

Research Paths

Trace how one question grows through sources.

CCSS.ELA-Literacy.WHST.6-8.7 “Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the main research question, circle every source Maya plans or uses, and number the three focused follow-up questions. These marks show how a researcher uses several sources and develops new paths for inquiry.

Maya Studies River Bats

- ① Maya wondered whether streetlights near her town's river affected bats. She turned the broad idea into a research question: “How might bright nighttime lighting change the feeding activity of local bats?” Her librarian suggested that one website would not be enough. Maya planned to compare several sources, including a state wildlife agency page, a scientific study, and an interview with a local bat researcher. Each source could offer a different kind of evidence for her question.
- ② At the wildlife agency site, Maya learned that many bats use echolocation and many species eat flying insects. The scientific study described researchers who used acoustic detectors to record bat calls at dark and lighted locations. Its data showed that light can affect bat activity differently among species. In the interview, the researcher explained that insects, tree cover, weather, and nearby water can also affect where bats feed. Maya wrote the source, date, main claim, and evidence in her notes.
- ③ Maya noticed that her first question still had several paths. She numbered new, focused questions: (1) Which local bat species hunt near the river? (2) Do insect numbers differ under bright and unlit lamps? (3) Does activity change during different seasons? These questions could lead to maps, insect counts, or bat-call data. Maya decided not to claim that lights alone caused any change. Instead, she would use evidence from several sources to explain patterns and limits in her findings.

2 ANSWER WITH EVIDENCE Use the passage

1 How did Maya turn a broad topic into a researchable question?

2 What three types of sources did Maya plan to compare, and why was comparing them useful?

3 What did researchers record in the scientific study, and what factors should Maya consider before deciding that lights caused a change?

4 What evidence types could Maya's focused questions lead her to collect, and how do these types create more than one research path?

3 YOUR TURN Your own words

Choose a local environmental topic. Write one focused research question, name three different sources you would use, and write two numbered related questions that could lead to different kinds of evidence.

PART 1 • READ AND MARK

Underline the main research question, circle every source Maya plans or uses, and number the three focused follow-up questions. These marks show how a researcher uses several sources and develops new paths for inquiry. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did Maya turn a broad topic into a researchable question?	She changed a general concern about streetlights and bats into a focused question about how bright nighttime lighting might affect local bats' feeding activity.
2	What three types of sources did Maya plan to compare, and why was comparing them useful?	She planned to use a state wildlife agency page, a scientific study, and an interview with a local bat researcher. Comparing them could provide different kinds of evidence.
3	What did researchers record in the scientific study, and what factors should Maya consider before deciding that lights caused a change?	They recorded bat calls with acoustic detectors. Maya should also consider insects, tree cover, weather, and nearby water.
4	What evidence types could Maya's focused questions lead her to collect, and how do these types create more than one research path?	They could lead to maps, insect counts, and bat-call data. These evidence types allow Maya to investigate location, insects, and bat activity in different ways.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Research question: How does the amount of shade on our school playground affect its temperature at lunchtime?
Sources: a school grounds map, local weather records, and an interview with the facilities manager. 1. Which playground areas have the most tree cover? 2. How do surface temperatures on asphalt and grass compare at the same time?

Accept equivalent descriptions of Maya's research plan when they match the passage. For Part 3, accept focused questions with three distinct sources and two related questions that open different avenues for collecting evidence.