Roof Heat Detectives

Trace main ideas, steps, and support in an informational text.

5.RI.1 "Key Ideas and Confirming Details Summarize the main ideas of texts and specific paragraphs within them, including how they are developed through the details. Summarize events, procedures, ideas, or concepts in historical, scientific..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB In each paragraph, underline the sentence or key words that state its main idea. In paragraph 2, number the three action steps, then circle the author's point and box one supporting reason or piece of evidence in paragraph 3.

How Cool Roofs Work

1. On hot summer days, dark roofs can make a city warmer. They absorb sunlight and send heat into buildings and the air. Some cities are trying cool roofs, which are covered with light-colored materials that reflect more sunlight. In 2009, New York City began a program that helped volunteers coat roofs with white paint. The project focused on large, flat roofs that receive direct sun.

2. Workers first clean the roof surface. Next, they repair cracks so water cannot enter the building. Then they roll or spray a white coating across the roof and let it dry. The coating does not create cool air. Instead, it reflects part of the sun's energy, so less heat moves through the roof. Buildings may need less air-conditioning, which can lower electricity use.

3. The author argues that cities should expand cool-roof programs. One reason is that cooler buildings can use less electricity. As evidence, the author explains that the white coating reflects sunlight, so less heat moves through a roof. Another reason is that volunteers can help treat rooftops. In the author's opinion, coating roofs is "a practical step for crowded, sunny neighborhoods," though it cannot solve every heat problem.

2 ANSWER WITH EVIDENCE

Use the passage

1. What is the main idea of the whole passage? Give two details that develop this main idea.

2. Summarize the procedure in paragraph 2 in two sentences. Include what workers do and why they use the white coating.

3. What point does the author make in paragraph 3? Quote one sentence that supports that point.

4. Which words in paragraph 3 show the author's opinion? Explain why these words are an opinion rather than a fact.

3 YOUR TURN

Your own words

Write a three-sentence summary of the passage. State the main idea, explain how a cool roof works and why it can help, and include the author's point with one quoted phrase that supports it.

ANSWER KEY

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GRADE 5 · 5.RI.1

PART 1 · READ AND MARK

In each paragraph, underline the sentence or key words that state its main idea. In paragraph 2, number the three action steps, then circle the author's point and box one supporting reason or piece of evidence in paragraph 3. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What is the main idea of the whole passage? Give two details that develop this main idea.	**Cool roofs can help cities reduce heat in buildings. Details include that light-colored coatings reflect sunlight and that buildings may need less air-conditioning.**
2	Summarize the procedure in paragraph 2 in two sentences. Include what workers do and why they use the white coating.	**Workers clean the roof, repair cracks, and then apply and dry a white coating. The coating reflects some sunlight, so less heat moves through the roof and the building may use less electricity.**
3	What point does the author make in paragraph 3? Quote one sentence that supports that point.	**The author says cities should expand cool-roof programs. Supporting quote: "As evidence, the author explains that the white coating reflects sunlight, so less heat moves through a roof."**
4	Which words in paragraph 3 show the author's opinion? Explain why these words are an opinion rather than a fact.	**The words "a practical step for crowded, sunny neighborhoods" show an opinion. The word "practical" is a judgment about the value of coating roofs.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Cool roofs can help cities reduce heat in buildings because their light-colored surfaces reflect sunlight. Workers clean and repair a roof, then apply and dry a white coating so less heat moves through it and buildings may use less air-conditioning. The author supports expanding these programs by explaining that volunteers can treat rooftops and calling coating roofs "a practical step for crowded, sunny neighborhoods."

Accept summaries that accurately include the passage's main idea, the coating procedure or heat-reflection process, and the author's argument. Quotes must match the passage and must support the stated point.