Clean Technology Awards

CLEAN TECHNOLOGY AWARDS: 2009 SCIENCE FAIR GUIDELINES AND RULES

GENERAL COMMENTS:

Our knowledge about clean energy technologies and our understanding of the implications for adopting them are increasing every day — much faster than textbooks and standard classroom materials can cover.

Because of this the *IMAGINING TOMORROW*™ program in Massachusetts, is continuing the Clean Energy Awards program begun in 2007, working with the Massachusetts State Science and Engineering Fair (MSSEF) to motivate and recognize student work in science on the issues of clean energy.

Now in its 60th year, the MSSEF is both an opportunity and a showcase for inquiry-based learning in all areas of science. We are pleased to be able to join with them to present the following awards:

- High-School Regional: The best qualifying project at each of the high-school regional science fairs will receive a cash award of $100, a Certificate of Recognition, and a "Visionary in Residence" T-shirt.
- Middle-School Regional: The best qualifying project at each of the middle-school regional science fairs will receive a Certificate of Recognition, and a "Visionary in Residence" T-shirt.
- High-School and Middle School State Fairs: The two best qualifying projects at the high-school state fair level will each receive a cash award of $125, as well as certificates and T-shirts; the two best qualifying projects at the state middle-school fair level will each receive cash awards as well as certificates and T-shirts.
- All award winners (if desired) will have their project description posted on-line.
- **In Addition:** This year we are pleased to offer a special award on Climate Science and System Dynamics if there is a qualifying project related to these topics.

RULES TO QUALIFY:

1. At both the regional and state fairs, award recipients will be chosen from among the winners as selected by the MSSEF organization. Please see the organization's website, http://www.scifair.com, for any information about rules and entry procedures, as well as for the dates of the fairs in your area. Please note that there are two paths to the State Fair: to be a winner at a regional fair, or to be a delegate directly from your school.
2. The student project must be related to clean energy issues, technologies, or solutions. See the following guidelines for details and examples. Please note that if you are studying one aspect of a system, you should be aware of the over-all energy consumption of the system that you are studying.

Clean Technology Awards

GUIDELINES FOR PROJECTS:

All Clean Energy Award projects must focus on a topic that is related to clean energy issues, technologies, or solutions. This can be in any of the MSSEF categories, from astronomy, biology, and behavioral science, through electronics, engineering, to math and physics.

Here are some examples:

Benefits of Renewable Energy: Explore or investigate a problem that could be addressed by the adoption of clean energy or reduced energy use.

Conversion of Renewable Energy Sources into Usable Power: Explore an energy conversion technology. These could include (but are not limited to) conversion of solar radiation into electrical energy, hot water, space heat (as in passive solar design) or lighting; the use of wind power and the factors that result in an appropriate design; hydropower and related technologies; or projects that look at factors related to the use of biomass for fuel.

Improved Efficiency of Energy Use: Explore how to accomplish a specific task with less energy. This could include (but is not limited to) studies of technological systems or comparisons between technological and biological energy transformations.

Reduced Energy Use through Behavioral Changes: Explore or investigate the how, what, where, or when of human behavior that can lead to or result in a reduction of energy use. These may include surveys of human behavior or motivation, behavior experiments, a statistical analysis of human behavior.

Special Awards in 2009: Climate and Weather Issues in Clean Technology: Although we talk about climate change, climate is a word that describes an overall average over a period of time that is relatively stable. What are the implications of changing the composition of our atmosphere, and of the change in temperature gradients that result? Climate is a combination of many feedback loops that result in specific weather conditions in individual locations. How do such non-linear, dynamic, feed-back systems work?

For additional potential examples, check out "Questions to Consider: About Science and Technology" at www.itomorrow.theforesightproject.org, as well as the 2007 and 2008 award winners whose projects are described at www.ma.cleantechawards.org.

Any questions should be addressed to info@cleantechawards.org.

Use your imagination and enjoy your journey of discovery!

IMAGINING TOMORROW: ALTERNATE ENERGY FUTURES™ is a program from The Foresight Project, Inc., www.theforesightproject.org.