



2013 - 14 Educational Grant Application
Deadline: Wednesday, March 20, 2013, by 4pm

Name of Grant: ___Green Going Green-Alternative Energy Sources

Name of person(s) submitted by: (if submitted by a team of teachers, grade level, etc. please list all names involved and select one individual to be the contact person for the grant.)

___Carrie Sledge_____

Campus/Department: ___Green GT_____ **Grade Level(s):** ___k-6_____

Total Dollar Amount Requested: ___\$ 525_____

Number of students who would be involved/impacted by grant: ___700_____

Name of principal or immediate supervisor who will approve submission: ___Kelly Campman_____

Project Purpose: What is the problem, need or opportunity that this grant will address? What is the **student need** which the project will address? The purpose should explain **what students will know and be able to do** as a result of this project. Please explain how a problem will be addressed or a situation improved because of the grant. **(200 words or less)**

Alternative Energy comes from resources like the sun (solar), the earth (geothermal), the wind (wind power), wood, agricultural crops and animal waste (biomass), landfill or methane gasses (biogas), and other sources like fuel cells. These resources are abundant and are renewable fuels. By using alternative fuel sources we can conserve our non-renewable fuel sources like natural gas and oil. By doing this we can be more energy efficient in producing electricity and heat while protecting our environment.

Project Description: How will the project or program be implemented? Describe activities and tasks. Who is the target population and in what ways will they benefit? **(200 words or less)**

In one way or another, almost every form of energy we use originates as energy from the Sun. Solar energy directly powers photovoltaic cells and thermal collectors. Indirectly, we get power from plants grown by the Sun, oceans heated by the Sun, and Earth's weather systems sustained by the Sun. Even the energy stored in fossil fuels originated as energy from the Sun, captured by plants and animals millions of years ago. The Physics Solar Workshop explores this principles with in-depth experiments and projects.

Each person in the class will choose an alternative energy source (hydro, wind, solar, or geothermal) Explain that they will work independently to research the Web sites, take notes from the information on the sites, and answer questions regarding their alternate energy resource, but will share this information with the rest of their team members after the information is collected. When the students understand the assignment, distribute the criteria sheet and have the students use it as a guide for what information to collect when conducting the research. I will then distribute the question sheet and the additional notes sheet for the students to record any additional facts that the question sheet does not cover. When the

students understand the assignment, I will allow them to begin researching their topic by viewing the Web sites listed below that apply to their area of study and complete the question sheet as directed.

For their final presentation, they will go before the community members in Allen to present their proposal on how Allen can GO GREEN just by.... Now I cannot answer that for it is the children's answers with the proposals to the city.

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Allen ISD Goals/TEKS: Which Allen ISD goals/TEKS does this project support? Limit to top two or three examples. **(50 words or less)**

5.8(8) Science concepts. The student knows that energy occurs in many forms. The student is expected to:

5.11(11) Science concepts. The student knows that certain past events affect present and future events. The student is expected to:

(A) identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow;

6.9 (9) Science concepts. The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:

Measurements: What specific measurements will be used to evaluate the effectiveness of the project? **(100 words or less)**

The students will build a model house complete with solar panels, windmill, greenhouse, and desalination system. We will build and operate an electric train, windmill, solar cooker, solar hot water tank, electric motor, power hoist, sail car, and more! By building a solar garden we will learn how plants convert sunlight into energy for your body and your engines. When we present our final readings, you will be invited to hear what the effects of this project allowed us as the AIM class and Green Elementary to start thinking and more importantly doing.

Teaching Methods: What teaching methods will be used to implement this project? **(100 words or less)**

As a country we depend greatly on the use of oil and gas as sources of energy. Because it is a finite resource (and we are well aware of this in Texas), the use of alternative sources of energy must be explored.

My class is extremely involved in environmental issues throughout the year. The objective is for the students to determine what types of energy sources can be used in our location and under what conditions. During the year long study, the class will be building water wheels designed to make something move and experiments with wind power as well as designing and building machines that work using solar power.

As an introduction to the unit we brainstorm the various types of energy sources and discuss all the positive and negative effects of their use. Then, based on this list, the children determine the type of alternative energy source they believe would be best suited for use in our area. The choice is invariably solar power because of the heat in Texas, but we must arrive at this answer later. After this unit the children will revise their choice because it becomes apparent to them that heat is not the necessary ingredient for solar power, it is the rays of the sun that we often do not get because of the cloud coverage.

The students will experiment uses the "sun block" plastic window film you can buy at hardware or building supply stores. This film is designed to block the sun's heat in the summer to keep your house cooler. They will build 2 small cardboard "houses" with one having a clear plastic window and the other using the sun blocking window film in the window. When you place the radiometer in the "house", you will see the difference in how fast the radiometer is spinning in the different "houses". We will also add oven and refrigerator thermometers to see the temperature of the "houses".

Our end of the year projects will be presented to the school during science day for ALL students to learn and experience!

Timeline for project: Funds will be available after September 1, 2013. **(50 words or less)**

September 2013-end of the year and then continue with the non-consumables the next years

Curriculum/System Support: Explain how this idea or project enhances/supports Allen ISD curriculum or existing systems. **(100 words or less)**

Our children must start to think now of how our land is being used and how we can start now learning and developing alternative energy supplies within our own community now. The children will have continually with the alternative energy uses novelty and variety. There will always be choice. How can they make it better? Affiliation will be weekly, but at the end of the year, they will have this when presenting their findings on alternative energy uses in Allen.

I believe every child deserves the highest quality education. We are responsible for building upon the sense of community we have inherited. These are two statements from the ALLEN ISD beliefs. I feel that will understand about the past and build upon the growth of our community. I

Additional Comments: Include any additional comments or information. **(100 words or less)**

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Grant Budget: specific product numbers, vendor addresses, etc. **are not required** on this budget page.

The name of the product or the type of training or estimated cost of transportation is sufficient.

***Please round numbers to the nearest dollar amount.**

Instructional Supplies or Resources: (Books, Manipulatives, etc.)	
Solar Energy Kit	
OWI Triple Action Solar Car Kit	
Power House kit - experiments in sustainable alternative energy	
WindLab Jr. Wind Turbine Educational Kit	
Solar Bag	
Solar Cells SLR-600	
Super Solar Racing Car ROB-500	
Our Super Deluxe Energy Educational Kit	
The Classic Radiometer - Demonstrates the intensity of radiant energy	
SunnySide Up Classroom 10-pack	

	Total: \$ 500
Staff Training / Staff Development:	
	Total: \$
Transportation:	
	Total: \$
Other Expenses:	
	Total: \$
TOTAL AMOUNT REQUESTED	\$500

Additional Funds: Are there any additional funds available for this grant? Campus or district funds? PTA funds? If you have or will be seeking funds from any other sources to help with this project, please explain.