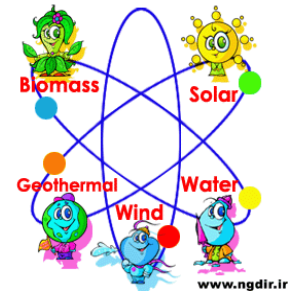


Alternative Energy Sources Town Hall Meeting

This project allows you the opportunity to investigate alternative energy sources as potential alternative energy sources for the city of Alternatown. Each student will choose a role (at random): nuclear energy, solar energy presenter, hydropower (water) presenter, wind energy presenter, geothermal energy presenter, biomass energy presenter or town council member.



PRESENTERS (nuclear, solar, water, wind, geothermal or biomass)

Presenters will develop a 5-minute presentation for the town council. The presentation should aim to inform town council members about their alternative energy source as well as persuade the town council members that their energy source is the alternative energy source.

TOWN COUNCIL MEMBERS

Town council members will research each of the alternative energy sources to gain a basic understanding of each. They will each formulate 2-3 of your own questions to ask EACH of the alternative energy source presenters. Questions should be specific for each of the alternative energy source options.

Scenario:

Alternatown is a fairly large city in the Midwest. The city was established in 1819 and has a population of close to 300,000 citizens. The city is about 80 square miles and is urban with some suburban areas surrounding the city. On the southern edge of the city is the Fourneyron River which has shown through preliminary surveys to be large enough to sustain a hydrodam. Land outside the city limits is primarily farmland owned by individual owners. Alternatown's landfill is located about 20 miles outside of the city. The landfill is operated in part by the city and a private agency, Trash-E. Though Alternatown has not experienced an earthquake in over 100 years, it sits along a fault line that has been surveyed for possible geothermal energy. Though the city does not contain any local uranium deposits, they have found that it can be imported from Canada.

Alternatown is at a crossroads for its energy future. The city presently has Ameribucks, a gas & electric company that is effective. However, the city has been suffering the effects of smog and pollution from coal and oil utilized by the gas & electric company and has been searching for alternative energy options to replace all or part of the energy Ameribucks provides the city.



Project Timeline:

- Day 1 – Project Explanation
- Day 2 – Project Work Day* (10 points)
- Day 3 – Project Work Day* (10 points)
- Day 4 – Town Hall Meeting
- Day 5 – Town Hall Meeting
- Day 6 – Alternatown Reflection



PRESENTERS

Questions that should be answered in your presentation:

1. How does this technology work and how could this energy source be used?
2. What are at least 2 examples of its current use? Are these examples currently successful?
3. What are apparent environmental impacts associated with this energy source?
4. Is this technology widely accepted today? Why or why not?
5. Do the costs of this technology make it prohibitive for common use? Why or why not?
6. What are the benefits of this alternative energy source? (Must have at least 3 benefits)
7. Address common concerns associated with this alternative energy source (i.e. how could these be avoided?).
8. What is the greatest factor that has kept this alternative energy source from being universally accepted/adopted? How could this be overcome?



TOWN COUNCIL MEMBERS

Preparation for town hall meeting (these will be collected):

- Research each of the alternative energy sources – biomass, wind, hydropower, nuclear, solar or geothermal – and answer the following question: How does this technology work and how could this energy source be used?
- You should have 3-5 bullet points to represent your general understanding of each of the alternative energy sources.
- You should 2-3 questions for EACH of the alternative energy source presenters.



Suggested Resources: *This is not a complete list...I encourage you to consider other resources as well.*

http://www.eia.gov/kids/energy.cfm?page=renewable_home-basics

http://www.nrel.gov/learning/re_basics.html

<http://www.eia.gov/tools/faqs/index.cfm>

<http://www.eere.energy.gov/>

http://www.repp.org/articles/static/1/996090105_982708676.html

Analysis Questions

→ Answer questions on a separate sheet of paper. These will be collected but will also be used for our reflection discussion.

Put yourself in the role of a concerned citizen of Alternatown...



1. What questions do you still have about some of the different energy sources? Provide at least 3 questions.
2. Is there an energy source that you think might be a viable option for the city of Alternatown? Explain your answer with at least 3 supporting details for your answer.

What have you learned...

3. What role do you think concerned citizens have in the decision-making process for cities and towns? Is it a requirement, expectation, voluntary...these are not all the words you could use to describe a citizen's role in the community but should give you some options to consider (and feel free to add another descriptive word of your own).
4. On a scale of 1 to 10 (1 = it's of the utmost importance, 10 = it's not important at all), how important do you think it is for communities, individual countries or even the world to consider alternative energy sources? You can break down community, individual countries and the world if you think there are different levels of importance. Explain your answer.



Consider the role you played in our Town Hall Meeting...

5. Did you feel the experience was authentic? Explain why or why not.
6. What do you think is the most important take away for students in this activity?
7. How do you think the experience could have been improved?



ALTERNATIVE ENERGY SOURCES TOWN HALL MEETING – Town Council Member

Name: _____

CRITERIA	4	3	2	1
PREPARATION	Bullet points (3-5) show a general understanding of ALL alternative energy sources & 2-3 questions have been developed for ALL alternative energy sources	Preparation is only partially completed (>50%)	Preparation is only partially completed (at least 50%)	Preparation is minimal (<50%)
QUESTIONING Interaction, discussion and posing of questions during council meeting.	Student asked or discussed questions at least 3 times.	Student asked or discussed questions 2 times.	Student asked or discussed questions 1 times.	
PARTICIPATION Contribution to council meeting including following discussion rules, active listening skills, etc.	Student was actively engaged and followed all rules ALL of the time.	Student was actively engaged and followed all rules MOST of the time.	Student was actively engaged and followed all rules SOME of the time.	
ANALYSIS QUESTIONS	Student answered ALL questions and provided very thoughtful responses.	Student answered all questions and provided thoughtful responses to the majority of questions.	Student answered at least 50% of the questions and/or provided only some thoughtful responses.	Student answered <50% of questions and/or lacks thoughtful responses.
ROLE-PLAYING	Exemplary – Student is in character ALL of the time, role-playing is appropriate (not excessive and/or distracting) and goes above the proficient level	Proficient – Student is in character ALL of the time, role-playing is appropriate (not excessive and/or distracting) but does not reach the exemplary level	Good – Student is in character most of the time, role-playing could be improved (i.e. role-playing was excessive and/or distracting)	Okay – Student is in character SOME of the time and/or falls out of character, lacks good role-playing (i.e. role-playing was excessive and/or distracting)

Rubric Score = _____/20 x 5 = _____/100

ALTERNATIVE ENERGY SOURCES TOWN HALL MEETING – Presenter

Name: _____

CRITERIA	4	3	2	1
VISUAL PRESENTATION	Visual aid was readable, highlighted important points and/or showed high levels of creativity.	Visual aid was readable, highlighted important points and/or showed creativity.	Visual aid was somewhat readable, highlighted important points and/or showed some creativity.	Visual aid was somewhat readable, highlighted a few points and/or showed little creativity.
ORAL PRESENTATION	Student effectively highlighted key points with emphasis and effectively answered questions.	Student highlighted key points with emphasis and adequately answered questions.	Student highlighted key points and answered questions.	Student highlighted vague points and vaguely answered questions.
PARTICIPATION Contribution to council meeting including following discussion rules, active listening skills, etc.	Student was actively engaged and followed all rules ALL of the time.	Student was actively engaged and followed all rules MOST of the time.	Student was actively engaged and followed all rules SOME of the time.	
ANALYSIS QUESTIONS	Student answered ALL questions and provided very thoughtful responses.	Student answered all questions and provided thoughtful responses to the majority of questions.	Student answered at least 50% of the questions and/or provided only some thoughtful responses.	Student answered <50% of questions and/or lacks thoughtful responses.
ROLE-PLAYING	Exemplary – Student is in character ALL of the time, role-playing is appropriate (not excessive and/or distracting) and goes above the proficient level	Proficient – Student is in character ALL of the time, role-playing is appropriate (not excessive and/or distracting) but does not reach the exemplary level	Good – Student is in character MOST of the time, role-playing could be improved (i.e. role-playing was excessive and/or distracting)	Okay – Student is in character SOME of the time and/or falls out of character, lacks good role-playing (i.e. role-playing was excessive and/or distracting)

Rubric Score = _____/20 x 5 = _____/100

ALTERNATOWN TOWN HALL MEETING AGENDA

→ Opening Address from the Mayor of Alternatown

→ Introduction of Council Members

→ Proposed Alternative Energy Presentations:

(5 minutes per presentation, floor will be open for 5 minutes following each presentation for Q&A)

- * Wind Energy

- * Solar Energy

- * Nuclear Energy

- * Hydropower

- * Geothermal Energy

- * Biomass Energy

→ Closing Address from the Mayor of Alternatown