PLTW_M_L_4CP

|  |
| --- |
| **END OF ELECTRICITY** |

Introduction

In today’s technological driven society, people rely heavily on electricity to power their lives. Through the extraction of fossil fuels, communication devices, transportation methods, and many other facets of our lives, electricity plays a large role. What if something happens to our electrical infrastructure such as a solar flare damaging the electrical grid or worse an EMP from the detonation of a nuclear bomb above our atmosphere that would have the potential of wreaking havoc on all electronic devices? Could you survive without electricity, would you be able provide heat, clean water, protection, and food?

Equipment

* Computer
* Pencil
* Internet
* Found Materials

Procedure

This project is designed for you to design and build resources that could help you survive in the event that all electricity would disappear from the earth for over 100+ years. Each device created must be done so without the use of electricity, the materials must be in abundance, or made from common items that would be left over from the previous electrical society. The following necessities will need to be met through an innovation or invention that your group designs:

**Water:**

Water is needed for the human race to survive and although in a large abundance it will need to be clean and drinkable. You will need to create a device that will allow you to filter and purify the water to make it safe to drink.

**Fire:**

Fire is necessary to meet demands of basic survival. It can be used to provide heat for warmth, cooking, and shaping metals. Your group must create a device that will allow anyone to easily create fire.

**Protection/Hunting:**

With the absence of electricity the ability to provide protection will be needed because of the potential that society will fall apart in a panic. Guns will eventually become obsolete when ammo runs out and the ability to easily bring down game will be dimensioned. You will need to create a form of protection that will protect you in both close and long range scenarios and could also be used for hunting. (Certain forms of protection cannot be brought to school and therefore may need be created at home or created as an Inventor sketch if the protection device is dangerous.)

**Cooking without direct use of fire:**

In the event that fire cannot be created or a need for a food to be baked arises, you will need to create a device that does not use fire as its only method of cooking. For example create a device that does not require the food item to be thrown over top of a fire to be cooked.

**Scoring:**

You will be given two weeks to complete your groups design and prototype for each of the categories. Each device will be worth 200 points, below is a list of materials that will be needed to earn full credit for each need.

Device Grading

Working Model- 100 points

Hand Sketches- 25 points

Inventor Sketches- 50 points

Written Summary- 25 points

Presentation Grading

Visual Aid (PowerPoint, Website, Prezi, Slide Rocket, etc.)- 100 Points

Verbal/Physical Presentation- 100 Points

Total Points- 1000