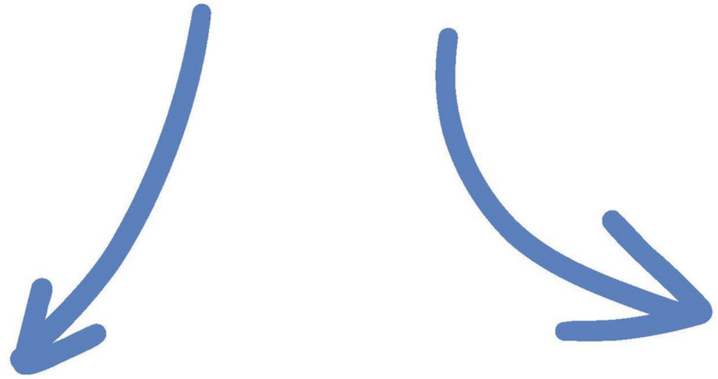
2 Types of AOL Prompts



Solution, Contribution & Innovation

How can you...
What solution ....

Situational Prompts

If you are...
Pretend that you are ...

2023-2024 Writing Prompt Rubric

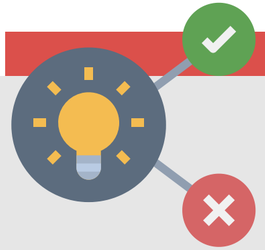
Indicators	0 No Evidence	1 Limited Evidence (Response indicates majority of the criteria below)	2 Full Evidence (Response indicates the majority of the criteria below)	Score (Record Score in this column)
Questioning/ Processing	No evidence	• Questions/processes are basic and lack specificity • Poses closed-ended questions • Basic exploration of thought	• Questions/processes are probing and specific • Poses opened-ended questions • Highly developed/purposeful exploration of thought which challenge assumptions	-close vs open-ended questions • first bullet in Info Processing
Information Gathering/ Analysis	No evidence	• Irrelevant, illogical, and/or confusing thought processes • Superficial information gathering including limited and/or unreliable resources • Minimal analysis of topic	• Relevant and logical thought processes based on evidence • Information gathering includes multiple methods of collection including valid and reliable resources • In-depth analysis and synthesization of topic	
Fluency/ Originality of Ideas	No evidence	• Generates few ideas (1 or 2) specific to the topic • Minimal explanation of ideas • Ideas lack originality	• Generates multiple ideas (3 or more) specific to the topic • Provides clear and concise explanation of ideas • Ideas are original and demonstrate unique viewpoints	• specified numbers • Resourcefulness
Presentation/ Reasoning	No evidence	• Presents ideas in a poorly organized manner which does not directly address the topic and/or has minimal practical application • Presents vague evidence of meaningful possibilities • Minimal acknowledgement or pursuit of a counter argument	• Presents ideas in a clear and well-organized manner which directly addresses and can be applied to the topic • Presentation provides detailed/clear descriptions of meaningful possibilities • Clearly presents and/or pursues counter argument(s)	• Open Mindset, Problem Solving and Info Processing
Point of View/ Perspective	No evidence	• Describes potential impact on limited audiences or audiences that would only be minimally impacted	• Describes impact a wide range of audiences or one where the solution would have a major impact	• audience impact
Total **10**				

YOUNG SCHOLARS CIRCLE

Literacy, STEM & Test Prep for the Gifted

Every Student is a Masterpiece!

Problem & Research Questions

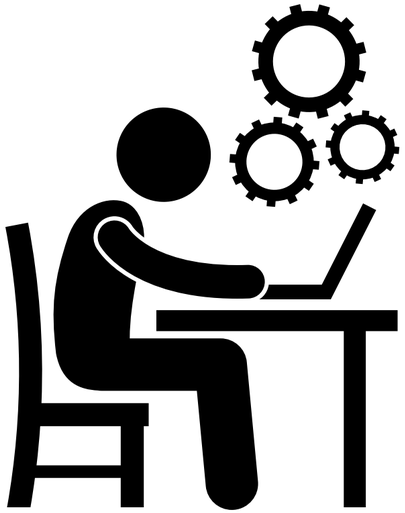


Goal, Purpose & Hypothesis

Methodologies & Tools to Test the Hypothesis

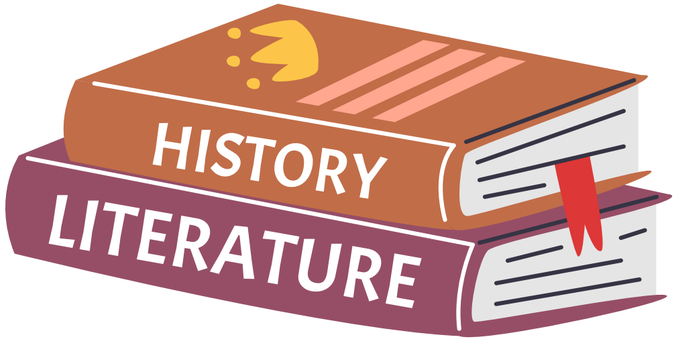
Possible Findings, Data Presentations and/Alternative Approaches

Research how your work fits into the existing literature



Your Work

How does your proposal fit into the current studies



Cite sources

Sample Language Stems

Some scientific questions that I will initially ask to guide my research are:

In the research journal, Dr. _____ studied (logos).
Dr. ___ found out that _____
Another source is _____.
The IUCN criteria for extinct/extinct in the wild/endangered are _____.
The Y species _____ based on the IUCN is currently _____.
According to the US Fish and Wildlife Endangered Species Act, _____.

Sample Language Stems

Delisting a species from the endangered list is a complex scientific process in conservation biology. It involves careful study and analysis to ensure the species has recovered and is no longer at risk of extinction, or the other way around, extinct. Scientists use various methods/processes to assess the population size, habitat quality, and species threats. They also consider the effectiveness of conservation efforts and the species long-term prospects. They conduct population surveys, genetic analyses, and habitat assessments to gather data on the species' population size, genetic diversity, and habitat suitability.

Some questions to ask yourself

- What do we know about the topic?
- What open questions and knowledge do we still need to learn?
- Why is this information important?

QUESTIONING/PROCESSING

- questions/processes are probing and specific
- open-ended questions
- highly developed/purposeful exploration of thoughts that challenge assumptions.

Closed Questions

- single short answers
- ends conversation

Open-Ended Questions

- long answers
- opens conversation

Closed Questions

Has the monitoring of the restoration project been performed?

Was the project part of the larger national restoration?

When was the X species last seen in Y place?

What was the funding source of the previous conservation project?

Who was involved in the conservation project in the Y community?

Open-Ended Questions

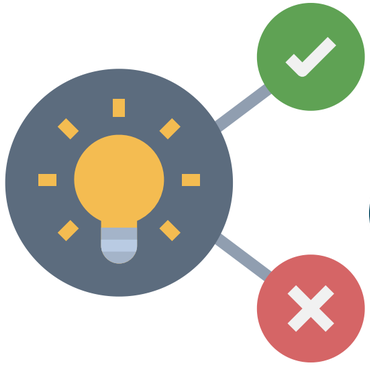
How do ecological corridors affect the population size of species X living in fragmented habitat Y?”

How does environmental education influence the behavior of the local community Z toward species X?”

What benefits can an ecotourism program bring to local community Z?

How are ecotourism visitors in area Y affecting the population density of species X?”

Testable Questions



Goal, Purpose & Hypothesis

TABLE 1. Constructing a hypothesis.

A hypothesis is a testable explanation of an observed occurrence in nature, or, more specifically, *why* something you observed is occurring. Hypotheses relate directly to research questions, are written in the present tense, and can be tested through observation or experimentation. Although the terms "hypothesis" and "prediction" are often incorrectly used interchangeably, they refer to different but complementary concepts. A hypothesis attempts to explain the *mechanism* underlying a pattern, while a prediction states an expectation regarding the results. While challenging to construct, hypotheses provide powerful tools for structuring research, generating specific predictions, and designing experiments.

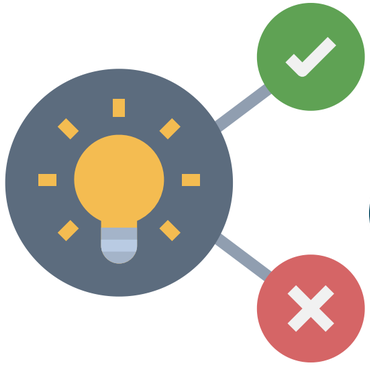
Example:

Observation: Brown-headed cowbird nestlings refrain from ejecting host offspring from the nest even though those offspring compete for limited parental resources.

Research question: Why do nestling cowbirds tolerate the presence of host offspring in the nest?

Hypothesis: The presence of host offspring causes parents to bring more food to the nest.

Prediction: Cowbird nestlings will grow at a faster rate in nests that contain host offspring.

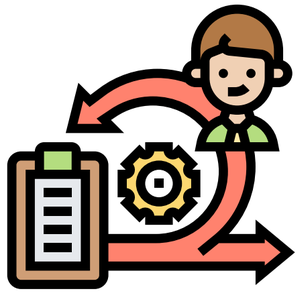


Goal, Purpose & Hypothesis

However, other wildlife biologists discovered that (other sources), so I would _____. Delisting an endangered species from the Endangered Species list prematurely would result in XYZ reasons because XYZ justifications. There were also reported _____, according to _____. Another point of view might be XYZ's alternative viewpoint and XYZ's alternative reasons.

Some of my hypotheses/My hypothesis is ____

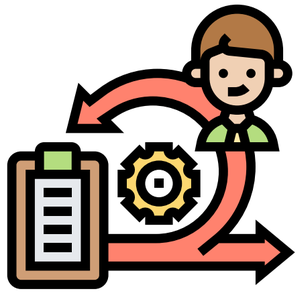
My purpose is/Some of my objectives are____.



Methodologies & Tools to Test the Hypothesis

TABLE 2. Common parameters included in the Materials and Methods section.

- Site characterization:
  - Study organism used, its origin, any pre-experiment handling or care
  - Description of field site or site where experiment was performed
- Experimental design:
  - Step-by-step procedures in paragraph form
  - Sample preparation
  - Experimental controls
  - Equipment used, including model numbers and year
  - Important equipment settings (e.g., temperature of incubation, speed of centrifuge)
  - Amount of reagents used
  - Specific measurements taken (e.g., wing length, weight of organism)
- Statistical analyses conducted (e.g., ANOVA, linear regression)



Sample Language Stems

Once the data is collected, scientists evaluate it using statistical models and peer-reviewed research. This rigorous approach ensures that decisions to delist a species are based on sound scientific evidence. (sample only based on your readings.)

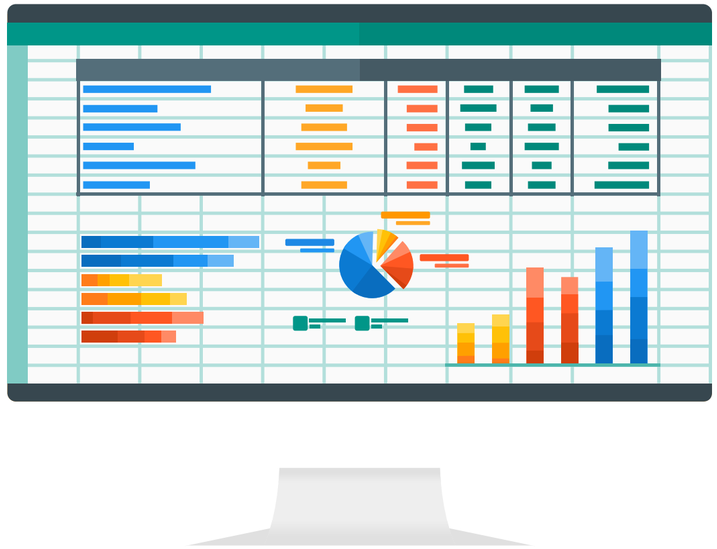
By comparing these data to the criteria set by the government, wildlife biologists can determine if a species is no longer at risk of extinction. If the species meets the requirements or standards, a proposal is submitted to the government for review. The government then evaluates the proposal and decides whether or not to delist the species. The scientific method ensures that decisions to delist species are based on sound evidence and not influenced by personal biases or political agendas.

Based on recent research (cite source) about Y species, Dr. ___(logos) found out that____. The team used field surveys and observation tools such as _______ (cite them). Another biologist, on the other hand, used _______, and they found out that ______. Contrary to these findings, another team discovered in X date that ____, and their methodology was _____.

Based on these studies, I would use __________ methodologies, and I will utilize ____ tools to do my research. My hypothesis is/are ______.

The processes that the biologists use are ______. I will use ______. Discuss the methodologies. Discuss your methods and tools in this paragraph and provide evidence or sources like previous journals or studies done by wildlife biologists. Verbalize your thought processes as to why you would do the same thing or reasons you would do them differently.

Possible Findings, Data Presentation & Alternative Approaches



Sample Language Stems

Could you discuss other wildlife biologists' findings in this paragraph and a summary? These would serve as your evidence. Transition sentence….. (Similarly, Unfortunately, etc.) Discuss your hypothesis and some scenarios if your findings might not go what you expected or your hypothesis proved untrue. Discuss how you would modify your experiment or your decision. Discuss how other scientists analyze their data or synthesize their data. Discuss yours - how would you synthesize your data?

Closing sentence here. Thanks to the efforts of ___- and the collaboration of many scientists (cite your source or identify the team), several species were successfully delisted from the endangered list (or the other way around). It was a reminder that with proper conservation measures and collective action, we can make a difference in saving our planet's incredible wildlife. Please write your conclusion.

Short closing sentence. Apply the “ending strategies” from our writing techniques.