FUTURE ENERGY PROJECT

***What does your future look like?***

As we look to the future, we see more people living on Earth than in the past. There will be more businesses selling more products. There will be more people traveling around the world.   
  
***Do you see the challenges?***

This means that in the future we will need more energy. We hope that everyone will be making their best efforts to conserve energy, but globally the demand is expected to grow.  
  
By now, you know that how we use energy directly affects our environment. You understand that using less energy is helpful in creating a **sustainable** planet for everyone. So how do we meet this challenge? How do we create the energy we need in a way that is least harmful to the environment? How do we use the energy we have in the best ways possible?

***We have choices!***

As you grow older, you will use new technology to create energy. Being smart about these decisions means using renewable energy sources to create electricity. Renewable energy technology have a smaller carbon footprint on the environment than   
non-renewable forms of energy.   
  
You might have a wind turbine or solar panel on the top of your house. You might heat your house with geothermal energy. Maybe you will own an electric car someday.

***Be the next Elon Musk or Ann Makosinski.***

This project is an opportunity to put your creative and scientific mind to work. You will research and use a renewable energy source to invent a new technology or apply a renewable energy source to power an existing technology in a realistic way.

FUTURE ENERGY PROJECT – THE PROCESS

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| **STEP 1:** | **Decide on which renewable energy source you will study and use to power your invention.**  **Options:**   * Hydro energy * Wind energy * Solar energy * Thermal body energy * Biomass energy |  |
| **STEP 2:** | **Brainstorm invention ideas!**   * Tip #1: think about what inventions you wish existed and has not been created yet. * Tip #2: think about what inventions currently exist, but is powered by non-renewable energy. |  |
| **STEP 3:** | **Research and gather information about your renewable energy source.**   * Think about how realistic it is to use this renewable energy source to power your invention. * Be aware: everything published on the Internet needs to be carefully considered for accuracy. |  |
| **STEP 4:** | **One-On-One Investor Meeting with Ms. Liu**   * Every invention requires money to get it made and mass produced. * Inventors will pitch their ideas to investors in hopes of getting funding for their invention. * Investors are people who will give their money to the inventors if they have faith the product will become successful. * At this meeting, you must be prepared to verbally discuss the 5 questions below in STEP 5. |  |
| STEP 5: | **The Poster**   * Each of the following questions must be answered in a separate section on your poster. * Make sure the print of your text is at least size 14 so it is easy to read. It should be typed and proofread.  1. ***What is this technological invention used for? How will it improve our lives?*** 2. ***Describe the advantages and disadvantages of using this invention.*** 3. ***How is this invention beneficial to the environment?*** 4. ***How is the energy used to make electricity?*** 5. ***How is the energy transported from the source to where it is useful?***  * Remember your poster should: * Be colorful and eye catching * Include the name of your invention * Include pictures of your renewable energy source, your invention, how it can be used |  |
| **STEP 6:** | **The Model**   * Build a model of your invention using resources around you. * If you can actually get your invention to work with the application of circuits, even better! However, this part is not expected, but it will definitely be a bonus. |  |
| **STEP 7:** | **The Presentation**   * You will have 5 minutes to present your invention to the class. * Give a demonstration of how your invention works. * You will discuss all the sections on your poster. However, do not just hold up your poster and read from it. * More criteria will be given on your presentation skills later on so you can prepare for it. |  |
| **STEP 8:** | **The Grand Reveal to the Public**   * Other classes will be invited for a gallery tour. * Students will tour the room and you will give a demonstration of your invention similar to your presentation. |  |