**GRADE 11 SCIENCE PROJECT OUTLINE**

UN Sustainable Development Goal Challenge

Science has the ability to be a tremendous driver of change in our world, the development of vaccines has allowed the reduction of suffering due to illness and the eradication of smallpox, the development of fertilizers has led to massive crop yields, and applications of electromagnetic radiation have led to medical discoveries and revolutions in communication. Even though we live in a time of rapid technological advancement, the human race still struggles with many challenges; to this end the United Nations (UN) has developed a series of “Sustainable Development Goals”. These goals set targets for the human race to strive towards in order to improve the human condition. This assignment is for you (as part of a group) to come up with, or research, a scientific approach to solving one of the UN Millennium goals.

The focus for this year’s project is:

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Current practices with our oceans have had a direct consequence of environmental degradation, pollution and loss of biodiversity. This development goal is centered around the preservation and sustainable use of our oceans, seas, and marine resources (www.undp.org).

**Project**

Your group must research the problem and collaborate to suggest a potential scientific approach to tackle this goal. You can either suggest your own innovative solution or research a modern approach that has already been suggested. You must, discuss and analyze the implications of using this particular approach.

Your project will be submitted as a 2-3 minute video that describes the specifics of the problem that you are addressing, and the solution that you are proposing. Your video should also address the scientific implications of using this solution and the process you followed when in developing this solution and the implications of using it.

Your video will be shown in one of the science 11 classes and will be assessed by your teacher mentor.

At the end of this process, once you have submitted your video, you will be asked (individually) to write a personal reflection that addresses, your role in the group, the process you followed in developing your video, the struggles you may have faced and the steps you took to overcome these struggles.

**This assignment is due by 8:30am, Monday, Feb 27th**

**Submitting the video**

**Your video must be submitted via thumb drive to your teacher mentor by the above deadline.**

**Assessment**

Your project will be assessed in the following areas:

* Self-Motivation and Perseverance.
* Reflecting on the Impacts of Science.
* Communication.
* Reflecting on the Process.

Rubrics are attached.

**Grade:** The mark from this project will contribute towards 10% of your mark in each of your science classes.

**Groups**

Everyone enrolled in a “Science 11” class (Biology 11, Physics 11, Earth Science 11 and Chemistry 11) must do a project. If you are enrolled in multiple grade 11 classes, you only need to do one project.

Project will be done in groups of 3-5, your group mates do not need to be in the same class as you (but they must be in at least one grade 11 science class). At this stage, you should already know your group.

**Mentors**

Your group will be assigned a “teacher mentor” who is a grade 11 science teacher; you will not necessarily be in a class with your mentor. It is your responsibility to touch base with your teacher-mentor regularly throughout the process. You are encouraged to use your teacher-mentor as a resource, if you are struggling in any areas. See Project Proposal Sheet for details.

**This assignment is due by 8:30am, Monday, Feb 27th**