

Cooling Connections

A model explanation that links a problem, solutions, and equity.

CCSS.ELA-Literacy.W.11-12.2c "Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB This model explains possible planning choices. Underline every transition word or phrase in the passage. In the margin, label the relationship it shows, such as contrast, result, addition, or shift in focus.

Planning for Cooler Cities

- ① Cities often grow warmer than nearby rural areas because pavement and dark roofs absorb sunlight. This urban heat island effect can raise nighttime temperatures, when bodies and buildings have less time to cool. In a city facing extreme heat, shade can matter greatly to people waiting at bus stops or walking to work. To address the problem, planners need not rely on a single project. Instead, they can combine reflective surfaces, tree canopy, and cooler public spaces. Each strategy serves a different location, yet together they can reduce exposure during the hottest hours.
- ② First, reflective roofs send more incoming sunlight away than dark roofs do. A coating will not cool an entire neighborhood by itself, but it can lower the temperature of a roof surface and reduce heat entering the building below. Consequently, residents may need less air-conditioning during sunny afternoons. Trees work differently. Their leaves block direct sunlight, while water released through transpiration cools the air nearby. Because young trees need water and years to mature, cities must protect existing canopy as well as plant new trees. As a result, a heat plan must join immediate surface changes with long-term care.

- ③ However, cooling projects can create new problems if officials ignore who receives their benefits. A shaded park is less useful to a resident who cannot reach it safely, and a renovated district may become unaffordable if rents rise sharply. Therefore, planners can pair heat investments with frequent transit, cooling centers, and policies that help residents remain in their homes. They also need public input: neighborhood knowledge can show where shade is missing and which routes people use. Ultimately, the strongest plans measure temperature, access, and cost together. By connecting these goals, cities can treat heat not only as an environmental issue but also as a question of health and fairness.

2 ANSWER WITH EVIDENCE _____ Use the passage

- ① What contrast does the word "Instead" signal in the first paragraph?

- ② What relationship does "Consequently" clarify in the second paragraph?

- ③ How does the sentence beginning with "Because young trees" connect two ideas?

- ④ How do "However" and "Therefore" organize the logic of the third paragraph?

3 YOUR TURN

Your own words

Write two paragraphs, 90 to 110 words total, explaining how a school could create a local-history archive. Use at least four transitions, including one that adds information, one that shows contrast, and one that shows a result, and begin at least one sentence with a dependent clause.

Your explanation

Separate the two paragraphs clearly. Check your addition, contrast and result transitions, and a sentence beginning with a dependent clause.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

PART 1 • READ AND MARK

This model explains possible planning choices. Underline every transition word or phrase in the passage. In the margin, label the relationship it shows, such as contrast, result, addition, or shift in focus. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What contrast does the word "Instead" signal in the first paragraph?	It contrasts relying on one project with combining several cooling strategies.
2	What relationship does "Consequently" clarify in the second paragraph?	It shows that cooler roof surfaces and less heat entering buildings may lead residents to use less air-conditioning.
3	How does the sentence beginning with "Because young trees" connect two ideas?	It gives the reason young trees are not an immediate solution, then explains why cities must protect existing trees while planting new ones.
4	How do "However" and "Therefore" organize the logic of the third paragraph?	"However" introduces an equity problem, and "Therefore" introduces planning actions that can address it.

PART 3 · YOUR TURN (SAMPLE ANSWER)

First, the library could invite students to record interviews with longtime residents. Because memories can be lost when people move, the recordings would preserve details textbooks omit. In addition, students could scan photographs and maps, then attach dates and source information. This process would make the collection easier to search and evaluate.

However, a digital archive can exclude people who lack internet access. Therefore, the school should display selected materials at community events. As the archive grows, teachers can use its sources in research lessons, while residents can correct errors. By joining online access with face-to-face outreach, the project would build a more accurate public record.

Accept supported explanations of the relationships created by transitions and syntax. Require a local-history archive explanation in two paragraphs, 90-110 words, at least four appropriate transitions including addition, contrast and result, and at least one sentence that begins with a dependent clause. That sentence need not be the first sentence of the text. The passage presents possible planning choices, not a report of one city's adopted program. General science: U.S. EPA, What Are Heat Islands? <https://www.epa.gov/heatislands/what-are-heat-islands> ; Using Cool Roofs to Reduce Heat Islands, and Benefits of Trees and Vegetation. Local access and housing measures are proposed considerations, not claimed measured results.