

Biology 30/ELA A30 Critical Analysis Ecology Inquiry Project

Over the course of this semester, you will write FOUR (4) critical analyses of four different informational articles about human activity and its effects on an ecosystem. Articles may be from newspapers, magazines, or scientific journals. You may also use a chapter from a book that discusses specific real-life events (e.g. a specific mining project, rather than mining in general). Part of the assignment is to determine which sources are appropriate sources of scientific information, or to critique articles from sources that are not appropriate (i.e. biased, incorrect, not backed up by research).

These article analyses will be cross-curricular efforts evaluated based on criteria for both the ELA A30 and Biology 30 curricula. You must develop and demonstrate your abilities in research, critical reading and analysis, writing, proposing hypotheses, and understanding the motivations and cultural perspectives behind human environmental actions. It is important for you to realize that these skills are helpful and necessary in all areas of education—they are not confined to separate groups of knowledge!

For each article, you must turn in:

- 1) A photocopy or print-out of your article **with your critical reading notes on it.**
- 2) An analytical response to the article that answers all of the questions listed below.

Critical analysis article responses:

Section One

Use pre-reading and post-reading strategies to analyze how the text's organizational structure and elements (text features like titles, headings and sub-headings, italics/boldface, charts/graphs/pictures, etc.) support or confuse the text's message.

Pre-reading: scan the article for text features, write down the page or paragraph numbers where they occur, and answer any questions about interpreting the features prior to reading.

Post-reading: Answer at least one text feature analysis question for each text feature.

TEXT FEATURE	PAGE(S)	QUESTION FROM TEXT
Article Title		Interpret the title prior to reading the article.
Heading or Synopsis		Evaluate how well the synopsis summarizes the article. Evaluate how well the heading captures the reader's interest, and why. Compare the heading to the title.
Subheading or Subtitle		Analyze how the division of the text with a subheading affect the reader's comprehension. Evaluate its importance.
Quotations		Explain the significance to the text of the quotation, if any. Evaluate its relevance to the whole chapter.
Italics/Boldface Printing		In what way does the use of italics/boldface affect the reader's comprehension? Evaluate its importance.
Chart/Graph		Interpret the chart/graph prior to reading the article. Explain how the chart supports or explicates information given in the main text. Evaluate how well the chart/graph presents its information.
Picture(s)		Analyze how the picture supports or explicates information given in the main text. Evaluate its relevance to the whole article.

Footnotes	Explain how the information offered in the footnotes increases the reader's understanding of the main text. Evaluate each one's relevance to the whole article.
Sidebar concepts	Explain how the sidebar text clarifies or explicates information mentioned in the main text.

Higher achievement:

Come up with different high-level questions of your own about the text features, and answer those instead. You will be marked on both your answer, and the thoughtfulness and sophistication of your question. (Consult Bloom's Taxonomy for how to ask high-level questions!)

Section Two

1. a) Summarize the article.

Read the article a second time, making careful notes (underlining, highlighting, circling, summarizing in the margin, etc.) to identify the main points of the article and the supporting evidence. Your summary should involve a paraphrasing of the main ideas along with specific reference to the most important pieces of supporting evidence.

b) Evaluate the credibility of the author, and identify any of the author's potential biases.

Why should the author's information be trusted? What kind of education or employment does the author have? Was the article peer-reviewed by fellow scientists? Is the author likely to benefit from skewing the information in a particular direction? Is the author writing mostly about facts and research, or about personal opinions?

2. a) Why did you choose this article?

b) What does this article remind you of? Make connections with other articles, news stories, books, TV shows, etc.

3. a) What were two elements of the text that stood out for you, and why?

b) What were three specific sentences or short passages that stood out for you, and why?

4. a) How does the human population depend on the parts of the environment (e.g. water, soil, air) that are being affected by human activity in your article?

b) What kinds of short-term and long-term effects does the human activity described in your article have on the environment? Are these effects positive, negative, or neutral?

c) Describe the ways in which any changes in the environment are likely to affect the human population, and evaluate how significant these effects could be. Are they positive, negative or neutral? Could current positive effects of this human activity become negative in the future?

5. a) Is the human activity discussed in your article sustainable? Why or why not? If not, how could it be made sustainable?

6. a) Analyze and describe the possible human motivations for the activities described in your article. What kind of perspective(s) on the environment could be behind these motivations?

b) Describe your own opinion on what should be done about the issue described in your article in the future. What are your motivations, and what kind of perspective on the environment is behind them?

7. a) Has this article changed your views—on science, ecology, human environmental activities—and if so, how?