Science and Innovation

Multiple matching: inventions and research | Cambridge IGCSE ESL 0510/0511

1. Lead-in discussion

Talk with a partner before you read.

1. What invention has changed everyday life most?
2. Why do some scientific ideas take a long time to become useful?
3. Should inventions always solve practical problems?
4. What makes a new technology trustworthy?

Exercise 2 at a glance

Read four short descriptions. For each statement, choose the correct idea, A-D. One idea may be used more than once. Read the whole detail carefully before you choose.

2. Read for overall understanding

Read the four texts. Which idea sounds most important? Give a reason.

Ideas That Changed Things

A Foldable solar lamp

The foldable solar lamp was designed for places where electricity is unreliable. It opens like a small book and charges in sunlight during the day. At night, it gives enough light for reading or cooking. The first version was made for emergency shelters, but teachers soon noticed that it could help students study after dark. The lamp is not powerful enough for large machines, and it does not work well if several cloudy days follow each other. However, it is light, cheap to transport and safer than using candles. Some versions now include a small phone-charging point, though that uses the stored energy faster.

B Smart bandage

The smart bandage is being developed to help doctors check wounds without removing the dressing every time. Tiny sensors measure temperature and moisture, which can show whether healing is happening normally. The idea is not to replace medical staff. Instead, it gives them extra information, especially when patients live far from a clinic. Researchers still need to test how reliable the sensors are in daily use. If the bandage becomes affordable, it could reduce unnecessary appointments and help patients receive treatment earlier when there is a problem. For now, it remains more common in trials than in ordinary homes.

C Ocean-cleaning screen

The ocean-cleaning screen floats in rivers and catches plastic before it reaches the sea. It does not collect every piece of waste, and it cannot solve pollution alone. Its value is that it works continuously and shows which types of rubbish are entering the water. Local teams empty the screen and record the results. This information can help governments decide whether to focus on bottles, packaging or fishing equipment. Some people expected a dramatic machine in the ocean, but stopping rubbish earlier is often more practical. The screen also makes pollution visible to people walking along the river.

D Translation earbuds

Translation earbuds allow two people to hear a spoken translation through a small device. They are useful for travellers who need simple information, such as directions or prices. However, they struggle with jokes, slang and strong background noise. Language teachers say they should support communication, not replace learning another language. The company improved the latest model after users complained that earlier translations sounded too formal. The earbuds are popular at technology exhibitions, although some users still prefer a human interpreter for important conversations. Battery life has improved, but long meetings can still be difficult. Clear speech helps the device work more accurately.

3. Strategy focus

Separate problem and solution

A statement may describe the problem, the design or the result. Check which part of the text it matches.

4. Exam-style matching questions

For each statement, write the correct letter, A, B, C or D, on the line.

No.	Which idea...	A-D
1	collects information that can influence decisions about preventing pollution	.....
2	was first intended for emergencies but later found another educational use	.....
3	may help medical staff avoid checking something unnecessarily	.....
4	was improved after users criticised the style of its language	.....
5	is less suitable when weather conditions prevent regular charging	.....
6	works before waste reaches a larger natural environment	.....
7	is designed to support experts rather than replace them	.....
8	is useful for basic communication but weak with informal language	.....
9	could help people get medical help sooner if a problem develops	.....

5. Vocabulary notebook

Underline five useful words or phrases. Check their meaning, then record them in your vocabulary notebook.

6. Follow-up tasks

1. Discussion: Which idea might have been hardest to develop? Why?
2. Strategy: Highlight the sentence where you found each answer. Label it with the question number.
3. Writing: Describe an invention that solves a practical problem.
4. Vocabulary: Circle words and phrases connected to research, inventions and technology.

ANSWER KEY

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2. Read for overall understanding

Suggested answer: Students' own answers, but they should refer to one or more details from the texts.

4. Exam-style matching questions

1. C
2. A
3. B
4. D
5. A
6. C
7. B
8. D
9. B

Notes for checking

Learners should match the statement to the exact detail in the text.

An option may be used more than once.

If learners disagree, ask them to highlight and label the sentence that proves their answer.