



Set B: Test 4

There are **6 questions** in this test.
Give yourself **10 minutes** to read the text and answer the questions.

The Story of Georges de Mestral

Georges de Mestral was born in Switzerland in 1907. As a child, he loved to play in the hills and fields and spent most of his days out in the open air. Even as a young boy, he enjoyed inventing things and was always trying out new ideas. When he grew up and became an engineer, Georges was still passionate about his inventions.

One evening in 1948, while they were getting dressed for an evening ball, Georges struggled to do up the fiddly fastening on his wife's dress. He was convinced that there must be an easier way of fastening clothing. Some time later, he was out walking in the woods with his dog, taking overgrown paths through the ferns and bracken. On his return to the house, he found that both he and his dog were covered in burrs (prickly seeds that attach to things that brush against them). He was curious about how these seeds clung so well to the dog's coat and his trousers.

His inquisitive mind led him to examine them under the microscope, and he saw that each one was covered in tiny hooks. He remembered his earlier problems with the zip and wondered whether he could make a fastener that stuck as well as the burrs did.

It took Georges many years to complete his invention. He designed it using two nylon strips: on one there would be thousands of little loops and on the other thousands of little hooks. He used a weaver in France to help him manufacture the strips for testing, and he finally revealed his invention, Velcro, in 1955.

VELCRO® is a biomimetic material, which means that it copies a trick from nature.

VELCRO® is incredibly strong — a small patch sticks well enough to bear the weight of an adult — and yet it is easy to unpeel. Today, this type of fastener is used worldwide, not just for clothing and shoes, but also for medicine (it can be used to hold a human heart together during surgery) and even in the armed forces.

1. Write the numbers 1 to 5 in the boxes to put these events from the text into the right order. The first one has been done for you.

Georges made a design for VELCRO®.

Georges wondered how burrs attach to things.

Georges examined the burrs under a microscope.

Georges struggled to fasten his wife's dress.

Georges and his dog got covered in burrs.

1 mark

2. Circle **two** things that, according to the text, the young Georges liked to do.

go to
balls

play
outside

walk
his dog

invent
things

1 mark

3. What was Georges's job as an adult?

.....

1 mark

4. *His inquisitive mind*
What does the word *inquisitive* mean in this phrase?

.....

1 mark

5. How can VELCRO® be used in medicine?

.....

.....

1 mark

6. Georges de Mestral died in 1990. How do you think he would feel if he saw how his invention was being used today?
Use the text to support your answer.

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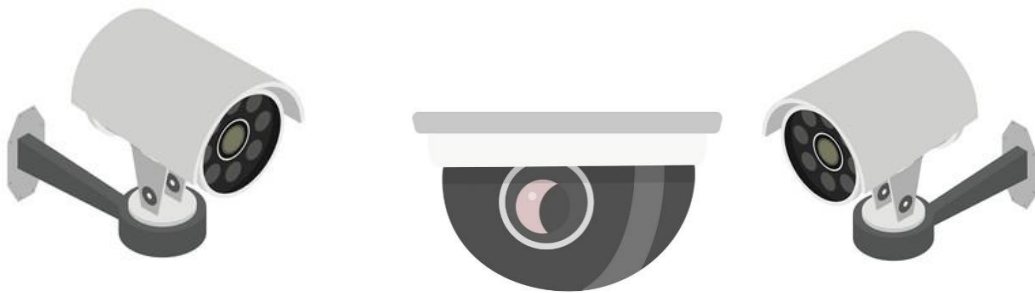
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3 marks



Only Scroll down if you have finished your homework.





Answers to be revealed on the next page!

Answers

Test 4 — Pages 30-32

1. 1 mark for all four correct

Georges made a design for VELCRO®. [5]

Georges wondered how burrs attach to things. [3]

Georges examined the burrs under a microscope. [4]

Georges struggled to fasten his wife's dress. [1]

Georges and his dog got covered in burrs. [2]

(2f)

2. 1 mark for both correct

play outside

invent things

(2b)

3. 1 mark

engineer

(2b)

4. 1 mark for a sensible answer, e.g.

curious

(2a)

5. 1 mark

It can be used to hold a heart together during surgery.

(2b)

6. 1 mark for suggesting how Georges might feel, with one piece of supporting evidence, e.g.

"Georges might feel proud because his invention is used in important things like medicine."

2 marks for suggesting how Georges might feel, with two pieces of supporting evidence, e.g.

"Georges might feel proud because his invention is used in important things like medicine and the armed forces."

3 marks for suggesting how Georges might feel, with three pieces of supporting evidence OR for suggesting multiple feelings, each with supporting evidence, e.g.

"Georges might feel proud that his invention is used in important things like medicine. He might also feel sad, though, because it is used by the armed forces."

(2d)