

10 Brilliant brains

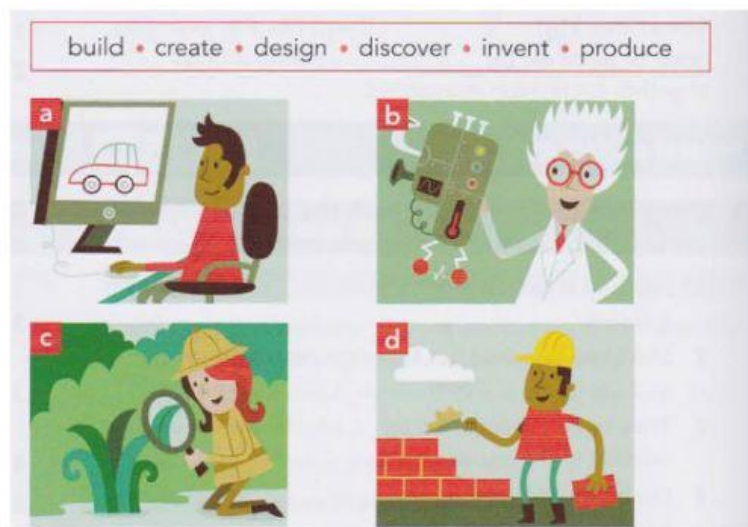
Match the words with the pics



digital camera • laptop (computer)
MP3 player • printer • satnav
smartphone • tablet

How can you use each invention?

Match the words with the pics.



build • create • design • discover • invent • produce

LISTENING 92

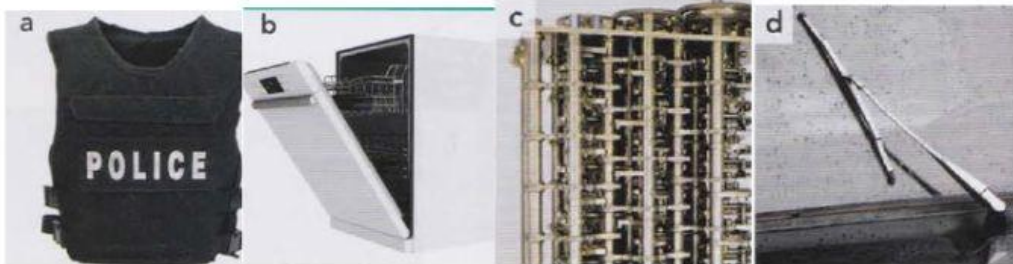
Listen and complete

GENERAL KNOWLEDGE QUIZ

- 1 invented the radio.
- 2 Alexander Graham Bell invented
- 3 Charles Babbage designed a basic
- 4 Marie Skłodowska-Curie created the word
- 5 discovered penicillin.
- 6 Apple produced their first tablet in
- 7 Karl Benz built the first modern

READING Read the article and write the name of the invention and the letter of the photo that shows that invention.

- | | | | |
|---|--------------------|------------------|--------------|
| 1 | Ada Lovelace | Invention: | Photo: |
| 2 | Mary Andersen | Invention: | Photo: |
| 3 | Stephanie Kwolek | Invention: | Photo: |
| 4 | Josephine Cochrane | Invention: | Photo: |



WOMEN INVENTORS

Do you know the names of Ada Lovelace or Stephanie Kwolek? They aren't as famous as Alexander Graham Bell or Karl Benz, but they, and many other women inventors, have also created important inventions that have changed our everyday lives.

ADA LOVELACE

Ada Lovelace was a mathematician, a scientist, and ... the world's first computer programmer. In the 1840s, she collaborated with Charles Babbage, the inventor of a mechanism that people call the first computer. In 1843, at the age of 27, Lovelace created a language for the computer. People didn't pay much attention to her work at the time and her ideas were only discovered in the 1950s. In 1980, the software created by the US Department of Defence was named 'Ada', to honour this pioneer of computer programming.

MARY ANDERSEN

Windscreen wipers were invented by an American woman called Mary Andersen. Mary Andersen lived in Alabama, USA. In the winter of 1903, she went to New York. She was travelling in a tram and was very surprised that the driver often stopped to get out of the tram and clean the snow from the window. She suddenly had the idea for a simple version of the windscreen wiper that we use today. It wasn't automatic, but drivers could operate the wiper from inside the car or tram so they didn't need to stop and get out. In 1917, the first automatic windscreen wipers were designed by another woman, Charlotte Bridgwood.

JOSEPHINE COCHRANE

Josephine Cochrane was born in the US in 1839. She didn't take science lessons but her great-grandfather was also an inventor. Cochrane's family often had dinner parties. Cochrane herself didn't have to wash the dishes after these parties because she had servants. But her servants often broke plates and glasses. To solve this problem, in 1886 she created the first commercially successful dishwasher. Her dishwasher became very popular in hotels and restaurants, but not in private homes, because it needed a lot of hot water. Now, of course, dishwashers are seen as essential in many homes.

STEPHANIE KWOLEK

American Stephanie Kwolek always wanted to be a doctor but she never went to medical school. That's good news for police officers all over the world because in 1971 Kwolek invented a new substance. This substance was used to create a material called Kevlar. Kevlar is a synthetic fibre which is incredibly strong and resistant, but is also very light. It is used by police officers in bullet-proof jackets. Kwolek's invention has helped to save thousands of lives. In fact, Kevlar is also used to make many other products such as skis and helmets.

Complete the information in the notes with between one and four words from the text.

Women Inventors

Ada Lovelace: Worked with (a) People discovered her invention in (b)

Mary Andersen: Had idea for invention when travelling by

(c) during trip to (d)

(e) improved design in 1917.

Stephanie Kwolek: Thanks to invention we can make (f)

(g) and (h)

Josephine Cochrane: Created invention to protect (i) At first, wasn't used in (j) but in hotels and restaurants.

- Do you think men and women have equal opportunities to become inventors today?

Which invention in 2 do you think is the most useful? Why?

1 Read the sentences and answer the questions.

- Kevlar **is used** in bullet-proof jackets.
 - The first computer program **was created** in 1843.
 - Josephine Cochrane **invented** the dishwasher.
 - Windscreen wipers **were invented** in 1903.
 - Dishwashers **are used** in many homes today.
 - The police **use** bullet-proof jackets.
- Which sentences are active and which are passive?
 - What verb goes before the past participle to make passive sentences?
 - Which sentences are in the present form of the passive and which are in the past?
 - What do you do to make the past passive form?
 - What is more important in passive sentences – the action or the person who does it?

Complete the sentences with **is** or **are**.

- A lot of cars made in Germany.
- A lot of coffee produced in Brazil.
- New games consoles created in Japan each year.
- American films watched all over the world.
- A lot of tea drunk in Great Britain.
- More and more computer games sold each year.
- Football played in nearly every country in the world.

Complete the sentences with the past passive form of the verbs given.

- 1 The first portable computer (produce) in 1975. It weighed 25 kilos!
- 2 The Simpsons (create) in 1987.
- 3 The London Eye (build) in 1999.
- 4 The final match of the UEFA Euro 2012 (play) in Ukraine.
- 5 Rugby, tennis and cricket (invent) in England.
- 6 Jeans (wear) for the first time in 1873.
- 7 The first 3D printer (make) in 1984.



create • **creation** • imagination • imagine • invent
invention

The part of the words in **bold** is a suffix. The suffix can change certain verbs into nouns.

Verb	Noun
act	1
describe	2
3	explanation
express	4
5	imagination
inform	6
7	investigation
8	organisation

Checking information

on the Internet

PYRAMIDS OF GLASS DISCOVERED IN THE OCEAN

- 1 What do you think the article is about?
- 2 Have you ever heard of these pyramids?
- 3 Would you click on a story like this to read it? Why/Why not?

HOME

NEWS

GAMES

SCIENCE

PHOTOS

Cosmic News



These strange underwater pyramid structures were found 2,000 metres under the sea by Dr Verlag Meyer. Studies by Japanese scientists show that the two giant pyramids are made of something like thick glass. Each of them is larger than the pyramid of Cheops in Egypt.

Recently, American and French scientists studying the Bermuda Triangle say that they have found a pyramid standing on the bottom of the sea. The length of the base of this pyramid reaches 300 metres, and the distance from the base to the tip of the pyramid is about 100 metres. Preliminary results show this structure is made of glass.

This newly discovered pyramid is larger than the pyramids of ancient Egypt. On top of the pyramid, there are two very large holes. The sea water moves in an unusual way because of the holes. This new discovery makes scientists wonder if the pyramid is having an effect on passing boats and planes and could be the reason for all the mysterious events that have happened over many years in the Bermuda Triangle.

Some experts think the pyramid was made on the land and that an earthquake changed its position. Other scientists think that a few hundred years ago the waters of the Bermuda Triangle area were the home of the people of Atlantis. And that the pyramid was probably built under the water by these people.

This amazing news was discussed at a conference in Florida and even appeared in local Florida newspapers. There are a lot of pictures and high resolution data which show the pyramids. Some people think that the pyramid can attract and collect cosmic rays, from the 'energy field' or 'quantum vacuum'.

In 1977, another mysterious discovery was made on the floor of the Atlantic. A large pyramid with lights was found. The discovery was photographed by Ari Marahall's expedition near Cay Sal.

Another huge pyramid was found with a pulsating crystal on top of it, by Tony Benik's expedition. The group also found a crystal tablet there, and reported that when a light passed through it, mysterious writing became visible.



LISTENING 94 A student called Jessica is investigating the story about the glass pyramids. Watch the video or listen and answer the questions.

- 1 Who is Ryan?
- 2 What is Jessica's conclusion – is the story fact or fiction?
- 3 What does Ryan have to buy Jessica?