

Natural Sciences

Students can:

1. **Articulate the relevance of the Natural Science course to their general education.**
2. Explain how knowledge of natural science is applicable to their lives.
3. Apply appropriate scientific methodology within one of the natural sciences.
4. Evaluate the validity and limitations of scientific theories and claims.

Instructors can choose from one of 2 passages to assign the students:

Passage 1.

The ozone layer contains about 90% of atmospheric ozone and is located in the stratosphere. It is vital to human well-being because it shields us from harmful ultraviolet radiation from the Sun. In the mid-1970s, it was discovered that chlorine atoms released from CFCs were destroying ozone and depleting the ozone layer. As a result, there was an increase in ultraviolet radiation at Earth's surface and this may increase the occurrences of skin cancer and eye cataracts. The most severe loss of ozone occurred over Antarctica during the springtime and is known as the "ozone hole". In response, the Montreal Protocol was written to address this global issue. As a result of compliance to the Protocol and its Adjustments, the accumulation of ozone depleting gases has slowed and begun to decrease.

Passage 2.

Coal, oil and natural gas remain the primary sources of energy in the US. This is problematic because all of these sources are finite. Eventually the sources will be completely depleted or their efficiency rating will be either null or negative. (The efficiency rating is a measurement of the energy inputted compared to the energy outputted.) Renewable energy sources such as solar and wind power are beginning to replace fossil fuels, but still only provide 5% of overall energy to the US. Little discussion is given to nuclear power, which provides 8% of overall energy to the US. Although nuclear power produces low amounts of greenhouse gases compared to fossil fuels, it produces radioactive waste that can be extremely harmful if released into the atmosphere. Additionally uranium, which is the source of nuclear power, is a finite resource and therefore not sustainable.

Assignment to the student:

Write a single, well developed paragraph in which you address how you could study an area related to the above information. Use specific examples from the course that would apply to understanding the issue.

Grading Rubric

Learning Objective #1: Students can articulate the relevance of the Natural Science course to their general education.				
Does not meet criteria	Beginning	Developing	Proficient	Advanced
Cannot articulate why the natural science discipline is relevant.	<i>Limited</i> articulation of why the natural science discipline is relevant.	Articulates <i>in general</i> why the natural science discipline is relevant.	Articulates in <i>satisfactory detail</i> why the natural science discipline is relevant.	Demonstrates a <i>thorough</i> understanding of the natural science discipline and its relevance.