Roofing for Relief

Analyze how an informational model builds a focused controlling idea.

8.11.B "compose informational texts, including multi-paragraph essays that convey information about a topic, using a clear controlling idea or thesis statement and genre characteristics and craft;"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the sentence that states the controlling idea. Number the topic sentence in each paragraph 1, 2, or 3, and circle transition words or phrases that link ideas.

How Cool Roofs Help Cities

1. On hot summer days, dark roofs can make a neighborhood warmer than nearby parks. A cool roof offers a practical response: it reflects more sunlight and absorbs less heat than a traditional dark roof. By lowering the roof's surface temperature, this design can reduce heat entering a building, ease demand on air conditioners, and help cities manage extreme heat. Cool roofs do not solve every climate problem, but they are a useful tool because they improve comfort, save energy, and support safer urban spaces.

2. First, the roof coating matters. Many cool roofs use white paint, reflective tiles, or metal surfaces that send a large share of the sun's energy back into the atmosphere. In contrast, black asphalt roofs absorb much of that energy and may become far hotter than the air around them. Building owners can choose materials based on local weather, building use, and cost. A reflective roof is especially valuable where long, sunny seasons force cooling systems to run for many hours.

3. Cool roofs also affect people beyond a single building. When many roofs reflect sunlight, less heat may build up across densely paved areas, which can help limit the urban heat island effect. This benefit matters most during heat waves, when high temperatures can threaten health, particularly for people without reliable cooling. However, a cool roof must be maintained, and its benefits vary with climate and insulation. For these reasons, communities should treat cool roofs as one evidence-based part of a broader plan for cooler, healthier neighborhoods.

2 ANSWER WITH EVIDENCE

Use the passage

1. What sentence states the passage's controlling idea?

2. How does each paragraph help develop the controlling idea?

3. What does the phrase “In contrast” show about black asphalt roofs and cool roofs?

4. Why does the writer include the sentence beginning with “However” in paragraph 3?

3 YOUR TURN

Your own words

Write a three-paragraph informational mini-essay of 150 to 200 words about one practical change that could improve your school or neighborhood. State a clear controlling idea in paragraph 1, develop focused ideas in paragraphs 2 and 3 with at least three accurate details, use at least two transitions, and include one limit or consideration. Use extra paper if needed.

ANSWER KEY # Roofing for Relief

GRADE 8 · TEKS 8.11.B

PART 1 · READ AND MARK

Underline the sentence that states the controlling idea. Number the topic sentence in each paragraph 1, 2, or 3, and circle transition words or phrases that link ideas. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What sentence states the passage's controlling idea?	**"Cool roofs do not solve every climate problem, but they are a useful tool because they improve comfort, save energy, and support safer urban spaces."**
2	How does each paragraph help develop the controlling idea?	**Paragraph 1 introduces cool roofs and states their value. Paragraph 2 explains reflective materials and energy-saving benefits. Paragraph 3 explains community benefits and limits.**
3	What does the phrase "In contrast" show about black asphalt roofs and cool roofs?	**It introduces a difference: black asphalt absorbs heat, while cool roofs reflect more sunlight and absorb less heat.**
4	Why does the writer include the sentence beginning with "However" in paragraph 3?	**It gives a limit by explaining that cool roofs need maintenance and work differently depending on climate and insulation.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Planting shade trees around a school can make outdoor spaces safer and more usable during hot weather. Trees block direct sunlight, so students at bus stops or playgrounds receive less solar radiation. Leaves also cool air through transpiration, the release of water vapor. Although trees take time to grow, a planned program is practical because it can improve comfort, protect pavement from intense sun, and make the campus more inviting.

First, the school could place native or well-adapted trees beside sidewalks, seating areas, and the bus loop. Shade over pavement can lower surface temperatures, making walks across campus less uncomfortable on sunny days. Trees also intercept rainfall, slowing some water before it reaches storm drains. By mapping the hottest locations before planting, staff members could choose sites where shade would help students most.

However, planting trees is not as simple as digging holes. Young trees need water, mulch, and protection from damage, especially during dry periods. The school should select species that fit the local climate and keep roots away from buildings, pipes, and narrow walkways. A watering and pruning schedule would protect the investment. With planning, shade trees could become a long-lasting part of a cooler, functional campus.

Accept accurate paraphrases of the controlling idea and explanations that connect paragraph structure, transitions, evidence, and qualifications to the writer's purpose. For the writing task, look for three paragraphs, a clear controlling idea, logical development with accurate details, transitions, and a meaningful limitation or consideration.