

Questions That Grow

Follow how focused questions guide short and sustained research.

CCSS.ELA-Literacy.CCRA.W.7 “Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each research question in the passage. Circle details that show how Jordan gathered evidence, then number the circled details in the order Jordan used them.

Cooling the Schoolyard

- ① Jordan began a short research project after noticing that the playground felt hotter than the nearby park. Jordan asked, “How do trees cool a schoolyard?” This focused question named one place and one effect to investigate. Jordan read a city parks webpage and a science article from a university extension office. Both explained that tree leaves provide shade. They also described transpiration, a process in which water leaves plants as vapor and can help cool the surrounding air. Jordan recorded each source’s main idea and publication date.
- ② After completing the short project, Jordan planned a longer investigation: “Where should our school plant trees to reduce heat most effectively?” The new question required more than an explanation. Jordan compared a city tree inventory, a peer-reviewed study about shade and surface temperature, and school grounds maps. Jordan also measured pavement temperatures in sunny and shaded spots at the same time of day for several weeks. The sources helped Jordan identify patterns, while the measurements supplied local evidence. Jordan kept notes that separated direct facts, observations, and ideas to investigate further.
- ③ Near the end of the investigation, Jordan found that shaded pavement was usually cooler than pavement in direct sun. However, Jordan did not claim that every tree would produce the same result. Weather, tree size, and the amount of shade could change temperatures. Jordan returned to the question and drafted a claim: planting trees beside the largest sunny paved areas may reduce heat there. Before presenting the claim, Jordan checked that every fact had a source or a measurement. Jordan listed a new question for future research: Which tree species will thrive in the schoolyard?

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How did Jordan’s first question make the short project focused?

2 How was Jordan’s longer research question different from the first question?

3 Name two sources Jordan used in the longer investigation and one kind of local evidence Jordan collected.

4 Why did Jordan use the word “may” in the final claim instead of saying trees will reduce heat everywhere?

3 YOUR TURN _____ Your own words

Choose a school or community topic. Write one focused question for a short project and name two sources or kinds of evidence you would use. Then write a deeper question for a longer project and explain one new step you would take to investigate it.

PART 1 • READ AND MARK

Underline each research question in the passage. Circle details that show how Jordan gathered evidence, then number the circled details in the order Jordan used them. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did Jordan's first question make the short project focused?	It named one place, the schoolyard, and one effect, how trees cool it.
2	How was Jordan's longer research question different from the first question?	It asked where trees should be planted to reduce heat most effectively, so it required comparing locations and evidence.
3	Name two sources Jordan used in the longer investigation and one kind of local evidence Jordan collected.	Sources included the city tree inventory, a peer-reviewed study, and school grounds maps. Local evidence was pavement-temperature measurements in sunny and shaded spots.
4	Why did Jordan use the word "may" in the final claim instead of saying trees will reduce heat everywhere?	Weather, tree size, and the amount of shade can change temperatures, so the result may not be the same for every tree or place.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Short project question: How much food is thrown away in our cafeteria during one lunch period? I would use cafeteria waste measurements and an interview with the cafeteria manager. Longer project question: Which changes could reduce cafeteria food waste during the whole school year? I would measure waste for several weeks, compare different lunch days, and research how other schools reduce food waste.

Accept focused questions that name a clear topic, place or group, and idea to investigate. For the longer project, accept a question that extends the short project and includes a reasonable plan for additional sources, evidence, comparison, or repeated observations.