

Claim Check Lab

Use evidence and testing to evaluate a health claim.

SC.8.N.2.1 “Distinguish between scientific and pseudoscientific ideas.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline evidence-based features of the bracelet investigation. Circle statements or features that show why a claim could be pseudoscientific, then number the two kinds of marks 1 and 2.

Testing a Wellness Claim

- ① At a school wellness fair, a company gave away magnetic bracelets and claimed that wearing one improves balance. A scientific idea can be tested with careful observations or measurements. It also makes a prediction that could turn out to be wrong. Scientists describe their methods clearly so other people can repeat the test. When results from several well-designed tests agree, confidence in an explanation can grow. Even then, scientists stay open to new evidence that may change the explanation.
- ② To investigate the bracelet claim, students could randomly assign volunteers to wear either a magnetic bracelet or an identical bracelet without a magnet. A person measuring balance should not know which bracelet each volunteer wore. The students would use the same balance test for everyone, record numerical results, and compare the groups. Repeating the investigation with more volunteers would make the evidence stronger. This plan could show that the claim is unsupported, or it could provide evidence worth further study.
- ③ Suppose the company instead says, “Thousands of customers feel better, so the bracelets work,” but it shares no measurements, comparison group, or test method. Personal stories can suggest a question, yet they cannot show whether the bracelet caused a change. People may expect to improve, receive other treatment, or remember only successes. A claim becomes pseudoscientific when it avoids fair testing, ignores conflicting evidence, or says it cannot possibly be proven wrong. Scientific claims welcome evidence that could challenge them.

2 ANSWER WITH EVIDENCE Use the passage

1 Name two parts of the student investigation that would help make the bracelet test fair.

2 Why are customer stories not enough evidence that the magnetic bracelets caused better balance?

3 What three kinds of information does the company fail to share when it says that customers feel better?

4 Why would a claim that cannot possibly be proven wrong be pseudoscientific?

3 YOUR TURN Your own words

Invent a claim for a product that is said to improve a person's health or performance. In 4 to 6 sentences, describe a fair test with a comparison group, a measurement, and a result that would challenge the claim, then explain what would make the conclusion scientific rather than pseudoscientific.

PART 1 • READ AND MARK

Underline evidence-based features of the bracelet investigation. Circle statements or features that show why a claim could be pseudoscientific, then number the two kinds of marks 1 and 2. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Name two parts of the student investigation that would help make the bracelet test fair.	Answers may include randomly assigning volunteers, using an identical bracelet without a magnet, keeping the balance tester unaware of bracelet type, and using the same balance test for everyone.
2	Why are customer stories not enough evidence that the magnetic bracelets caused better balance?	Stories do not show whether the bracelet caused a change. People may expect improvement, receive other treatment, or remember only successes.
3	What three kinds of information does the company fail to share when it says that customers feel better?	Measurements, a comparison group, and a test method.
4	Why would a claim that cannot possibly be proven wrong be pseudoscientific?	It avoids evidence that could challenge it. Scientific claims make predictions that could be tested and possibly shown to be wrong.

PART 3 • YOUR TURN (SAMPLE ANSWER)

A company claims that a lavender sticker improves students' concentration during quizzes. I would randomly assign students to wear either a lavender sticker or an identical unscented sticker. Both groups would take the same short quiz, and I would compare their average scores. If the lavender group did not score higher in repeated tests, that result would challenge the claim.

Measurements, a comparison group, and repeatable results would support a scientific conclusion.

Accept equivalent descriptions of fair testing, measurable evidence, repeatable methods, and evidence that could challenge a claim. For the open response, accept any reasonable product claim and test design that includes all required parts.