Questions That Grow

Track how a researcher gathers evidence and refines an inquiry.

8W6 "Conduct research to answer questions, including self-generated questions, drawing on multiple sources, refocusing the inquiry when appropriate. Generate additional related questions that allow for multiple avenues of exploration."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the initial and revised inquiry questions, circle each source, and number the two related questions in paragraph 3. Your marks should show how Jordan used several sources and changed direction when needed.

Cooling the Bus Stop

(1) Jordan began a project with the question, "Do shade trees make bus stops cooler in summer?" The question was narrow enough to investigate, but Jordan did not assume one source could answer it. First, Jordan searched the city's open-data site for the locations of bus stops and public trees. Next, Jordan read an Environmental Protection Agency page explaining that trees can cool nearby areas through shade and by releasing water vapor. Jordan recorded each source's author, date, and useful details in a research log.

(2) To compare conditions, Jordan also used a university extension article about measuring air temperature and surface temperature. This source raised a problem: pavement can be much hotter than the air, so "cooler" needed a clearer meaning. Jordan revised the inquiry to ask, "How does tree shade affect the surface temperature at bus stops?" Jordan then planned to compare shaded and unshaded pavement at the same time of day. A transit planner could explain which stops are scheduled for upgrades, but that interview would not measure temperature.

③ Jordan's revised question could lead to more than one investigation. A science path might test surface temperatures with the same tool at several stops. A design path might examine whether shelters, tree planting, or lighter pavement reduce heat most effectively. Jordan added related questions: "Which neighborhoods have the fewest shaded stops?" and "How might shade projects affect riders who wait longest?" These questions would require different sources, such as tree-canopy data, transit schedules, city budgets, and interviews with riders. Jordan's research log would show which evidence answered each question and which gaps remained.

2 ANSWER WITH EVIDENCE

Use the passage

1. What was Jordan's original inquiry, and which two sources did Jordan consult first?

2. Which source caused Jordan to refocus the inquiry, and what problem did it reveal?

3. State Jordan's revised inquiry. What comparison did Jordan plan to make to investigate it?

4. Describe the two different research paths in paragraph 3. How does each path explore the bus-stop heat issue?

3 YOUR TURN

Your own words

Your teacher will help you choose a topic with accessible sources and supply the reading materials and extra paper. Plan: Choose a question about a change or condition at your school or in your community. Write an initial research question, name two different sources you would use, state what finding might make you refocus the question, and add two related questions that could be investigated in different ways. Now consult two actual sources. On extra paper, record each source's title, author/organization and page or URL, plus a relevant finding. Combine the findings in a short evidence-based answer to your question. Explain whether the evidence warrants refocusing; revise only if useful. End with two related questions and different ways to investigate them.

Questions That Grow

PART 1 · READ AND MARK

Underline the initial and revised inquiry questions, circle each source, and number the two related questions in paragraph 3. Your marks should show how Jordan used several sources and changed direction when needed. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What was Jordan's original inquiry, and which two sources did Jordan consult first?	**Original inquiry: "Do shade trees make bus stops cooler in summer?" First sources: the city's open-data site and an Environmental Protection Agency page.**
2	Which source caused Jordan to refocus the inquiry, and what problem did it reveal?	**A university extension article caused the refocus. It showed that pavement can be much hotter than the air, so Jordan needed to define "cooler" more clearly.**
3	State Jordan's revised inquiry. What comparison did Jordan plan to make to investigate it?	**Revised inquiry: "How does tree shade affect the surface temperature at bus stops?" Jordan planned to compare shaded and unshaded pavement at the same time of day.**
4	Describe the two different research paths in paragraph 3. How does each path explore the bus-stop heat issue?	**The science path would test surface temperatures at several stops using the same tool. The design path would compare possible heat-reducing choices, such as shelters, tree planting, or lighter pavement.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Planning example only (the completed task also needs actual findings and an answer):
My initial question is, "Does the school cafeteria throw away more food on certain days?" I would compare cafeteria waste records with observations made during different lunch periods. If the records do not list food types, I would refocus on which foods are discarded most often. Related questions: "Do menu choices affect waste?" and "Could share tables reduce unopened food waste?" The first could use menus and surveys, while the second could use school policy and interviews with staff.
Completion record: write your actual source title and finding, then explain how the finding supports your answer. Results depend on the materials you consulted; do not invent findings.

For the passage questions, accept equivalent answers supported by the supplied text. Supply two distinct, readable sources relevant to the learner's question, such as book excerpts, articles or actual school records, preserving attribution and dates where available. A printed packet is sufficient. Help match or adjust the question to available evidence; do not require outside interviews or unsupervised internet access. Check actual source notes and an answer connecting evidence from both sources, rather than just listing them. Learners explain whether to keep, narrow, broaden or otherwise refocus the inquiry based on findings; a revision is not mandatory when unnecessary. Require two related follow-up questions with different feasible avenues of investigation. Provide extra paper and reading/recording support. Keep each learner's own question and reasoning. The planning example above does not claim that research has already occurred.