

Chemistry  
Public Awareness Project  
Alternate Energy

Name \_\_\_\_\_  
Partner \_\_\_\_\_  
Partner \_\_\_\_\_  
Partner \_\_\_\_\_

### **Description**

We are members of a very important and fragile ecosystem. We have learned that we impact the earth in various activities that we do individually and as a company. We now have a chance to begin to correct these negative impacts by educating people in our community. We will achieve this by researching and creating a video on an alternative energy source. We will then individually show this video to members of the community and record their reaction.

Each alternate energy source can only be represented one time per class period. Topic choice is first come/first served. You may not use any fossil fuels (petroleum based sources or coal) or nuclear energy. You will be in a group of 3 – 4 people for a total of 6 groups per class. You are going to pick your partners but make sure that someone in the group has a video camera!

### **Video Assignment**

Your assignment is to make an informative, entertaining, quality, 5 minute (max) public service announcement about your alternative energy source. The final product must be **uploaded to YouTube.com by Sunday 3/19!** Once the video is uploaded to YouTube you **MUST send your teacher the link to the video by 5pm on Sunday 3/19!** Also, be sure to bring in a flash drive with your video on it, Monday 3/20, to your class, just in case your video has issues when it is downloaded from YouTube by your CEO.

### **Ideas for video:**

Here is a list of things that you will want to consider before creating your video. Do not try to do all these things in your video – it would be too much information. There are also other things that you will think of – creativity is always a bonus.

- Think of Power of One video, Earth is like a spaceship clip, Suberbowl commercials and Infomercials as you plan your script
- History of source
- Research / compare to European alternatives
- What is the future of the source?
- Comparison to current fossil fuel source –
  - Environmental issues – pollution, etc.
  - Economical issues
  - Readiness / Availability of source
  - Other benefits / disadvantages
  - Aesthetic appeal
- Green chemistry – does the design create a product without waste – a product that can be used again?
- Think of anything else – great!

### Alternative Energy Options

Your teacher will decide how groups are made and what alternative energy sources are assigned to which groups. The following are a list of possible alternative energy sources:

1. Solar Photovoltaic Cells
2. Solar Thermal Power
3. Microbial Fuel Cells
4. Wind
5. Geothermal
6. Biomass for cars
7. Biomass not for cars
8. Tidal Power
9. Hydrogen Fuel Cells
10. Waste to Fuel
11. Others?

The video MUST include a visual representation of actual product / system. For example – for a hot water heater that uses propane gas you would have a picture or video of the system. You MUST describe how it works. Remember you are trying to sell a product and people need to see a product to help them make decisions. Also remember that all citizens are not scientists....Make the explanation understandable to all!

Video MUST have a reference to a specific case study of where this energy source is currently being utilized.

Each person in your group MUST have an expert role in this project. Ideas for experts would be Video Director, Head writer, Costume/Props, or Research Advisor. These are just a few ideas. Each student will be REQUIRED to TYPE a one page report as to how his/her Expert Role aided the group in the project and how it aided the video in getting across its intent. You must also explain how the other Experts in your group achieved their purpose.

You MUST type up a video script for the teacher to follow and evaluate. Include a bibliography of information obtained.

Your peers (in a different Chem Themed Inc. company) will evaluate your video in comparison to the other ones produced in your company. This company will grade your video and also pick the best video from your company. The best video in the company will be awarded one extra credit point.

By informing other Chemistry Themed Inc. employees you are not necessarily getting the public more aware. For this part of the assignment each member of the group must educate people outside of company. Each person must show the video to two groups of people. These groups can be your family, another non-chemistry class or a club you belong to. Any other group must be pre-approved by your teacher. **THIS ASSIGNMENT MUST BE DONE BY EACH MEMBER OF THE GROUP.** The people that see your video must evaluate it:

On a separate sheet of paper – EACH viewer needs to

1. Print their name, your name, their relationship to you, and their phone number

2. Answer these three questions

Do you understand the science in the video?

Was the video entertaining?

Did the video make you want to learn more / do something?

3. Sign the bottom of the page

(HINT: You may want to have pre-typed up question sheets for your viewers).

Your CEO will determine when this part of the assignment is due.

## GRADING RUBRIC:

### **VIDEO: (group grade assessed by the CEO)**

- Science / chemistry involved in the process – relate to material discussed in class 10 pts
  - Where is the source currently used (case study) 5 pts
  - Clear discussion of advantages and disadvantages of your alternative energy 5 pts
  - Visual representation of actual product / system 5 pts
  - Script typed out; time less than 5 min 5pts
  - Creativity 5 pts
- TOTAL 35 PTS**

### **VIDEO: (group grade assessed by peer\*)**

- Science / chemistry involved in the process 3 pts
  - Where is the source currently used (case study) 3 pts
  - Visual representation of actual product / system 3 pts
  - Creativity 6 pts
- TOTAL 15 PTS**

\* peer grades will be given as groups. For example, if there are 6 groups in a class, each video assessed will be given 6 grades. The average of these will be the Peer Video grade.

### **EXPERT ROLE PAPER-TYPED: (individual grade)**

- How did your role contribute to the overall project? 5 pts
  - How do you think your group members role contributed the project? 5 pts
- TOTAL 10 PTS**

### **PUBLIC AWARENESS: (individual grade)**

Groups that you can use: family, another class, a club. All others must be pre-approved.

- Evaluation sheets from group 1 5 pts
  - Evaluation sheets from group 2 5 pts
- TOTAL 10 PTS**

### **INDIVIDUAL PEER EVALUATION:**

Your peers will determine a portion of your grade as well. They will grade you on a 5 point scale on your dependability, effort, and responsibility during the project.

5 pts  
**TOTAL 5 PTS**