Hot Play Research

Use focused questions and credible sources to build a research plan.

8.T.RA.1 "Research & Inquiry: Conduct research, generating questions to guide investigations of complex topics of interest and using credible sources to support analyses."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the main research question and the smaller questions. Circle each detail that explains why a source is credible, and number the steps Maya plans to use when analyzing evidence.

Mapping Hot Play Spaces

1. During a week of hot weather, Maya wondered why the playground beside her apartment felt hotter than the shaded park six blocks away. She did not begin by searching for a quick answer. Instead, she wrote a focused question: How do shade and pavement affect afternoon temperatures at neighborhood play spaces? She added two smaller questions: Which surfaces hold the most heat, and where could shade make the biggest difference? These questions would help her decide what evidence to collect.

2. To investigate, Maya planned to compare temperatures at three playgrounds at the same time on several clear days. She would use a thermometer with adult supervision and record the amount of tree cover and pavement at each site. For background, she chose a National Oceanic and Atmospheric Administration page explaining urban heat islands and a city planning report describing its tree-canopy map. She considered both sources credible because they identify the organizations responsible for the information and provide methods or data readers can examine.

3. Her notes would not prove that one tree caused a certain temperature. A playground might differ because of building shadows, wind, or the time since its pavement was installed. Maya planned to compare patterns across sites and check whether her measurements matched the larger map and NOAA explanation. If the evidence pointed in different directions, she would revise her question or seek another source, such as a university study of local heat. Her final analysis would explain what the evidence supports and what it cannot show.

2 ANSWER WITH EVIDENCE

Use the passage

1. What is Maya's main research question, and what two factors does it compare?

2. How does Maya's plan for collecting temperature data help her make a fair comparison among playgrounds?

3. What two background sources does Maya choose? Give two reasons the passage says they are credible.

4. Why would Maya avoid claiming that one tree caused a certain temperature? What would she do if her evidence disagreed?

3 YOUR TURN

Your own words

Choose a complex question about your school or community. In 4 to 6 sentences, write one main research question and two smaller questions, name two credible sources you would use and why each is credible, and explain how you would compare the evidence.

ANSWER KEY

Hot Play Research

GRADE 8 · 8.T.RA.1

PART 1 · READ AND MARK

Underline the main research question and the smaller questions. Circle each detail that explains why a source is credible, and number the steps Maya plans to use when analyzing evidence. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What is Maya's main research question, and what two factors does it compare?	**Her main question is how shade and pavement affect afternoon temperatures at neighborhood play spaces. It compares shade and pavement.**
2	How does Maya's plan for collecting temperature data help her make a fair comparison among playgrounds?	**She will compare three playgrounds at the same time on several clear days and record tree cover and pavement at each site.**
3	What two background sources does Maya choose? Give two reasons the passage says they are credible.	**She chooses a NOAA page about urban heat islands and a city planning report with a tree-canopy map. They identify responsible organizations and provide methods or data readers can examine.**
4	Why would Maya avoid claiming that one tree caused a certain temperature? What would she do if her evidence disagreed?	**Other factors, including building shadows, wind, and pavement age, could affect temperature. She would revise her question or seek another source.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I want to investigate how later school start times affect students' sleep and attendance. My main question is, How would a later start time affect students at my school? My smaller questions are, How much sleep do students get now, and how has attendance changed in districts with later starts? I would use a Centers for Disease Control and Prevention page because it identifies the agency and cites health research. I would also use my district's published attendance reports because they provide local data and name the office that collected it. I would compare attendance data before and after a schedule change while considering other causes, such as severe weather or new attendance policies.

Accept equivalent descriptions of Maya's research plan, source checks, and limits on cause-and-effect claims. For Part 3, accept varied topics if the response includes a focused main question, two supporting questions, two credible sources with valid reasons, and a plan for comparing evidence.