

Shade by Design

Analyze how a model text combines sources, organization, transitions, and tone.

ELA.9.C.1.4 "Write expository texts to explain and analyze information from multiple sources, using a logical organization, varied purposeful transitions, and a tone appropriate to the task."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline details drawn from a source and circle transition words or phrases. In Paragraph Roles below, write each paragraph number and a short phrase explaining its job in the explanation.

Trees, Data, and Heat

- ① Cities can use street trees as one part of a practical heat-safety plan. In New York City, the Parks Department's 2015-2016 street-tree census recorded 666,134 street trees, including dead trees but excluding stumps. That inventory does not prove that every block is cool, but it shows that city leaders can map tree locations as a starting point for studying shade coverage. In addition, the census records species and trunk size, details that help planners estimate which trees may need care. By beginning with measured local conditions, a tree-planting plan can target neighborhoods rather than simply adding trees wherever space is easiest to find.
- ② National research explains why those maps matter. The Environmental Protection Agency states that vegetation cools surrounding areas through shade and evapotranspiration, the combined movement of water into the air through evaporation from surfaces such as soil and transpiration from plants. Therefore, trees can reduce heat exposure for people walking, waiting for buses, or using playgrounds. However, a citywide tree total can hide uneven coverage. Tree counts alone do not measure canopy area or show whether sidewalks and bus stops are shaded. When planners compare the local census with heat and shade maps, they can identify places where new trees, watering, and maintenance could provide the greatest public benefit.

- ③ Evidence from both sources supports a focused approach, not a claim that trees solve urban heat on their own. The census supplies street-level information about the existing tree population, while the EPA explains the cooling process that makes shade valuable. As a result, officials can use local data to choose planting sites and then track whether trees survive long enough to create meaningful canopy. This approach also requires attention to limits. For example, young trees need water and care before they offer broad shade, and planting space may be limited on dense streets. Still, combining scientific explanation with local records makes heat planning more precise and accountable.

Paragraph Roles

For paragraphs 1, 2 and 3, name each paragraph's job and briefly explain how it helps build the overall explanation.

2 ANSWER WITH EVIDENCE Use the passage

- 1 State the passage's central claim. Name the two sources the writer uses to support it.

- 2 How does the transition "However" help organize paragraph 2?

- 3 Explain how paragraph 3 combines information from both sources instead of listing each source separately.

- 4 Quote one phrase that creates a formal, measured tone. Explain how the phrase affects the writer's claim.

3 YOUR TURN ————— Your own words

Materials for Your Turn

You may use these two source summaries to explain a later-start proposal, or obtain two credible sources for another school or community issue. You may cite the summaries without opening the links. Use your own organization and wording when writing your paragraph.

Source A: School start-time guidance

Editorial summary of American Academy of Pediatrics (2014), School Start Times for Adolescents.

The American Academy of Pediatrics recommends that middle and high schools begin at 8:30 a.m. or later to help adolescents obtain sufficient sleep. Biological sleep-timing changes during puberty can make early schedules difficult. The policy statement discusses benefits and practical barriers such as transportation and family schedules.

Scope and limits: This national guidance does not establish the best bus schedule or predict outcomes for a particular school.

American Academy of Pediatrics (2014)
<https://doi.org/10.1542/peds.2014-1697>

Source B: Sleep among high school students

Editorial summary of CDC (2024), Chronic Disease Indicators: Sleep.

CDC reports that 77.9% of U.S. high school students reported insufficient school-night sleep in 2019. The indicator defines insufficient sleep as fewer than 8 hours on an average school night for ages 13-18.

Insufficient sleep is associated with health, attention and academic problems.

Scope and limits: The historical national survey does not prove that an earlier bell caused an individual student's sleep problem or establish a local prevalence.

Centers for Disease Control and Prevention (2024)

<https://www.cdc.gov/cdi/indicator-definitions/sleep.html>

Choose a school or community issue and use two credible sources to write one 90-110 word expository paragraph. State a clear claim, cite each source by author or organization name, use at least two purposeful transitions, and include one limit or consideration.

Write your expository paragraph

Write 90-110 words. Explain and connect two named credible sources, use at least two purposeful transitions, and include one limit or consideration. Use a formal, measured tone.

[illegible]

PART 1 • READ AND MARK

Underline details drawn from a source and circle transition words or phrases. In Paragraph Roles below, write each paragraph number and a short phrase explaining its job in the explanation. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	State the passage's central claim. Name the two sources the writer uses to support it.	Cities should use local tree data and scientific research to make focused heat-safety plans. The sources are the New York City Parks Department's 2015 street-tree census and the Environmental Protection Agency.
2	How does the transition "However" help organize paragraph 2?	It contrasts the benefit of knowing a city's total number of trees with the problem that a total can hide unequal shade coverage among neighborhoods.
3	Explain how paragraph 3 combines information from both sources instead of listing each source separately.	It connects the census's street-level tree data with the EPA's explanation of how vegetation cools areas, then explains how officials can use both kinds of information to choose and monitor planting sites.
4	Quote one phrase that creates a formal, measured tone. Explain how the phrase affects the writer's claim.	"not a claim that trees solve urban heat on their own" qualifies the claim and shows that the writer recognizes limits instead of making an exaggerated statement.

PART 3 · YOUR TURN (SAMPLE ANSWER)

High schools should consider later start times because research connects sleep with learning and health. The American Academy of Pediatrics recommends that middle and high schools begin at 8:30 a.m. or later to help adolescents obtain enough sleep. In addition, the Centers for Disease Control and Prevention reports that many high school students do not get the recommended amount of sleep on school nights. Together, these sources suggest that schedule changes could support students, although transportation and family schedules also require planning. Therefore, a district should study bus routes and community needs before adopting a later start time.

Accept equivalent explanations that accurately connect the city's census to the EPA's scientific explanation and identify the organizational role of transitions. For the open response, accept varied topics and claims when students use two credible sources, organize ideas logically, include purposeful transitions, maintain a formal tone, and address a reasonable consideration. For Paragraph Roles, accept functions such as introducing a local inventory, explaining the science and its limits, and synthesizing both to guide action. The NYC dataset contains 683,788 records: 652,173 Alive, 13,961 Dead and 17,654 Stump; 666,134 excludes stumps and includes dead trees. These are 2015-2016 inventory records, not current canopy coverage. Source: <https://catalog.data.gov/dataset/2015-street-tree-census-tree-data> . Scientific definition: evapotranspiration includes both evaporation and plant transpiration; see USGS, <https://www.usgs.gov/water-science-school/science/evapotranspiration-and-water-cycle> .