Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Biology - Environmental Threats Project**

Ecosystems consist of a delicate balance of all the biotic and abiotic factors that are present. Organisms within ecosystems rely heavily on each other for food, protection, and habitat. Humans are part of our natural world and as such are just as vulnerable.   
  
Humanity is currently facing some huge environmental threats that we are being forced to consider seriously. These threats jeopardise the health, well-being and security of the biosphere and humans. We must consider how our actions can contribute to climate problems and also be agents for change to provide solutions.

In this project, you will choose ONE environmental issue that is currently impacting the world and Canada. Through research, your **group of 2 students** will create a **presentation** (using Google Slides) that outlines and describes the concerns associated with the chosen issue.

Some examples of current environmental issues that are impacting Canada and the world. You may select one of these issues or come up with your own.

| Food Wastage | Mining | Road Salt Pollution |
| --- | --- | --- |
| Increased Carbon Footprint | Acid Precipitation | Tar Sands Development and Fossil Fuels |
| Ocean Acidification | Light & Noise Pollution | Agricultural Soil Erosion & Degradation |
| Water Scarcity | Urban Sprawl | Heavy Metal and Toxic Chemical Contamination |
| Forest Fires | Plastics Pollution | Household & Industrial Waste Management |
| Bycatch | Fast Fashion Industry | Illegal Fishing & Wildlife Trade |
| Cattle Ranching | Fish Farming | Food/Product Delivery (e.g. online shopping, Door Dash, Uber Eats) |
| Overpopulation | Fracking | Ozone Layer Depletion |
| Technology Waste Disposal | Pesticide Use | Engineered Obsolescence of Products |
| Desertification/Drought | Optional: Students can choose their topic with the teacher's approval | |
| International Tourism/Travel |

Some resources to help you get started:

* Climate change in Canada, visit this link: [Climate Change](https://www.canada.ca/en/environment-climate-change/corporate/transparency/briefing/key-issues-climate-change.html)  
  Information about environmental issues, use the following links: [**Environmental Issues in Canada**](https://thenarwhal.ca/topics/environmental-issues-canada/)
* [**Biggest Climate Issues in Canada**](https://www.worldatlas.com/articles/the-biggest-environmental-issues-in-canada.html)[**20 Environmental Issues Our World is Facing Today**](https://www.conserve-energy-future.com/15-current-environmental-problems.php)[**The Biggest Problems of Our Lifetime**](https://earth.org/the-biggest-environmental-problems-of-our-lifetime/)**.**
* These resources are just a starting point.
* Before beginning your research, consider reviewing how to do research and find credible sources for your project.

When you have chosen an issue to study for this project, confirm your choice with your teacher. Each group will be studying a different issue. **Put your name on your slide of information in the top RIGHT corner.**

Your presentation will be **7 slides long** and will contain the information outlined in the chart below. With your partner, decide who will be Student #1 and Student #2. Each student is responsible for specific slides as indicated in the chart below. You will each be evaluated based on both the content of the presentation along with your communication of the ideas during the presentation. The presentation can be no more than 5 minutes long.

| **Slide 1**  **(Students #1 & #2)** | Include the following information on the **Title** slide:   * The title * Your group’s names * The course code |
| --- | --- |
| **Slide 2**  **(Students #1 & #2)** | **Introduce** the issue. Answer the following:   * What is it? * How does it occur? * Where does it occur in Canada and the world? * When was this issue first identified as an environmental threat? * Why is it a problem in Canada and the world? |
| **Slide 3**  **(Student #1)** | Explain the impact on **the Biosphere**. Answer the following:   * What organisms are affected by this environmental threat? * What damage is this threat doing to the ecosystem? * If this issue is allowed to continue, explain the continued outcome/impact as time goes on. * Be sure to highlight any links to **Climate Change**. |
| **Slide 4**  **(Student #2)** | Explain the impact on **Society**. Answer the following:   * Who is most affected by this environmental threat in Canada? The world? * How does this issue impact the lives of marginalized Canadians? * If this issue is allowed to continue, explain the continued outcome/impact as time goes on. (e.g. Why should society be concerned about this issue? etc.) |
| **Slide 5 (Student #1)** | Explain the **Action** steps taken by **Community Stakeholders**. Answer the following:   * What are Governments, Organizations and Industries working towards to control, limit or reverse damage caused to environments and society? * Provide stats, graphs, or other proof. * **In your opinion**, are stakeholders doing enough? |
| **Slide 6**  **(Student #2)** | **Recommend Actions** that can be taken by **Individuals**. Answer the following:   * What can you as an individual do to promote or contribute to meaningful change? * Provide stats, graphs or other proof. * **In your opinion**, can individuals solve this problem? |
| **Slide 7 (Students #1 & #2)** | **Bibliography** following the APA format.   * Slide 7 should not be presented to the class - it only needs to be shown at the end of the presentation and it does not count as part of the 5-minute time limit. * Each group member should have their bibliography labelled to indicate their name. |

**EVALUATION CHECKLIST** Topic:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| **Application Level:** | **Communication Level:** |
| --- | --- |
| **Student 1:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Slide 2: Introduction**   * What is it? * How does it occur? * Where does it occur in Canada and the world? * When was this issue first identified as an environmental threat?   + Year given * Why is it a problem in Canada and the world?   + Specific information given   + Information is accurate   **Slide 3: Impact on the Biosphere**   * What organisms are affected by this environmental threat? * What damage is this threat doing to the ecosystem? * If this issue is allowed to continue, explain the continued outcome/impact as time goes on. * Highlight any links to Climate Change.   **Slide 5: Action Steps by Community Stakeholders**   * What are Governments, Organizations and Industries working towards to control, limit or reverse damage caused to environments and society? * Provide stats, graphs, or other proof. * In your opinion, are stakeholders doing enough? | **Presentation Communication Skills**   * Slides are organized   + Few words (no paragraphs)   + Title/headings   + No spelling mistakes * Eye contact made * Evidence of rehearsal (i.e. natural presentation - no reading/relying on notes or slides) * Good voice projection * Presentation met the 5-minute time limit   **Slide 7: Bibliography**   * The bibliography is in alphabetical order * The bibliography follows APA format:   + Refer to the APA citation document posted [here](https://docs.google.com/document/d/1K3zWR8ouf2Nw4WhbcswG7wkBYtY3mIJSwWLOVD46CGo/edit?usp=sharing) * Used a minimum of 3 reliable sources   + Author and/or date   + .edu, .org, .gov, or other reliable database source |
|  | |
| **Application Level:** | **Communication Level:** |
| **Student 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Slide 2: Introduction**   * What is it? * How does it occur? * Where does it occur in Canada and the world? * When was this issue first identified as an environmental threat?   + Year given * Why is it a problem in Canada and the world?   + Specific information given   + Information is accurate   **Slide 4 - Impacts on Society**   * Who is most affected by this environmental threat in Canada? The world? * How does this issue impact the lives of marginalized Canadians? * If this issue is allowed to continue, explain the continued outcome/impact as time goes on. (e.g. Why should society be concerned about this issue? etc.)   **Slide 6 - Recommended Actions by Individuals**   * What can you as an individual do to promote or contribute to meaningful change? * Provide stats, graphs or other proof. * In your opinion, can individuals solve this problem? | **Presentation Communication Skills**   * Slides are organized   + Few words (no paragraphs)   + Title/headings   + No spelling mistakes * Eye contact made * Evidence of rehearsal (i.e. natural presentation - no reading/relying on notes or slides) * Good voice projection * Presentation met the 5-minute time limit   **Slide 7: Bibliography**   * The bibliography is in alphabetical order * The bibliography follows APA format:   + Refer to the APA citation document posted [here](https://docs.google.com/document/d/1K3zWR8ouf2Nw4WhbcswG7wkBYtY3mIJSwWLOVD46CGo/edit?usp=sharing) * Used a minimum of 3 reliable sources   + Author and/or date   + .edu, .org, .gov, or other reliable database source |