

Date: _____

Name: _____

PHYSICS 11 Project: How Clean is Your Energy?

We have been discussing and solving problems using different types of energy and the conservation of energy, but what about the energy that powers our world on a larger scale? With Peak Oil approaching (or maybe even passed), and too many world conflicts regarding oil, an alternative to fossil fuels is becoming more urgent. Globally, we have already begun harnessing the power of many natural resources (solar, wind, hydro, etc.) and many “clean” energy alternatives exist or have been proposed. In this project we will be exploring the effectiveness of different energy sources and their global impacts.

Objective: Create an infographic about an energy source with the intention of convincing your fellow classmates to invest in your researched form of energy. You will be giving your classmates a “sales pitch” to persuade them that your energy source could be the best at Ms. Christy’s First Annual ‘Clean Energy Summit.’

The infographic you make to support your presentation could take the form of a:

- Brochure
- Poster/ flyer
- Powerpoint / Prezi Presentation (must provide presentation notes)
- Song/ rap
- Create a video
- Other (pitch idea to me for approval)

Your group’s energy source will be assigned to you in class by a draw from a brainstormed list generated by the class. **Some examples of energy sources are:**

- Solar Energy (renewable)
- Wind Energy (renewable)
- Hydroelectric Energy (renewable)
- Geothermal Energy (renewable)
- Bioenergy (renewable)
- Tidal/Wave Energy (renewable)
- Coal (non-renewable)
- Natural Gas (non-renewable)
- Nuclear Energy (non-renewable)

What your project and presentation should include:

- A **visual representation** of your researched information (brochure, poster, powerpoint, infographic)
- A **3-5 minute presentation** of your researched energy source (be prepared to answer questions from the class)
- A clearly defined energy source
- Indication if the energy source is renewable or nonrenewable
- How is energy generated from this source?
- How is the generated energy stored?
- What resources are required to harness this energy; where is this source of energy accessible; is it successful in these places?
- How efficient is the production of this type of energy? (Be sure to comment on the Law of Conservation of Energy-- Is any energy be converted into a non-useful type of energy)
- Could this source supply the human population of 7 billion people with enough energy? Could it continue providing us with enough energy in the future?
- What are the costs and benefits of using this energy source?

Consider at least one of the following:

- economical costs and benefits
 - environmental costs and benefits
 - manufacturing costs and benefits
- A works cited page including credible sources.

Project Timeline:

- Friday, February 19th: Project assigned
- Tuesday, February 23rd: Visual representation plan and cost/benefit focus selection.
- Thursday, February 25th: Project work period (in the library)
- Monday, February 29th: Work period (in the library)
- **Thursday, March 10th: Project Presentations + Reflection/ Assessment Assigned.**

Here are some resources to get you started:

<http://www.nrcan.gc.ca/energy>

<http://www5.statcan.gc.ca/subject-sujet/theme-theme.action?pid=1741&lang=eng&more=0>

<http://www.nationmaster.com/>

<http://www.worldenergy.org/data/>

<https://www.ted.com/topics/alternative+energy>

<https://www.ted.com/topics/energy>