

Roof Choices Matter

Analyze how a model explanation introduces and organizes a complex topic.

CCSS.ELA-Literacy.W.9-10.2a "Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension."

NAME _____ DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the sentence that introduces cool roofs. Circle the three bold headings, then number them 1, 2, and 3 to show how the explanation moves from the topic to distinctions and then to planning.

Can a Roof Cool a City?

- ① **Why Roofs Matter** On a hot afternoon, a dark roof can become far warmer than the air above it. That heat moves into the building below, so fans and air conditioners must work harder. A cool roof uses a light-colored or reflective surface to send more sunlight away. This choice can lower the roof's temperature and reduce indoor cooling needs. Cool roofs do not solve every heat problem, but they connect one building decision to a larger issue: how cities manage energy use during heat waves.
- ② **Benefits and Limits** The same reflective surface can bring different results in different places. In a neighborhood with many trees, shade may already protect some roofs. In a dense area with little shade, a cool roof may be more useful because many buildings absorb sunlight at once. However, a reflective roof does not replace insulation. Insulation slows heat transfer through walls and ceilings, while a cool roof reduces heat absorbed at the roof surface. Using both can improve comfort, yet each addresses a different part of the problem.
- ③ **Planning a Project** Before choosing a roof material, a school facilities team should gather information about its building and climate. It might compare summer electricity bills, roof condition, local shade, and the cost of installation. These details help the team distinguish a short-term expense from possible long-term savings. The team should also explain its decision with clear headings, such as "Current Conditions" and "Expected Effects." A labeled table of costs and energy use could make the comparison easier to follow. Organized information allows readers to see not only the recommendation, but also the evidence behind it.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What topic does the first section introduce, and what larger city issue does it connect to?

2 How does the heading "Benefits and Limits" prepare the reader for the information in the second section?

3 What distinction does the second section make between insulation and a cool roof?

4 What graphic does the final section suggest, and which two kinds of information would it help readers compare?

3 YOUR TURN _____ Your own words

Write an 80-100-word recommendation about one improvement your school could make. Include a descriptive heading, introduce the improvement, distinguish it from a different solution, and name a useful table or chart that could support your recommendation.

PART 1 • READ AND MARK

Underline the sentence that introduces cool roofs. Circle the three bold headings, then number them 1, 2, and 3 to show how the explanation moves from the topic to distinctions and then to planning. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What topic does the first section introduce, and what larger city issue does it connect to?	It introduces cool roofs and connects them to how cities manage energy use during heat waves.
2	How does the heading "Benefits and Limits" prepare the reader for the information in the second section?	It signals that the section will explain both advantages of cool roofs and limits or conditions that affect their usefulness.
3	What distinction does the second section make between insulation and a cool roof?	Insulation slows heat transfer through walls and ceilings, while a cool roof reduces heat absorbed at the roof surface.
4	What graphic does the final section suggest, and which two kinds of information would it help readers compare?	It suggests a labeled table. It would help readers compare costs and energy use.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Quieter Lunchroom Our school could add sound-absorbing panels to the cafeteria ceiling. This improvement would help students talk and eat without competing with echoes. Panels are different from stricter lunch rules, which may lower voices but do not reduce the room's noise. The project would cost money at first, yet a calmer space could support conversation and supervision every day. A small table comparing panel prices, installation costs, and measured noise levels would help families and staff judge whether the benefits justify the expense.

Accept accurate paraphrases that identify the passage's topic, section order, and distinctions. For the open response, accept varied school improvements if the response has a heading, a clear introduction, a meaningful distinction, and a relevant proposed table or chart.