative Text

1 Before you read Think, Pair, Share



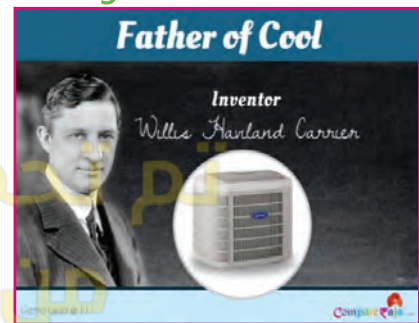
- Make a list of famous inventors you know. Then compare your list with other groups.



2 Read the following text and choose the correct answers:

Willis Carrier: The Father of Air Conditioning

Genius can strike anywhere. On a foggy day in 1902, Willis Carrier had an idea that helped him to invent the first **electrical** air conditioner. **It** was not created for people, Carrier wanted to control the **humidity** at his printing company because the water was ruining paper. In 1915, he **founded** Carrier Corporation, a company that sells heating and air conditioning systems. In 1998, he was named one of TIME magazine's "100 Most **Influential** People of the 20th Century".



Sadeq Ahmed Qasem: The Inventor of ALCHEMIST

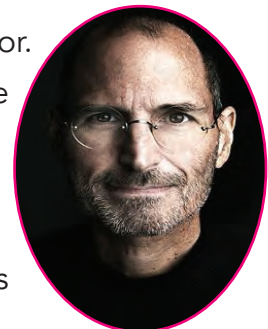


Sadeq Qasem is a Kuwaiti inventor. He was born on December 6, 1984. Sadeq was given the best invention award and the title of "Arab Inventor" in 2010 by the Stars of Science TV show. He won the award for his invention 'Alchemist', a machine that scientists use to work with chemicals. He has also won many other awards.

He is the head of the invention development **department** at Sabah Al-Ahmed Center for Development and Innovation. He has created over 20 inventions.

Steve Jobs: The Man Who Thought Different

Steve Jobs was an American businessman, designer and an inventor. He was born on February 24, 1955. He was the **chairman**, chief executive officer (CEO), and co-founder of Apple Inc. He played a key role in the creation of the Apple II, MacBook, iPod, iPhone, and iPad. When Jobs died, at the age of 50 in 2011, he was worth \$10.2 billion, and Apple was one of the largest, most **profitable** and most influential tech companies on the planet.



- (1) 1. Thomas Edison (1847–1931) Edison filed over 1000 patents. He developed and innovated a wide range of products from the electric light bulb to the phonograph and motion picture camera.
2. The Wright Brothers Successfully designed, built and flew the first powered aircraft, showing that man could fly. One of the most important inventions of Twentieth Century.
3. Benjamin Franklin (1705–1790) Polymath who discovered electricity and invented the Franklin stove.
4. Nikola Tesla (1856–1943) Serbian-born scientist who emigrated to the US. He was a brilliant scientist who played a key role in the development of AC electricity, through the AC induction motor, transformer, and Tesla coil. His method of AC electricity has been the template for global electricity use.
5. Charles Babbage (1791–1871) Created first mechanical computer, which proved to be the prototype for future computers. Considered to be the 'Father of Computers'.
6. James Watt (1736–1819) Inventor of the steam engine, which was critical in the industrial revolution. His invention of a separate condensing chamber greatly improved the efficiency of steam.
7. Alexander Bell (1847–1922) Credited with inventing the first practical telephone. Also worked on optical telecommunications, aeronautics and hydrofoils.
8. Leonardo Da Vinci (1452–1519) One of the greatest ever minds. He invented models that proved workable 3-500 years later.
9. Galileo (1564–1642) Developed a powerful telescope and confirmed revolutionary theories about the nature of the world. Also developed an improved compass.
10. Tim Berners Lee Developed the <http://> protocol for the internet, making the World Wide Web freely available.

1. The writer's purpose is to
 - a. compare the three inventors.
 - b. explain how genius can strike anywhere.
 - c. give information about great inventors.
 - d. describe how people become inventors.
2. The underlined pronoun 'it' in the **1st paragraph** refers to
 - a. genius
 - b. day
 - c. idea
 - *d. air conditioner
3. The underlined word 'profitable' in the **last paragraph** means
 - *a. powerful
 - b. advanced
 - c. helpful
 - d. beneficial

3 Read the text again to answer the following questions:

1. Why did Willis Carrier invent the first air conditioner?
2. What did Sadeq Qasem receive the title of "Arab Inventor" for?
3. How did Steve Jobs contribute to the development of Apple?

Speaking and Writing

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4  **If you could invent one thing that would make your life easier, what would you create?**

a. In groups, think of a new invention that does not exist. Name the invention, describe it and make notes of its uses and benefits. Then, select a member to present your invention to the class.

 b. In your notebook, plan and design a presentation describing your invention by answering the following questions:

What does the invention look like? (*shape/ size/ colour..etc*)

What does it do? (*different uses*)

Why is it important? (*benefits*)

You can draw a picture of your invention.



Search the net or other sources to find out how these things were invented.
(Potato chips - Fireworks - Watches - Tea)

(3) Read and answer questions:-

1. Because he wanted to control the humidity at his printing company because the water was ruining paper.
2. He won the award for his invention 'Alchemist', a machine that scientists use to work with chemicals.
3. He played a key role in the creation of the Apple II, MacBook, iPod, iPhone, and iPad.



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