**Assignment 3:** Case Study Draft

**Assignment Summary:** In this assignment, your group will draft a complete case study that presents a socioscientific issue through a narrative involving multiple stakeholders. The case should be realistic, grounded in evidence, and structured to engage a general audience. Your draft will include five required sections: Title, Abstract, Story (including stakeholder dialogue and scientific evidence), Discussion Summary, and References. This is your opportunity to combine narrative structure with rigorous evidence-based reasoning to explore how science and values intersect in public decision-making.

**Course Learning Outcomes (LO) Assessed:**

* **Use** peer-reviewed scientific sources to support evidence-based reasoning.
* **Identify** and **distinguish** between positive (descriptive, fact-based) and normative (opinion-based, value-driven) claims.
* **Evaluate** the credibility and relevance of scientific claims related to the universe, evolution, and human health using peer-reviewed evidence.
* **Assess** scientific findings that impact your life and future to make informed personal decisions.
* **Communicate scientific concepts related to** the universe, evolution, and human health **using evidence-based reasoning and accurate data.**
* **Analyze** how values and evidence shape public responses to socioscientific issues.

**Purpose:** The purpose of this assignment is to serve as a **summative assessment** of your ability to integrate scientific understanding with narrative communication and stakeholder analysis. You will demonstrate your ability to communicate scientific concepts accurately, evaluate peer-reviewed evidence, and analyze how values and practical constraints influence public responses to socioscientific issues. This assignment also provides an opportunity to practice teamwork and apply course concepts to a real-world case. The draft format allows for structured feedback prior to Assignment 4.

**Content Requirements:**

Your case study should be broken down into the following 5 parts (adapted from © 1999-2022 National Center for Case Study Teaching in Science, University at Buffalo):

1. **Title.** Your case study title should:

* Clearly reflect the topic explored in the case.
* Capture the interest of a general audience.
* Avoid vague phrases like "Case Study on..." or "An Issue with..."

1. **Abstract (150 words max).** The abstract should be written in paragraph form and provide a complete overview of your case without going into detailed evidence or solutions. Your abstract should include:

* **The Event**: Briefly describe the real or realistic scenario that sets the stage for your case. What has happened to bring the stakeholders together to discuss the issue?
* **The Case Study Question**: Clearly state the central question your case addresses. What decision needs to be made?
* **The Stakeholders**: Identify the key stakeholders involved in the case. Who are the groups or individuals affected by or involved in this discussion?
* **Decision Structure**: Indicate whether your case presents one stakeholder as the final decision-maker, or if the stakeholders reach a shared compromise. Briefly explain who makes the decision and why.

1. **Story.** This is the main body of your case study and should be structured as follows:

* **Story setup** **(~100 words).** Set the stage for your case. Introduce the key stakeholders involved and the decision point that brings the stakeholders together.
* **Dialogue (600 words minimum).** The case study should unfold entirely through the stakeholders’ conversation. Within this section, you should:
  + Clearly **identify the case study question**.
  + **Present and interpret scientific evidence** (peer-reviewed articles, news reports, expert commentary).
  + **Include at least one visual** (e.g., a table, chart, or graph) to support the evidence presented. One visual is the minimum requirement; however, incorporating more than one well-chosen and effectively used visual may result in a higher score.
  + **Propose an answer** to the question that is grounded in the evidence.
  + **Discuss the advantages and disadvantages** of the proposed answer for each stakeholder involved.
  + **End with a final decision**. Be sure the final decision is supported by evidence and takes practical considerations into account (e.g., time, cost, feasibility). Either:
    - * one stakeholder makes the decision and explains their rationale
      * *OR* the stakeholders reach a compromise and jointly justify their decision.

1. **Discussion Summary (150–200 words).** Your discussion summary should be a short paragraph that provides a concise reflection. Make sure your summary connects clearly to your full case study and highlights how your group used scientific reasoning to evaluate the options. It should include:

* **Real-world relevance**: Explain the importance of the case and how it reflects a real-world dilemma.
* **Stakeholder views:** Explain how stakeholder views are connected to personal values or evidence.
* **Sources of evidence**: Identify the types of evidence (peer reviewed sources, news articles, social media, etc) used by each stakeholder in the case and comment on the *quality* of evidence.
* **Trade-offs and practical considerations**: Summarize the practical challenges or constraints that influenced the decision-making process.
* **Proposed solution**: State the agreed-upon course of action or outcome.
* **Takeaway message**: How does the science inform evidence-based decision-making.

1. **References.**A minimum of 3 articles using MLA format (including at least 1 primary literature source). More sources may be included as needed.
   * All claims made by stakeholders **must be appropriately cited within the text**, especially when referencing scientific studies or data.

**Formatting Requirements:**

Please follow these basic formatting instructions when preparing your written draft:

* **File Format**: Submit as a .doc, .docx, or .pdf file
* **File Name**: Save your file as ARSC104\_Fall25\_Assignment3\_Group#.docx
* **Font**: 11- or 12-point standard font (Calibri, Times New Roman, or Arial)
* **Spacing**: 1.5 spacing
* **Margins**: 1 inch
* **Headings**: Clearly label each of the 5 required sections:
  + Title
  + Abstract
  + Story
  + Discussion Summary
  + References
* **Length**: Total draft should be approximately **1000–1300 words** (excluding references)

**Grading Rubric**

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| Criteria | WOW! | Meets Expectations | Needs Improvement |
| Abstract Clarity and Structure (10) | Meets expectations and:  The event is clearly described, realistic, and establishes the context for the decision.  Stakeholder relevance to the case is evident. Explains who makes the decision (individual or group) and why. | Meets word count requirement of <150 words.  Case study question is included.  The event, stakeholders, and decision-maker are clearly presented. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Scientific Accuracy and Use of Evidence (15) | Meets expectations and:  Distinguishes between positive and normative claims where appropriate. | Scientific concepts are clearly explained and accurate.  Claims are supported with appropriate evidence. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Integration of Science and Stakeholder Perspectives (10) | Meets expectations and:  Stakeholder views are described and connected to values or scientific evidence.  The final decision is supported by both stakeholder input and scientific reasoning. | Stakeholder views are described.  Trade-offs and potential limitations of the decision are included. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Decision-Maker Logic (10) | Meets expectations and:  The final decision is justified using a balance of stakeholder input and scientific reasoning, with trade-offs acknowledged. | The decision-maker is consistent throughout the case study.  The final decision is clearly presented. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Case Study Title, Narrative, Structure, and Clarity (10) | Meets expectations and:  The title is clear and engaging for a general audience.  The narrative has a clear structure: setup, dialogue, and decision.  The story is logically sequenced, easy to follow, and appropriate for a general audience. | Title is included.  The writing is understandable to a general audience and generally stays on topic.  The story centers around a defined decision. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Discussion Summary Quality (15) | Meets expectations and:  Offers a clear and thoughtful takeaway aligned with the full case.  Reflects on the types of evidence used, the role of values, and the case’s relevance. | Summary briefly explains the issue and the decision made.  Offers a takeaway. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Visual Communication (10) | Meets expectations and:  The visual(s) is referenced in the narrative or summary.  More than one relevant visual is included and effectively aids in understanding the case. | One visual element (e.g., chart, graph, table, or infographic) is included. The visual is relevant, labeled, and aids in understanding the case. | Needs improvement in one or more areas described in “Meets Expectations.” |
| Writing Quality and Mechanics (10) | Meets expectations and:  The document is cohesive and flows logically across sections.  Writing is clear, with minimal grammar or punctuation issues.  Sentences are well-structured, resulting in a clear dialogue. | Dialogue is appropriate for a general audience.  Formatting guidelines (headings, font size, margins, file name) are followed. | Needs improvement in one or more areas described in “Meets Expectations.” |
| References and Citation Formatting (10) | Meets expectations and:  References are cited within the text and appear in a complete and appropriately formatted reference list. | Includes at least 3 credible sources, with 1 peer-reviewed source.  MLA formatting is mostly correct. | Needs improvement in one or more areas described in “Meets Expectations.” |