**A Household of the Future** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Hour \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Problem:** How could alternative energy sources be used to meet a household’s needs?

**Directions:** In this activity students need to design a home and a car of the future that can operate entirely on renewable energy sources. Students need to apply what they have learned about renewable resources (green 714-719) and create a futuristic home and car. Students designs may incorporate either current or “futuristic” devices that use any or all of the following alternative energy sources: solar energy, energy from flowing water, tidal energy, biomass fuels, geothermal energy, hydrogen power and nuclear fusion (but not nuclear fission, which is a nonrenewable energy source) Your designs must address the following four household needs heating/cooling, hot water, electricity, and transportation. Although you may add other energy sources if you wish. Designs can be devices that already exists or ones that might be developed in the future.

**Checklist**

\_\_\_\_ Research: You must include background information on the energy sources that you use. This can include the assignment “Alternative Energy Resources Intro”.

\_\_\_\_ Blueprint: You must have a large, detailed and labeled illustration or design of your home and car.

\_\_\_\_ Explanation: You must have an explanation of your design. This can be written up in an essay format or written as captions on your blueprint. This should be an explanation of how and why your alternative energy sources work. Your house or car need to have at least three alternative energy sources.

\_\_\_\_ Household needs: You must use renewable energy sources to provide

 -the heating and cooling in your house/car

 -the hot water in your house/car

 -electricity in your house/car

 -transportation

\_\_\_\_ Complete constructed model of your car or house.

\_\_\_\_ All Important parts of the model are labeled.

\_\_\_\_ Complete Plan of Work

**YOU MUST TURN THIS RUBRIC IN WITH YOUR PROJECT!!!**

Plan of Work

Each team member needs to have a job assigned each day and a day they will be responsible for homework.

Day 1: Is there any additional research that needs to be done, assign who will do the additional research if needed. Decide who will be working on your explanation, blueprint and actual building of the model. When assigning the building of the model, be sure to assign specific jobs. (Example: Build walls out of Popsicle sticks) Create a supply list and who will collect your group’s supplies.

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| --- | --- | --- |
| Team members | Task | Homework |
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Day 2:

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| --- | --- | --- |
| Team members | Task | Homework |
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|  |  |  |
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Day 3:

|  |  |  |
| --- | --- | --- |
| Team members | Task | Homework |
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|  |  |  |
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**Alternative Energy Sources Intro Name**

 **Date**

 **Hour**

**Directions:** Read p. 714-719 in the green text. Select one source of alternative energy. (Solar energy, energy from water, geothermal energy, wind energy, nuclear energy or biofuels) You may not have the same choice as your table partner. Draw a detailed, labeled and colored picture of your alternative energy source on the back of this page. (Must take up entire page) Follow the directions below.

1. Write a brief summary of your alternative energy source. Your summary must explain what your alternative energy source is, how it works, one advantage and one disadvantage of your alternative energy source as well as one piece of textual evidence.