

Project Prometheus **11th grade - First Semester**

Project Description:

Students will engage in a dynamic group-driven project exploring the many facets of sustainable energy resources. Using their acquired knowledge from extensive research, students will explore alternate energy sources that could mitigate our dependency on fossil fuels. *Project Prometheus* will require students to exercise critical thinking skills, utilize persuasion tactics, and synthesize accumulated data to ultimately present their answer to the Essential Question.

Essential Question:

What is the best pathway to a sustainable energy future?

Project Components

1. Energy Inventory (100 pts) [ND] – CP/Math

Each member of the group will document their individual household energy use for a one-week period. This will include electrical and transportation usage. At the end of the two weeks, students will quantify their individual findings and identify ways to conserve energy as well as estimate how much energy those techniques would save. The information and conclusions will be presented to the class via a formal PowerPoint presentation.

2. Conservation Mythbusting (100 pts) [D] – CP/Chemistry

Students will create a video documentary in the style of the Mythbusters TV show lasting 3-5 minutes. The video will include a thorough narration of the experiment along with analysis of the data collected as they attempt to prove or “bust” a conservation myth. The documentary will be accompanied by a lab report that will include: an introduction, a hypothesis, materials list, procedure, data and conclusion. The conclusion must address the energy efficiency or conservation concepts that resulted from their experiment.

3. Fossil Fuel Forecast (100 pts) [D] – CP/Math

Students will create mathematical models to forecast the depletion of existing fossil fuel resources and/or other natural resources. This component requires a formal written report that will include graphs and equations representing the mathematical models, and a prediction of when we reach 50% of remaining fossil fuel resources. This component also requires an exploration of the assumptions made by the experts presenting the data.

4. Political Reasoning and Debate (100 pts) [ND] – CP/U.S. History

Students will research why their chosen energy resource is not currently being utilized as our primary energy resource. They will explore the political and economic climate and determine why alternative forms of energy are not being aggressively pursued. Findings will be summarized in a 1000-word abstract. Students will then defend the benefits of their energy resource in a formal debate while preparing sufficient rebuttals against their assigned opponents.

5. Public Policy (100 pts) [D] – CP/English

Students will learn that policy making is a process of identifying real world problems, formulating solutions and proposing a course of action to follow. They will exhibit this understanding by creating their own public policy in relation to their answer to the Essential Question. They will be utilizing various strategies of informative and persuasive writing in order to convince their audience to a call to action.

6. Call to Action Symposium (100 pts) [ND] – IP

The project will culminate in a two-hour Symposium that will summarize and highlight the students’ research and conclusions. This component requires a poster and infomercial that promotes their answer to the Essential Question. At the end of the Symposium, an awards ceremony will honor groups that have shown excellence in a variety of categories.

**Project Prometheus
 Calendar**

AUGUST	
08/22 [F]	<ul style="list-style-type: none"> Intro Project Prometheus Assign groups
08/25 [M]	<ul style="list-style-type: none"> Intro Component #1 – Energy Inventory (in Math)
08/29 [F]	<ul style="list-style-type: none"> Gallery Walk on energy sources Documentary viewing Discussion/share out Pre-response to EQ
SEPTEMBER	
09/05 [F]	<ul style="list-style-type: none"> 4-core rotation
09/07 [Sun]	<ul style="list-style-type: none"> Component #1 – Energy Inventory PowerPoint emailed by midnight
09/8 [M]	<ul style="list-style-type: none"> Component #1 – Energy Inventory presentation (in Math) Intro Component #2 – Conservation Mythbusting (in Chem)
09/12 [F]	<ul style="list-style-type: none"> Pep Rally
09/15 [M]	<ul style="list-style-type: none"> Hypothesis and 1-paragraph justification due (in Chem)
09/19 [F]	<ul style="list-style-type: none"> Typed materials and procedure due (in House) Case Study #1
09/26 [F]	<ul style="list-style-type: none"> Dailies check
OCTOBER	
10/03 [F]	<ul style="list-style-type: none"> Mini-assessment #1
10/06 [M]	<ul style="list-style-type: none"> Component #2 – Conservation Mythbusting report/video due (1st block) Intro Component #3 – Fossil Fuel Forecast (in Math)
10/10 [F]	<ul style="list-style-type: none"> Mythbusters video premier
10/17 [F]	<ul style="list-style-type: none"> Assign energy source
10/24 [F]	<ul style="list-style-type: none"> Case Study #2
10/27 [M]	<ul style="list-style-type: none"> Component #3 – Fossil Fuel Forecast due (1st block) Intro Component #4 – Political Reasoning and Debate (in History)
10/31 [F]	<ul style="list-style-type: none"> Scare Faire
NOVEMBER	
11/07 [F]	<ul style="list-style-type: none"> “Points Against Own Energy Source” check (in House) Reveal debate opponents Mini- assessment #2
11/13 and 11/14	<ul style="list-style-type: none"> “Points Against Opponents’ Energy Source” check (in History)
11/17 through 11/21	<ul style="list-style-type: none"> Component #4 – Political Reasoning and Debate occurs (in History)
11/21 [F]	<ul style="list-style-type: none"> Thanksgiving Feast
DECEMBER	
12/01 [M]	<ul style="list-style-type: none"> Intro Component #5 – Public Policy (in English)
12/05 [F]	<ul style="list-style-type: none"> Bibliography in MLA format due
12/12 [F]	<ul style="list-style-type: none"> Rough draft and edit of policy paper
12/15 [M]	<ul style="list-style-type: none"> Component #5 – Public Policy paper due (in English) Intro Component #6 – Call to Action Symposium (in English)
JANUARY	
01/09 [F]	<ul style="list-style-type: none"> Case Study #3
01/12 [M]	<ul style="list-style-type: none"> Component #6 – Symposium poster and video due
01/15 [R]	<ul style="list-style-type: none"> Component #6 – Call to Action Symposium