

Names

Energy Sources Project

Each small group of students will be responsible for researching an energy source that they pick from a hat. They will do a class presentation, build a physical model, and participate in a debate with another energy source. The energy sources include: Biomass, Coal, Geothermal, Hydropower, Natural Gas, Nuclear, Petroleum, Propane, Solar, and Wind.

A. Presentation with Visual (PowerPoint, Prezi, Google Slides) 6– 9 minutes

2200 exp

History & Politics

Physics (as well as applicable Chemistry, Biology, Geology, etc.) of your Energy Source

Production & Use of Your Energy Source (including maps and/or charts)

- Southern California Production & Use
- National Production & Use
- Global Production & Use
- Imported/Exported
- Electricity Use (How? Why or why not?)

Answer the following topics:

- (1) Why is your energy source an effective fuel?
- (2) How does the use of your energy source effect the environment/earth's climate?
- (3) What is the fuel mass to energy output? (not applicable to geothermal, hydropower, solar, wind)
- (4) Explain the physics used to convert your energy source into electricity. (as applicable)
- (5) What are the shortcomings of your source? What are possible solutions to these concerns? How difficult or easy are these to achieve?

- A Question & Answer time will follow the presentation. Q & A time is not included in the 6 – 9 minutes.
- Include a printout of the presentation with 4 slides per sheet
- Include the bibliography(see point “D” for details) on the last slide of the ppt. Staple a copy of the bibliography to the printout of the presentation. Presentations without a bibliography will earn a *zero*. Points will be deducted for incomplete bibliographies.
- Presentation Format:
 - No more than 36 words per slide
 - At least one picture / diagram / graph per slide
 - No less than 34 size font
- Share all presentations with me at nfulmer@lcsd.net via **your student Google Drive**. Details provided in class.

Public Speaking Notes:

- Do not *read* from note cards or the power point
- Keep eyes upward on the audience
- Speak slowly and clearly
- Be mindful of time remaining
- Practice your presentation
- Be deliberate about your speech
- Maintain a formal tone
- Avoid using “Ummm” and “So yeah”
- Face the class, not the screen



- B. Model (30 s – 1 min during presentation) Model will be displayed. 1650 exp**
Physical Model will help to explain the Physics behind an energy source and/or will demonstrate and explain the distribution of an energy source

All components of Models should be labeled clearly and look professional

Names & period on the *back* side of the model

- C. Debate: 2200 exp**
Each group will be assigned a different energy source to debate. Each team will make a clear argument for the adoption of your energy source over the other group's energy source. Speakers must appeal to the widest possible audience through sound reasoning, succinct organization, credible evidence, and clear delivery.

During the debate, each team must include:

- At least three specific arguments in support of the adoption of your energy source
A specific piece of evidence to support each argument
- At least three specific arguments in defense of your energy source
A specific piece of evidence to support each argument
- At least three specific arguments against of your opponent's energy source
A specific piece of evidence to support each argument

Debate Format: The order of opening/closing statements will be determined by a coin flip.

- a. Opening Statements – 2 minute for each team
- b. Open Debate "Crossfire" – 5 minutes

"The first question is asked to the team that just ended its statement by the other team. After the initial question and answer, any debater may question or answer, and *all should participate*. A debater who attempts to dominate or be rude to his opponent will lose points. Good questions are brief and good answers must meet the question. Resist rushing questions or answers, or trying to do too much in crossfire; desperation is not persuasive." (Public Forum Debate Guide in made in coordination with the National Forensic League found online at www.nflonline.org)

- c. Closing Statements –1 minute for each team

The class and instructor will critique each groups' delivery, organization, and the quality of arguments, evidence, and reasoning cited for each argument.

- D. Mandatory Bibliography (Use Noodle Tools)**

Must include a minimum of 7 independent sources:

Must include at least one text source

Must include at least one periodical/magazine

Must include at least one online sources

- E. Audience Participation (Possible bonus points)**

1. All students will take notes during the presentations and debates
2. Write down questions during presentations. Then ask questions at the end of the presentations.
3. Do not clap until the Q & A time is complete
4. Students will be held responsible for the information presented. (ie. There will be a quiz.)