



S1E3 Worksheet #1: Using AI for Effective Research and Information Gathering

Objective: Students will learn how to use AI tools to gather information efficiently, refine their questions for better responses, and compare AI-generated results with traditional search methods to evaluate reliability.

Part 1: Asking Effective Questions

1. Choose a research topic (ex. "The effects of plastic pollution on marine life," "The impact of technology on education," or "The history of the space race").
2. Write down three different questions related to your topic. Make sure each question varies in how specific or broad it is. For example:
 - Broad: "What is plastic pollution?"
 - Specific: "How does plastic pollution affect sea turtles in the Pacific Ocean?"
 - Analytical: "What are the long-term effects of plastic pollution on marine ecosystems?"

Task:

- Use an AI tool (ex. ChatGPT) to answer each question.
- Write down the AI's responses.

Reflection:

- Which question yielded the most useful and detailed response? Why do you think that was the case?
 - How might you modify your questions to get even more accurate or relevant information from the AI?
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Part 2: Comparing AI-Generated Results with Traditional Searches

1. Choose one of the questions from Part 1 and use a traditional search engine (ex. Google) to find information.
2. Write down the top three pieces of information you found from the traditional search.

Task:

- Compare the information from the AI-generated answer with the results from the traditional search.
- Identify similarities and differences in the quality, depth, and reliability of the information.

Reflection:

- Which source provided more detailed information? Which one was more accurate or reliable?
 - Did the AI provide any insights that were missing from the traditional search, or vice versa?
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Part 3: Verifying AI-Generated Information

1. Choose a fact or statement from the AI-generated answer that seems important or surprising.
2. Use a traditional search method to verify whether this fact is accurate. Look for at least two credible sources (ex. academic journals, reputable news sites, or educational websites).

Task:

- Write down the fact or statement from the AI.
- Record what your traditional search revealed about this fact.

Reflection:

- Was the AI's information accurate? How do you know?
 - How important is it to fact-check information provided by AI tools, and why?
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Part 4: Final Evaluation

Task:

- Based on your experience with both AI-generated and traditional research methods, write a paragraph or bullet points summarizing the strengths and weaknesses of using AI for research.

Questions to Consider:

- When might it be most beneficial to use AI for gathering information?
 - In what situations might traditional research methods be more effective?
 - How can you combine both AI and traditional research to gather the most comprehensive and accurate information for your assignments?
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Teacher's Notes:

- Encourage students to be critical of the information they find, whether it comes from AI or traditional sources.
- Highlight the importance of asking clear and specific questions when using AI tools for research.
- Discuss the concept of “source credibility” and how it applies to AI-generated content versus traditional searches.

This worksheet will help students understand the nuances of using AI for research, teaching them to be thoughtful about both the questions they ask and the answers they receive.