Cooling Connections

Track comparisons, categories, and connected solutions.

CCSS.ELA-Literacy.RI.8.3 "Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline words or phrases that compare the two heat-reducing strategies. Circle the details that show where each strategy works, then number the details that show how the strategies can work together.

Two Ways to Cool a City

1. On hot summer days, cities can be warmer than nearby rural areas because pavement and roofs absorb sunlight and release heat slowly. Planners often group solutions into two categories: changes at ground level and changes on buildings. Street trees belong to the first category. Their leaves shade sidewalks, while water released by leaves can cool the surrounding air. Trees also make walking routes more comfortable, but they need soil, water, and years to grow before providing full shade.

2. Cool roofs are in the second category because they change a building's surface. A light-colored coating reflects more sunlight than a dark roof, so less heat enters the building below. This method can lower the need for air conditioning in some conditions, especially during sunny weather. Unlike a tree, a roof coating begins working as soon as it is applied. Yet it mainly affects the building under it, rather than shading a bus stop or a whole block.

3. These strategies are not rivals in every situation. They address the same heat problem at different places and speeds: roofs can be updated quickly, whereas trees provide broader shade after they mature. A city might prioritize cool roofs on large warehouses, where there is little room to plant, and plant trees along routes used by pedestrians. By matching each method to a location, planners connect a building-focused solution with a street-focused one. The combined plan can reduce heat exposure for more people.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does the passage use the categories of ground-level changes and building changes to distinguish street trees from cool roofs?

2. What comparison does the passage make between how quickly cool roofs and street trees begin helping?

3. Why does the author say the two strategies are “not rivals in every situation”? Use the passage's comparison of their places and effects.

4. How does the example of warehouses and pedestrian routes show that planners can connect the two strategies?

3 YOUR TURN

Your own words

Write a four-sentence recommendation for a fictional neighborhood with a sunny school building and an unshaded walking route. Explain which strategy fits each setting, state one difference between the strategies, and connect them to a shared goal.

ANSWER KEY

Cooling Connections

GRADE 8 · RI.8.3

PART 1 · READ AND MARK

Underline words or phrases that compare the two heat-reducing strategies. Circle the details that show where each strategy works, then number the details that show how the strategies can work together. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does the passage use the categories of ground-level changes and building changes to distinguish street trees from cool roofs?	**Street trees are a ground-level change that shade sidewalks and cool nearby air. Cool roofs are a building change that reflect sunlight and reduce heat entering a building.**
2	What comparison does the passage make between how quickly cool roofs and street trees begin helping?	**Cool roofs begin working when the coating is applied, while trees need years to grow before they provide full shade.**
3	Why does the author say the two strategies are “not rivals in every situation”? Use the passage's comparison of their places and effects.	**They solve the same heat problem in different places. Cool roofs mainly help the building below them, while trees provide shade along sidewalks and other outdoor areas.**
4	How does the example of warehouses and pedestrian routes show that planners can connect the two strategies?	**Planners can use cool roofs on warehouses with little planting space and plant trees along walking routes. Each strategy is matched to the location where it can help most.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The school should use a cool roof because its large roof receives direct sun. The neighborhood should plant trees along the walking route to shade people on the sidewalk. The roof can begin reducing heat soon after workers apply its coating, but the trees need time to grow. Together, the two choices address heat in different places and help people stay cooler.

Accept answers that accurately compare the strategies by category, location, speed, or effect and explain how both address urban heat. For the open response, accept varied recommendations when all four required ideas are present and supported by the passage.