

## SCI 100 Project 1 Guidelines and Rubric

### Overview

*Natural science does not simply describe and explain nature; it is part of the interplay between nature and ourselves.*

—Werner Heisenberg

Studying the natural sciences allows us to explore both the physical and biological aspects of the natural world as well as how those aspects affect us. As a consumer and voter, you will be exposed to news stories that discuss scientific concepts as diverse as pharmaceuticals, environmental management, nanotechnology, and plastics. Because of the prevalence of natural science concepts in our daily lives, it is important to develop perspectives in the natural sciences and to have a basic understanding of natural science principles.

There are three projects for this course. In Project 1, you will select a news story and explore the natural science topic of the news story using the [Topic Exploration Graphic Organizer Template](#). Your exploration of the topic will include a description of the evidence surrounding the topic, potential questions that a natural scientist might ask related to the topic, and a discussion of where you can find more information about your topic. The work you do on this project will directly support your work on Project 2 (a question development worksheet) and Project 3 (a presentation). These projects are due later in the course.

Project 1 will assess the following course outcome, which you will focus on throughout Theme: Understanding the Scientific Process:

- Determine fundamental approaches to scientific research in addressing questions related to the natural world

### Prompt

Review the graphic organizer template and [this graphic organizer sample](#). Your graphic organizer should address the following prompt: Visit the [ScienceDaily](#) website and select a news story that interests you and has been published within the past six months. Answer the questions in the graphic organizer template, based on your chosen news story.

Specifically, the following **critical elements** must be addressed and will be graded using the Project 1 Rubric:

- I. Describe the **science topic** discussed in your news story. Be detailed in your description, providing scientific background about the topic.
- II. Identify the **main idea** or thesis in the news story you selected. In other words, what is the key concept being expressed or examined in the news story?

- III. Describe the **evidence** that supports the main idea of the news story. For example, if the main idea of your news story is that volcanoes can cause massive amounts of damage, your supporting evidence should consist of examples of volcanoes and the damage they caused.
- IV. Pose **questions** that a natural scientist might be interested in, based on the main idea and supporting evidence that you identified. For instance, you might ask questions about volcano prediction or the causes of volcanic eruptions.
- V. Where could you look for **more information** about the science topic discussed in the news story and the questions that you posed? You do not need to list specific sources, but your response should focus on the types of sources you could use to research the topic and questions.

### Supporting Work and Resources

Throughout Theme: Understanding the Scientific Process, you will have these opportunities to work directly on different elements of this project:

1. In learning block 1-2, you will find a news story on a subject that is interesting to you and then answer a few questions related to that story. The news story must be related to the natural sciences, should be chosen from the [ScienceDaily](#) website, and should have been published within the past six months. You will use this same news story throughout the theme.
2. In learning block 1-4, you will summarize the news story that you chose in learning block 1-2. You will also begin to search various sources to start to learn more about the science topic you identified.
3. In learning block 1-5, you will have an opportunity to ask some scientific questions of your own.
4. In learning block 2-1, you will be turning your attention back to your own news story and considering the data or evidence that is provided in support of the research that is being reported. Also, you will answer the question “Do you feel that the information presented in your news story is valid and reliable?”

## Project 1 Rubric

**Guidelines for Submission:** Your submission for this project is your completed topic exploration graphic organizer, using the template provided.

Critical Elements	Exemplary (100%)	Proficient (85%)	Needs Improvement (55%)	Not Evident (0%)	Value
<b>Science Topic</b>	Meets “Proficient” criteria, and description demonstrates insight into science topic	Describes science topic discussed in selected news story, detailing scientific background about topic	Describes science topic discussed in selected news story, but with gaps in detail or accuracy regarding topic or scientific background	Does not describe science topic discussed in selected news story	19
<b>Main Idea</b>	Meets “Proficient” criteria, and main idea or thesis demonstrates insight into news story	Identifies main idea or thesis in selected news story	Identifies main idea or thesis in selected news story, but with gaps in accuracy	Does not identify main idea or thesis in selected news story	19
<b>Evidence</b>	Meets “Proficient” criteria, and supporting evidence demonstrates deep understanding of main idea of news story	Describes evidence that supports the main idea of news story	Describes evidence that supports the main idea of news story, but with gaps in detail or accuracy	Does not describe evidence that supports the main idea of news story	19
<b>Questions</b>	Meets “Proficient” criteria, and questions demonstrate strong grasp of approaches to scientific research	Poses questions that a natural scientist might be interested in, based on identified main idea and supporting evidence	Poses questions that a natural scientist might be interested in, but questions are not based on main idea and supporting evidence	Does not pose questions that a natural scientist might be interested in	19
<b>More Information</b>	Meets “Proficient” criteria, and types of sources demonstrate strong grasp of approaches to scientific research	Identifies appropriate types of sources that could be used to find more information about science topic and questions posed	Identifies types of sources that could be used to find more information, but sources are not appropriate for science topic or questions	Does not identify types of sources that could be used to find more information	19
<b>Articulation of Response</b>	Submission is free of errors related to citations, grammar, spelling, syntax, and organization and is presented in a professional and easy-to-read format	Submission has no major errors related to citations, grammar, spelling, syntax, or organization	Submission has major errors related to citations, grammar, spelling, syntax, or organization that negatively impact readability and articulation of main ideas	Submission has critical errors related to citations, grammar, spelling, syntax, or organization that prevent understanding of ideas	5
<b>Total</b>					<b>100%</b>