

Charger Claim Check

Compare sources before sharing a science claim.

PS.1.f.ii “obtaining, evaluating, and communicating information gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication”

NAME _____ DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline details that help you judge a source's credibility or possible bias, and circle each numerical claim or test detail you could use to compare sources.

Does the Charger Save Energy?

- ① At Riverbend Middle School, a science club investigated a claim that a new phone charger “uses half the energy” of an older charger. Students first read a company advertisement. It said the charger saves energy and costs less to use. The advertisement named no test method, comparison model, or date. Because the company sells the charger, its goal may include persuading people to buy it. That possible bias does not automatically make the claim false, but it means the claim needs evidence.
- ② Next, students found a report from the state energy office. Researchers tested twelve chargers by measuring electricity from a wall outlet while each charged the same phone battery. The report showed that newer chargers used 12 percent less energy on average than chargers made ten years earlier. It listed test dates, equipment, and a link to the full methods. A report from a public agency has no product to sell, although students should still check whether its methods match the claim.
- ③ A university engineering department also posted a short article about chargers. It explained that energy use can change with the phone, battery level, and whether a charger remains plugged in after charging. The article linked to a peer-reviewed study, but the study compared only two models. The club noticed that “half the energy” means a 50 percent reduction, while the energy-office average was 12 percent. To communicate responsibly, students need to state what each source supports, identify missing evidence, and avoid treating one limited test as proof about every charger.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What are two details the company advertisement does not provide that would help you check its energy-saving claim?

2 Give two reasons the state energy office report is easier to check for accuracy than the advertisement.

3 Compare the company's numerical claim with the energy-office result. What does the comparison suggest about the "half the energy" claim?

4 Which source gives the strongest evidence about typical energy use of newer chargers compared with chargers made ten years earlier? Explain one limit on using that source to judge the company's exact claim.

3 YOUR TURN _____ Your own words

Imagine a social media post claims that an insulated metal bottle keeps a drink cold twice as long as a plastic bottle. Write 4 or 5 sentences that name two sources you would check, explain one possible bias, describe fair test data you would want, and state how you would report the claim cautiously.

PART 1 • READ AND MARK

Underline details that help you judge a source's credibility or possible bias, and circle each numerical claim or test detail you could use to compare sources. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What are two details the company advertisement does not provide that would help you check its energy-saving claim?	It does not provide a test method, a comparison model, or a date. Accept any two.
2	Give two reasons the state energy office report is easier to check for accuracy than the advertisement.	It describes testing twelve chargers, measuring electricity from a wall outlet while charging the same phone battery, and lists test dates, equipment, and full methods. Accept any two.
3	Compare the company's numerical claim with the energy-office result. What does the comparison suggest about the "half the energy" claim?	"Half the energy" means a 50 percent reduction, but the report found a 12 percent average reduction. The report does not support a general claim of a 50 percent reduction.
4	Which source gives the strongest evidence about typical energy use of newer chargers compared with chargers made ten years earlier? Explain one limit on using that source to judge the company's exact claim.	The state energy office report gives the strongest evidence because it tested twelve chargers and explained its methods. Its tests may not match the specific charger, comparison model, or conditions in the company claim.

PART 3 • YOUR TURN (SAMPLE ANSWER)

I would look for a test report from a university or consumer testing group and the bottle company's product page. The company page may be biased because it sells the bottle, so I would not rely on it alone. A useful test would compare identical bottles, equal amounts of water, the same starting temperature, and the same room conditions. I would report the measured temperature changes and say whether the evidence supports the "twice as long" claim.

Accept equivalent evidence-based explanations that distinguish source credibility from whether a claim is automatically true or false. For Part 3, look for two appropriate sources, a realistic possible bias, fair comparison conditions, and cautious communication of results.