

**Professor Catalina Aristizabal**  
**Lesson Plan for Biology and the Environment (BSC 1050)**  
**Department of Biology, Health, and Wellness, Kendall Campus**

**Objectives:**

- Students will learn about the main environmental issues that our society is facing.
- Students will learn about current topics in Environmental Science by doing a class presentation.

**Lesson Plan:**

- Throughout the course of the semester the class Biology and the Environment will be divided into four Units. These Units are:
  1. Ecosystems, Energy, and Living Organisms
  2. Human Health and Population Issues
  3. Sources of Energy
  4. Water, Food Resources, Air Pollution, and Climate Change
- After each Unit has been covered in class (via lectures, reading assignments, and videos) students will do a short class presentation about current topics that are related to the material that was covered in class.

***Topics for Student Presentations***

Date	Topics for Student Presentations	Student Names
	<p><b>UNIT 1. Ecosystems, Energy, and Living Organisms</b></p> <ol style="list-style-type: none"> <li>1. What is a keystone species? Give an example (different from the ones in your textbook) of a keystone species that is in the brink of extinction. How will its extinction possibly affect other organisms in the ecosystem (give specific examples)?</li> <li>2. What is the current status of shark populations in the ocean? How are sharks being affected by human populations?</li> <li>3. How do humans affect nutrient cycles? What are some of the side effects of these alterations?</li> </ol>	

	<p><b>UNIT 2. Human Health and Population Issues</b></p> <ol style="list-style-type: none"> <li>1. To what kinds of toxic chemicals are we exposed on a daily basis? How do these chemicals affect our health (give specific examples)?</li> <li>2. How does population size affect the quality of life of humans? Do we currently know what the earth's carrying capacity is?</li> <li>3. How can human populations grow sustainably? Do you think this is an attainable goal? Relate this to the "Tragedy of the Commons".</li> </ol>	
	<p><b>UNIT 3. Sources of Energy</b></p> <ol style="list-style-type: none"> <li>1. What are the main advantages and disadvantages of using oil as the main source of energy for human populations?</li> <li>2. What are some of the effects of an oil spill on marine organisms? What are some of the indirect effects of an oil spill on human populations?</li> <li>3. What is acid rain? What causes acid rain? In what areas of the world is acid rain a problem? How does it affect soil organisms?</li> </ol>	
	<p><b>UNIT 4. Water, Food Resources, Air Pollution, and Climate Change</b></p> <ol style="list-style-type: none"> <li>1. What are the advantages and disadvantages of organic agriculture? Do you think organic agriculture is a solution to the world's food problems?</li> <li>2. What are the main advantages and disadvantages of using Genetically Modified Organisms in agriculture? Give examples of crops that have been genetically modified.</li> <li>3. How are hurricanes formed? Why is it said that Climate Change will increase the frequency and intensity of hurricanes?</li> <li>4. What is climate change? What is the evidence that indicates that climate change is occurring? Is there scientific evidence that indicates that climate change is not occurring?</li> </ol>	