

European Union Study Tour

Learning Unit

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Cluster: Career and Tech Ed

Target Course: Introduction to Engineering Design

Target Grade Span: 9-12

Unit Title: ***The Global Climate Crisis and the Challenges of Domestic and International Cooperation***

Lesson Overview:

In spite of the legislative requirement of unanimous consent of all 27 nations that make up the European Union, the EU has made bold progress toward addressing the problem of Global Warming. The centerpiece of this progress, is the European Green Deal.

If we are to get serious about solving this problem, the United States must find a way to arrive at consensus about a strategy that matches what the EU has already agreed upon and put into action.

Massachusetts Environmental Science Curriculum Framework Strands Addressed:

Strand 2: Technical Knowledge and Skills:

2B Environmental Systems. 2C Natural Resource Management. 2G Energy Technologies and Sustainability. 2H Environmental Site Management. 2K Conservation Policy and Public Outreach. 2O Forest Conservation. 2P Marine Science

Potential Outcomes:

Students will:

- Gain an understanding of the basic science behind the human activities that contribute to global warming.
- Gain an understanding of the ways in which climate change impacts social, political, and physical life in our country and around the world.
- Gain an understanding of the challenges of past international agreements on environmental issues such as Acid Rain, Atmospheric Ozone Depletion, Nuclear Proliferation.
- Gain an understanding of the geo-political issues that impact the global climate crisis and the what the EU's response is.
- Gain an understanding of the European Green Deal
- Come to an agreement about what steps we need to take, here in the U.S. to get out in front of this

Scenario: The focus of this class is in applying the Engineering Design Process to creatively solve Engineering problems of all kinds. The first steps in the process are:

1. Define the Problem
2. Research the problem
3. Brainstorm Solutions

The Problem: How can we, here in the United States, overcome the environmental, social, economic and political complexities that are impeding progress toward addressing the urgency of the existential global climate crisis?

Research:

Teams of 3-4 students will begin their research by answering the following questions:

- What is the 1970 Nuclear Proliferation Treaty?
- What Is the 1979 Long Range Transport Pollution Treaty?
- What is the 2015 Paris Agreement?
- What is the U.N. 2030 Agenda for Sustainable Development?
- What are the major causes of global warming?
- What are the adverse effects of a warming planet on global bio-diversity?
- What are some of the solutions that seem to be working to mitigate the warming?
- What are some of the economic challenges that stand in the way of solutions to the problem?
- What are some of the political challenges that stand in the way of solutions to the problem?
- What are some of the social challenges that stand in the way of solutions to the problem?
- What is the sum and substance of the European Green Deal?
- Will this agreement do enough to begin to solve this problem?

What proposals have been made so far, here in the U.S. to address the problem?

What are some of the obstacles to legislating these proposed solutions?

Brainstorming:

Each team will discuss their research findings and begin to brainstorm possible solutions. Presentations to the class from each team will be used to generate discussion about the urgency of the problem, the viability of proposed solutions and the prospects for successful outcomes.

Assessment/Evaluation

Members of each team will evaluate each team mate's effort and participation in the team project. At the conclusion of the presentations and discussion, students will write individual reflections. These reflections will be graded on their understanding of the issues and their ability to express them.

Climate Change Link:

<https://thenext100.org/four-reasons-why-climate-change-isnt-a-single-issue/>

European Green Deal links:

https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3746

<https://op.europa.eu/en/publication-detail/-/publication/95311c9d-f07b-11ec-a534-01aa75ed71a1>

New Green Deal Link:

https://www.gp.org/green_new_deal

