

**BIOLOGY 2420
RE-ENERGIZE ASSIGNMENT**

MICROBIOLOGY FOR NON-SCIENCE MAJORS

Purpose: To inform and engage students in the role of microbiology in environmental sustainability.

As some of you may be aware, climate change is a growing concern for governments and communities around the world. As such, many scientists are currently researching various ways to find solutions to these environmental concerns. One viable possibility for these problems may be through the discipline of microbiology.

Instruction: You are to write a 3-5 page scholarly researched paper concerning the role of microbiology in environmental sustainability.

Find an incidence where microbiology is playing a role in improving environmental quality (e.g. how is microbiology playing a role in helping the environment?)

Some examples of microbial research and technology include:

- Microbes and bioremediation
- Microbes and energy production
- Microbes and their effects on environmental organisms important to environmental ecosystems
- Microbes and their role in climate change
- Microbes and geography
- Microbes and nanotechnology

Some places to find ideas on the topic:

- Your textbook-chapter 8, recombinant DNA technology (page 253); chapter 25-Applied and environmental microbiology (starting on page 792).
- United States Geological Survey <http://microbiology.usgs.gov/>

Assignment details: The paper will need to be between 3-5 pages of written text and a citation paper with at least 3 peer-reviewed articles on your subject. You can include figures and/or tables but they do not count toward the length of the paper. A rubric is attached which will give you how I will grade the assignment.

Our department is currently partnering with Texas State University on research concerning green energy. Along with completing the paper, you are to participate in this research by completing some brief surveys on renewable energy and STEM career fields.

You will need to choose a topic and have it approved by me before starting the assignment. No topic will be chosen twice, so first come first serve!!!

*****Final Paper assignment will be due on Friday, November 30, 2015 and will be submitted by portal only!!! No exceptions will be made for late submission******