Ice Wrap Evidence

Compare written calculations with a data table.

CCSS.ELA-Literacy.RST.6-8.7 "Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each sentence that explains a number from the table, circle the matching table value, and give each matching pair the same number.

Which Wrap Slows Melting?

1 To test insulation, a school engineering team placed equal ice cubes in three identical cups. Each cup had a different wrap: no wrap, felt, or bubble wrap. The cups sat indoors for 30 minutes. At the start, every cube weighed 40 grams. Afterward, the team weighed the ice that remained. Keeping the cup size, starting mass, location, and time the same made the type of wrap the only planned difference. The table reports the final masses from the test.

ICE REMAINING AFTER 30 MINUTES

Cup Wrap	Final Ice Mass (g)
No wrap	16
Felt	24
Bubble wrap	29

2 Bubble wrap left 29 grams of ice, so 11 grams melted. Felt left 24 grams, meaning that 16 grams melted. The unwrapped cup had only 16 grams remaining, so 24 grams melted. The figures show that bubble wrap slowed melting most in this trial. It kept 5 more grams of ice than felt and 13 more grams than no wrap. These differences are based on comparing final ice masses, not on comparing the amount that melted.

3 The team can use the results, but one trial does not prove that bubble wrap will always work best. For example, a hotter room or a longer test could change how quickly the ice melts. Repeating each wrap test several times would make the evidence more dependable. The team could calculate an average final mass for each material. If bubble wrap had the highest average, the written conclusion and the table would support the same claim about which wrap slowed melting most.

2 ANSWER WITH EVIDENCE

Use the passage

1. The test began with 40 grams of ice in each cup. Use the table value for no wrap to explain why the paragraph says that 24 grams melted.

2. Which wrap slowed melting most? Use one number from the table and one statement from the passage to support your answer.

3. The passage says that bubble wrap kept 5 more grams of ice than felt. Which two table values support this claim, and what subtraction shows it?

4. Which cup had the least ice melt? Explain how the final-mass value in the table connects to the amount melted in the paragraph.

3 YOUR TURN

Your own words

A new test begins with 50 grams of ice in each cup. Cloth leaves 38 grams, foil leaves 31 grams, and no wrap leaves 22 grams. Complete the table, then write one sentence that uses the table results to explain which wrap slowed melting most in this test.

CUP WRAP	FINAL ICE MASS (G)	ICE MELTED (G)

ANSWER KEY

Ice Wrap Evidence

GRADE 7 · RST.6-8.7

PART 1 · READ AND MARK

Underline each sentence that explains a number from the table, circle the matching table value, and give each matching pair the same number. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	The test began with 40 grams of ice in each cup. Use the table value for no wrap to explain why the paragraph says that 24 grams melted.	**The no-wrap cup had 16 grams remaining. Since 40 minus 16 equals 24, 24 grams melted.**
2	Which wrap slowed melting most? Use one number from the table and one statement from the passage to support your answer.	**Bubble wrap slowed melting most. The table shows 29 grams remaining, and the passage says bubble wrap kept more ice than the other wraps.**
3	The passage says that bubble wrap kept 5 more grams of ice than felt. Which two table values support this claim, and what subtraction shows it?	**The values are 29 grams for bubble wrap and 24 grams for felt. 29 minus 24 equals 5.**
4	Which cup had the least ice melt? Explain how the final-mass value in the table connects to the amount melted in the paragraph.	**The bubble-wrap cup had the least ice melt. It had the largest final mass, 29 grams, so only 11 grams melted from the 40-gram starting mass.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Cloth | 38 | 12 Foil | 31 | 19 No wrap | 22 | 28 Conclusion: Cloth slowed melting most because it had the highest final ice mass, 38 grams, and the least ice melted, 12 grams.

Accept equivalent calculations and conclusions that accurately connect the largest final ice mass to the smallest amount melted. For the open task, students should calculate 12 grams, 19 grams, and 28 grams melted.