

Research, Then Explain

Gather, evaluate and connect information from print and digital sources.

CCSS.ELA-Literacy.W.9-10.8 "Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question..."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline a useful fact in printed Source A. Use an internet-connected device for the search tasks. Record actual findings; a plan alone is not completed research.

What Can Conductivity Tell Us?

- ① **Research question:** Why can conductivity help investigate road salt in streams, and what can it not establish alone? Use printed Source A and a different authoritative digital source. Internet is required; a shared classroom device is suitable. Read the full digital page, not only its search snippet.
- ② **Printed Source A.** U.S. Geological Survey, *Conductivity (Electrical Conductance) and Water*, Water Science School, 24 Aug. 2026. Excerpt: "Water stops being an excellent insulator once it starts dissolving substances around it. The most common dissolved substances are salts, common table salt (sodium chloride (NaCl)) is the one we know best. In chemical terms, salts are ionic compounds composed of cations (positively charged ions) and anions (negatively charged ions)." Original page: <https://www.usgs.gov/water-science-school/science/conductivity-electrical-conductance-and-water>. The quotation is a short excerpt, not the complete article.
- ③ **Cite what you use.** Paraphrase in your own wording and structure. Cite quotations and paraphrases. An MLA-style citation for an unpaginated source uses its author, such as (U.S. Geological Survey). Match it to Works Cited: Author. "Page Title." *Website*, publication/update date if shown, URL. Accessed day month year. Alphabetize entries and indent continuation lines. Never invent a date or page number.

2 ANSWER WITH EVIDENCE _____ Use the passage

- 1** Paraphrase one fact from printed Source A. Explain its usefulness for the research question and one thing the excerpt does not establish.

- 2** Run a search, then refine it using an advanced feature such as site: or an exact phrase in quotation marks. Record both actual queries and describe how the results changed.

- 3** Open a relevant digital result as Source B. Name its author and title. Explain why its expertise and content make it useful; note a limit or date-related concern.

- 4** Paraphrase one relevant detail from Source B and identify its section or page. Explain how it adds to or qualifies Source A. Save its URL and date information for Works Cited.

3 YOUR TURN

Your own words

Using both sources you inspected, answer the research question in two paragraphs totaling 120-160 words. Integrate one accurate paraphrase from each source with a matching parenthetical citation. Explain a limitation. Then write two matching Works Cited entries outside the word count.

1. Synthesize the evidence

Connect the sources in your own explanation. Distinguish what they support from what remains unknown. Leave a blank line between paragraphs.

[illegible]

2. Works Cited

Record both sources in MLA style using the guide above. Use the actual date you accessed the digital page; omit a publication date if none is shown.

PART 1 • READ AND MARK

Underline a useful fact in printed Source A. Use an internet-connected device for the search tasks. Record actual findings; a plan alone is not completed research. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Paraphrase one fact from printed Source A. Explain its usefulness for the research question and one thing the excerpt does not establish.	Example: dissolved salts contain charged ions and make water conductive. This connects salts with the measurement, but does not identify road salt as the source in any particular stream.
2	Run a search, then refine it using an advanced feature such as site: or an exact phrase in quotation marks. Record both actual queries and describe how the results changed.	Example queries actually checked during preparation: conductivity road salt; site:epa.gov/caddis "conductivity" "road salt". The broad search included agency and academic sources; the refinement located EPA CADDIS material. Accept students' actual queries and observed differences, including little improvement; results vary.
3	Open a relevant digital result as Source B. Name its author and title. Explain why its expertise and content make it useful; note a limit or date-related concern.	One valid result is U.S. Environmental Protection Agency, "Urbanization - Water and Sediment Quality," in CADDIS. It explains possible solute sources and cites research, but supplies no measurements for a student's local stream. Require actual inspection and the date shown, or a note that no publication date is given.
4	Paraphrase one relevant detail from Source B and identify its section or page. Explain how it adds to or qualifies Source A. Save its URL and date information for Works Cited.	Example: the EPA section on conductivity identifies road deicers and other sources, including wastewater and concrete weathering. It extends the USGS explanation by showing why conductivity cannot identify one source alone. Accept another verified digital source and accurate relationship; no invented measurements.

PART 3 · YOUR TURN (SAMPLE ANSWER)

Synthesis: Conductivity can help investigators examine road salt because dissolved salts affect water's ability to conduct electricity. The U.S. Geological Survey explains that salts dissolve into positively and negatively charged ions, connecting the substance being investigated with the electrical measurement (U.S. Geological Survey). This makes conductivity a useful clue rather than a direct record of where the dissolved material originated.

The Environmental Protection Agency identifies road deicers as one possible contributor to higher stream conductivity, but also names wastewater, leaking sewer systems and concrete weathering as sources of dissolved solutes (U.S. Environmental Protection Agency). Read together, these sources explain both the value and the limitation of the measurement. A high reading could justify investigating salt inputs, but it cannot by itself establish that road salt caused a change in a particular stream.

Works Cited: U.S. Environmental Protection Agency. "Urbanization - Water and Sediment Quality." *CADDIS*, 22 Jan. 2026, <https://www.epa.gov/caddis/urbanization-water-and-sediment-quality>. Accessed 8 Sept. 2026.

U.S. Geological Survey. "Conductivity (Electrical Conductance) and Water." *Water Science School*, 24 Aug. 2026, <https://www.usgs.gov/water-science-school/science/conductivity-electrical-conductance-and-water>. Accessed 8 Sept. 2026.

TEACHER ASSESSMENT NOTES

Require actual search and refinement, inspection of a digital source, source-specific usefulness/limitations, two-source synthesis and matching MLA-style citations and entries. Judge evidence and reasoning, not agreement with the model or identical search results. Internet is part of this task; do not mark a planned search as completed. Printed Source A is a public-domain USGS excerpt with outer quotation marks added. The model uses an EPA page actually located and read during preparation; other authoritative sources are valid. Accessed dates record preparation access; the separate source dates are displayed on the USGS article and EPA update footer. Students use their own access dates and any clearly displayed publication/update dates. The compact printed model separates entries; accept handwritten hanging indentation. General source facts cannot prove a local cause. This is research and writing, not an electrical experiment.