

# Use of Science Technologies in Society

## APPENDIX A

NAME: \_\_\_\_\_

## Critical Thinking Poster Assignment and Rubric

### OBJECTIVE

The objective of this assignment is to create a critical thinking poster that will teach people without a science background how to evaluate scientific information from science journals, the media, and political organizations.

### INSTRUCTIONS

1. You may work individually or you may work in pairs for this assignment. However, groups of three or more members are not permitted.
2. The poster must be done using Ledger Size (11" by 17") paper.
3. The poster may contain any type of medium such as 3-dimensional pop-out art, hand-drawn illustrations, digital images or photographs, so long as it is original, creative, and artistic.
4. The poster must contain one explicit message that will teach non-scientists how to evaluate scientific information from science journals, the media, and political organizations. For example, this may be accomplished in the form of a simple question or a satirical cartoon.
5. The poster must also contain one or more implicit messages that will reinforce human rights, for example, ableism, ageism, classism, faithism, heterosexism, racism, and/or sexism.

### RUBRIC

25 marks:	Level R	Level 1	Level 2	Level 3	Level 4
Basic Criteria	Non-ledger sized paper was used.	The poster was congested with too many words and/or images.	The poster had many empty spaces with no functional use.	The entire ledger sized paper was appropriately used.	The entire ledger sized paper was effectively used.
Artistic Quality	The poster had no organization and was not neatly done.	The poster was not organized, but was somewhat neatly done.	The poster was somewhat organized, and somewhat neatly done.	The poster was very organized, very neatly done, and aesthetically pleasing to some.	The poster was very organized, very neatly done, and aesthetically pleasing to all.
Originality and Creativity	The poster was duplicated from a classmate.	The poster's concept was copied from a media source.	The poster's concept was a parody from popular culture.	The poster's concept was original, creative, but common.	The poster's concept was original, creative, and clever.
Explicit Message	There was no explicit message that taught non-scientists how to critically evaluate scientific information.	The message was very ambiguous and did not reflect critically thinking skills.	The message was ambiguous, but did reflect critically thinking skills.	The message was understood and taught how to critically evaluate scientific information to scientists only.	The message was clearly understood and effectively taught how to critically evaluate scientific information to all.
Implicit Message	There were no implicit messages that reinforced human rights such as the seven "isms".	The implied messages were very ambiguous and did not reinforce human rights.	The implied messages were ambiguous, but did reinforce human rights.	The implied messages were understood and reinforced human rights to only some individuals.	The implied messages were clearly understood and effectively reinforced human rights to all.

# Use of Science Technologies in Society

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## APPENDIX B

NAME: \_\_\_\_\_

## Researched Opinion Paper Assignment and Rubric

### OBJECTIVE

The objective of this assignment is help students develop global awareness and further develop critical thinking skills by researching current events on genocide, atrocities and catastrophes against humanity, and reading recently published scientific studies on racial biology.

### INSTRUCTIONS

1. You may do the research in pairs. Groups of three or more members are not permitted. However, each individual must submit their own original paper.
2. The researched opinion paper must contain a cover page with an original and creative title of the paper's theme, author's name, research partner's name, school's name, course code, course name, teacher's name, and the due date.
3. The bibliography must contain a variety of sources such as encyclopedias, books, journals, and not just internet websites. All references must be from appropriate authorities. The paper must contain embedded citations that use all the references listed in the bibliography.
4. The researched opinion paper must be typed using Arial 12 point font, single spaced, and be no longer than two pages, excluding the cover page and bibliography.
5. In the researched opinion paper, answer the following questions in separate paragraphs in the following order:
  - a. In this century, DNA technology has been revolutionary in medical advances, solving crimes, finding biological parents for adopted children, and genetically engineering agriculture to feed a growing human population. Explain what impact the application of these genetic technologies might have on our democratic society. You may use themes from the movie GATTACA, but I want to read at least two original thoughts. In addition, discuss why is it erroneous to consider improving the human genetic pool, for example, eradicating people with disabilities and/or asocial personalities. Use historical references to support your ideas and opinions.
  - b. The Jewish Holocaust was a horrific part of human history and we have all said "never again". Discuss three current events in today's world on genocide, atrocities and catastrophes against humanity where the world is still either behaving as perpetrators or bystanders. Each current event must be supported by appropriate references.
  - c. Remember that the Jewish Holocaust was not the fault of one man. There are many attitudes today that resemble those in the past. Explain how the "Aryan Race" is similar to the notion of "White Supremacy" in today's western culture. Explain how "the fear of terrorism" resembles the propaganda in the past. Discuss how human attitudes and behaviors all over the world like these can bring about genocides, atrocities and catastrophes against humanity, and let history repeat itself. Discuss how the government and media influence our perspectives and what issues in society are important to us. You must support your ideas and opinions with appropriate references. Use only articles on racial biology from scientific journals published no earlier than the year 2001 to support the theory that human race does not exist.
  - d. Discuss an action plan that could help our society prevent and/or stop history from repeating itself. You must be specific and explain in great detail how your action plan can accomplish this particular goal. Make sure that your response is not ambiguous or generic in nature. Use historical references to support the success of your action plan.

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## RUBRIC

Criteria		Level 1	Level 2	Level 3	Level 4
Mechanics (30 marks)	Organization	Little or no organization and was difficult to read.	Organization was apparent and was written somewhat coherently.	Organization was well planned, adequate, and appropriate where it was easy to read and understand the information presented.	Organization was well designed, polished, and clever where it was easy to understand and follow the flow of logic throughout the essay.
		No central thesis.	Undefined thesis or thesis was not clearly stated.	Focus of one central thesis was maintained most of the time throughout essay.	Focus of one central thesis was maintained consistently throughout essay.
		Paragraphs had unrelated topics, flowed confusingly, and were illogically or randomly linked together.	Paragraphs had no central topic, but flowed sequentially, and were linked coherently.	Some paragraphs had a topic sentence and followed some logical sequential flow. Paragraphs were usually linked efficiently with coherence and unity.	Each paragraph had a clearly stated topic sentence and followed a logical sequence. Paragraphs were always linked elegantly with a high degree of coherence and unity.
	Language	Vocabulary was limited.	Vocabulary was adequate, but repetitive.	Vocabulary was mature, appropriate, and variable.	Vocabulary was mature, highly effective, and variable.
		Poor sentence structure.	Used simple sentences.	Used simple sentences and compound sentences.	Used simple sentences, compound sentences, and complex sentences.
		Many spelling, grammar, and/or punctuation errors.	Some spelling, grammar, and/or punctuation errors.	Minor spelling, grammar, and/or punctuation errors.	All spelling, grammar, and punctuation were accurate.
Content (30 marks)	Research	Sources were unreliable.	Sources were reliable, but biased.	Sources were reliable, objective, but from similar authorities.	Sources were reliable, objective, and from different authorities.
		Did not use any sources.	Used only one source to illustrate comparison and current examples.	Used and synthesized from a few sources to illustrate comparison and current examples.	Used and synthesized from a variety of sources to illustrate comparison and current examples.
		No embedded citations.	Embedded citations were used inappropriately.	Embedded citations sometimes were ineffective in supported the idea, opinion, or showed evidence to support the argument.	Embedded citations always effectively supported the idea, opinion, or showed evidence to support the argument.
	Voice	Superficial arguments where ideas were poorly developed.	Purposeful and methodical arguments where some ideas were developed.	Inquisitive, insightful, and original arguments where most ideas were well developed.	Thought-provoking and original arguments where ideas were thoroughly developed.
		Voice was often limited to a personal and vernacular register.	Voice attempted to create interest with an occasional awareness of an audience.	Voice captures the reader's attention and presented a variety of stimulating information.	Voice engaged the reader's mind and inspired critical thinking and awareness on the topic.
		Audience was unaffected by writer's perspectives.	Audience was persuaded by writer's perspectives.	Audience was emotionally moved by writer's perspectives.	Persuaded the audience to "save the world" now!!!