

Shade Study Secrets

Analyze purpose across an investigation report.

CCSS.ELA-Literacy.RST.6-8.6 "Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline sentences that explain why the investigation matters, number the procedure steps in paragraph 2, and circle sentences that discuss what the results mean or cannot prove.

Testing Shade at School

- ① Cities often feel warmer than nearby parks because pavement, roofs, and dark surfaces absorb sunlight and release heat slowly. This pattern, called the urban heat island effect, can make hot days more dangerous for people who walk, wait for buses, or live without air conditioning. Trees can lower temperatures by shading surfaces and releasing water vapor from their leaves. To see whether shade made a measurable difference at one school, an environmental club planned a small investigation during lunch.
- ② Club members chose two spots with similar concrete, one beneath a large maple and one in direct sun. At 12:30 p.m., they used the same infrared thermometer to measure each surface from the same height. They recorded three readings at each spot, waiting one minute between readings, and then calculated an average. The students also noted cloud cover and checked that no one had recently sprayed water on either area. These controls helped them make the comparison fair rather than relying on a single quick observation.
- ③ The shaded concrete averaged 18 degrees Fahrenheit cooler than the sunny concrete. The club did not claim that one tree would cool the whole neighborhood, because it measured only two locations on one day. Instead, the results gave the group evidence to share with the principal when requesting more shade near the blacktop. By reporting both the finding and the limit, the article helps readers judge how strongly the investigation supports the request. It also shows why careful measurements can guide a practical school decision.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 Why does the author explain the urban heat island effect in paragraph 1?

2 Why does the author include details such as using the same thermometer, measuring from the same height, and taking three readings?

3 Why does the author state that the club did not claim one tree would cool the whole neighborhood?

4 How does the author's purpose in paragraph 3 differ from the purpose in paragraph 2?

3 YOUR TURN _____ Your own words

Choose a simple school investigation. Write exactly three sentences: explain why the question matters, describe a fair procedure, and discuss what a possible result would mean and what it could not prove. Add one label after each sentence: explanation, procedure, or discussion.

PART 1 • READ AND MARK

Underline sentences that explain why the investigation matters, number the procedure steps in paragraph 2, and circle sentences that discuss what the results mean or cannot prove. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Why does the author explain the urban heat island effect in paragraph 1?	To give background and show why testing shade at the school matters.
2	Why does the author include details such as using the same thermometer, measuring from the same height, and taking three readings?	To show that the students used a fair, reliable procedure for comparing the two surfaces.
3	Why does the author state that the club did not claim one tree would cool the whole neighborhood?	To explain the investigation's limit and prevent readers from making a conclusion that the evidence cannot support.
4	How does the author's purpose in paragraph 3 differ from the purpose in paragraph 2?	Paragraph 3 discusses what the results mean, their limit, and how they could be used. Paragraph 2 describes the procedure used to collect fair evidence.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Testing whether the library is quieter before school could help students choose a time to read. (explanation) A student could measure sound for five minutes at the same table before school and during lunch on three days. (procedure) If the before-school average is lower, the test suggests that time is quieter, but it cannot describe noise in every part of the library. (discussion)

Accept responses that correctly connect explanation to background or importance, procedure to fair evidence collection, and discussion to meaning, limits, or use of results. For Part 3, accept any plausible investigation with exactly three sentences and accurate purpose labels.