

Environmental Issue Paper

Learning Objectives:

- As human impacts on the natural environments have become greater, there are an increasing number of environmental issues that we and our future generations have to face. It is critical for biology majors to be aware of such environmental issues surrounding us and also be able to explain them to the general public. The goals of this project are: by the end of the semester, students will be able to
 1. talk about contemporary environmental issues that we are currently facing.
 2. explain newspaper articles regarding environmental issues to the general public by discussing underlying ecological and evolutionary principles.
 3. present their projects in both oral and written format in a scientific manner.
- This exercise also fosters abilities to collaborate with others, conduct literature search, synthesize information from diverse sources, analyze scientific papers, and develop your own assessments and discussion on a given environmental issue.

Procedure:

- This is a group exercise (two or three students). All students in a group are expected to make an equal contribution to the project. Although we will not evaluate each student's contribution, please contact us as soon as possible if your group experiences any conflicts or problems. If there is enough evidence suggesting some student is not making an effort, it will be reflected on his/her class participation grade.

Topic Selection:

- Find an article about environmental issues published within the last 12 months in a national or regional newspaper (e.g., New York Times, Washington Post, Daily Item) or credited internet news sources (e.g., CNN and BBC) that are targeted for the general public. Examples of such topics include, but not limited to, wildlife conservation, global climate changes, pollutions, human resource exploitation, and environmental policy. Please feel free to ask your instructor if you have any questions or difficulty in finding a topic. Within the lab section, every student group has to find its unique newspaper article on a first-come, first-served basis. All topics and sources must be provided to and approved by the instructor by Feb 18 (Mon). This means that the sooner you find an article, the better.
- Do scientific research on the selected topic by reading related scientific papers and books. A newspaper article often refers to scientific studies that the article is based on. You may want to find such newspaper articles, which make subsequent scientific information search easier. Otherwise, "Web of Knowledge" and "Google Scholar" will be good on-line sources to find related scientific information. Ask your instructor for a help if you need one.

Analyses:

- You will analyze whether scientific data and findings are accurately reflected on the newspaper article, and whether the message in the newspaper article is effectively addressed to the general public. Ask yourself questions such as: Is the newspaper article biased? If so, how and why? Is it easy enough for the public to understand? How important it is for the general public to know about the issue?

Summary Paper Format:

- Submit a 1-2 page summary (excluding a reference list) via TurnItIn by **March 25 (Monday) 11:59PM.**
- Times New Roman font 12, single-spaced, one-inch margins
- A paper needs to have 1) title, 2) class information, 3) names of students, 4) summary of your project, and 5) reference list
- Structure: discuss your newspaper article first followed by scientific articles. Then, analyze the newspaper article against the scientific articles.
- When you cite newspapers, scientific papers and books in your text, please follow the formats in the following examples:

Newspapers:

(Bryce 2012, October 24)

Scientific papers and books:

A single author: (Takahashi 2007)

Two authors: (Allendorf and Luikart 2007)

More than three authors: (Shaffer et al. 2004)

- A list of references cited should be in a separate page(s) and has to contain at least two references listed in an alphabetical order by the first author's last name. Please follow the formats in the following examples:

Newspapers:

Bryce E. 2012, October 24. Insights Into the Koala's Genetic Challenge. New York Times.

Scientific papers:

Shaffer, H. B., G. B. Pauly, J. C. Oliver, and P. C. Trenham. 2004. The molecular phylogenetics of endangerment: cryptic variation and historical phylogeography of the California tiger salamander, *Ambystoma californiense*. *Molecular Ecology* 13:3033-3049.

Takahashi, M. 2007. Oviposition site selection: pesticide avoidance by gray treefrogs. *Environmental Toxicology and Chemistry* 26:1476-1480.

Books:

Allendorf, F. W. and G. Luikart. 2007. *Conservation and the Genetics of Populations*. Blackwell Publishing Ltd, Malden, MA.

Oral Presentation Format:

- A ~8 minute talk including 2~3 minute period of questions & answers.
- PowerPoint format. I will provide tips of making PowerPoint slides in one of the labs.
- A structure of a presentation follows the structure of the paper
- Use of figures, tables, and photos is highly encouraged.

Topic selection	10%
Final paper	40%
<u>Oral Presentation</u>	<u>50%</u>
Total	100%