# **Applied Natural Sciences**

#### **Planning Document**

#### Choose Your Issue

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**Objective**: Choose the topic in the natural sciences that you will research for your Planning Document and Presentation.

The first step toward completing your Planning Document and Presentation for this course is to pick a topic within the natural sciences to study.

### **Topic Choices**

Below is a list of potential topics in the natural sciences that you could choose to research for your Planning Document and Presentation. These topics will all include a potential question and an unacademic source that you can use to see if you are interested in the topic and question. If none of these fields interest you, you can choose your own topic with the approval of your instructor. Remember that an appropriate topic has to be able to be related to the natural sciences and able to be investigated scientifically.

#### **Genetically Modified Organisms**

The use of genetically modified organisms (GMOs) is a controversial topic. Public education on GMOs is generally lacking, and there are outstanding questions about the potential hazards of extensive GMO use.

<b>Example Question</b>	Further Reading
Should products containing genetically modified organisms be required to include a label indicating the presence of GMOs?	"The Truth about Genetically Modified Food"

#### **Electric Cars**

As concerns about the use of fossil fuels increase due to climate change, there has been a concerted movement to limit the use of these fuels in transportation. The push for electric vehicles has gained strength as battery and energy transportation technologies have advanced, but many hurdles still remain.

<b>Example Question</b>	<b>Further Reading</b>
What advances must be made in electric car technology and usage to have an impact on climate change?	"Electric Cars Are Not Necessarily Clean"

#### Commercial Nuclear Energy

As countries try to limit their carbon emissions, sources of energy that do not directly produce carbon emissions are in higher demand. Nuclear energy is a controversial alternative to plants that produce large amounts of carbon emissions.

<b>Example Question</b>	Further Reading
Should nuclear energy be considered as a viable alternative to less environmentally friendly energy sources like coal and natural gas?	"New York State Has a Plan to Rescue Nuclear Power"

#### **Genetic Engineering**

Even with the evolution of science, there are diseases and disorders that humans have trouble treating. As our knowledge of genetics has advanced, the question of whether it is possible (or ethical) to avoid these afflictions entirely has been raised.

<b>Example Question</b>	<b>Further Reading</b>
Should humans take advantage of genetic engineering in an effort to eliminate diseases and disorders that are currently incurable?	"Engineering the Perfect Baby"

#### Ocean Acidification

Since the Industrial Revolution, the Earth has had to deal with ever-increasing levels of carbon dioxide being released into the atmosphere. Of the many effects of increased carbon dioxide levels, one that often gets forgotten is on the world's oceans. The oceans act as one of the world's main carbon dioxide sinks—places or objects that help deal with carbon dioxide. This increase leads to a chemical reaction that results in ocean waters becoming more and more acidic.

<b>Example Question</b>	Further Reading
What are the effects of ocean acidification on specific marine ecosystems as well as terrestrial coastal communities?	"Ocean Acidification"

## **Biodiversity Conservation**

Human-caused climate change combined with our need for additional land for habitation has led to changing and shrinking environments for numerous species. The increased stress on these organisms has resulted in certain species' populations shrinking dramatically, some to the point of extinction. The loss of these species—and of biodiversity in general—has led to more emphasis on conservation of specific areas as habitats for great biodiversity.

<b>Example Question</b>	Further Reading
What habitats are the most biodiverse, what is being done to protect them, and what effects would their loss have?	"Conservation of Biodiversity"

Use the writing template below to select an issue in the natural sciences to research for your Planning Document and Presentation.

Below is your first writing template. This template will ask you what issue you have decided to research and why you chose it. Remember that these templates will help you build your Planning Document and Presentation, so be sure to think about your grammar and formatting in your responses.

Once you have completed the template below, go into <u>Brightspace</u> and respond to the first discussion prompt.

Select Your Issue in the Natural Sciences

# To begin completing your Planning Document, fill in the following writing template.

Writing Template

What issue have you chosen to research in the natural sciences? In a few sentences describe why this issue is significant.

ItalicBold

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Rich text editor

Please enter your full name.

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Sample text: Phineas J. Whoopee
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a few seconds ago

To complete this template, you must click the "Add to Planning Document" button. If the button cannot be clicked, make sure you have responded to all prompts in the template.

When you click the button to download your check-in in the writing template above, the file may be automatically saved to your Downloads folder or to another location you've specified, depending on your browser's settings. To ensure that your document is correctly formatted, you must open it in an application that fully supports the DOCX format, such as Microsoft Word.

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