



2009

MASSACHUSETTS CLEAN TECHNOLOGY AWARDS

A Program from The Foresight Project Inc; www.theforesightproject.org



Region II, Central MA
CleanTech Honorable
Mention:

Alexandra Cronin and
Harriet Holmes, The
Bromfield School, Harvard

"The Effects of Surface Area
on the Efficiency of a Solar
Oven"

ABOUT US:

Alexandra (Allie) lives with her parents, Sharon and Chuck, her brother, Tristan, and puppy, Madigan in Harvard, MA. She loves horses and horseback riding and hopes to get her own horse soon. She also enjoys soccer, reading, writing, swimming, basketball, science and drama. Allie is an adventurer and will choose exploring the outdoors over television any day. Harriet lives with her parents, Kathi and Don, her dogs, TheaLu and XanderMax and their cats, IlsaBlue and AbbyRose. Her interests are gymnastics, dance, soccer, art, and poetry. She loves all academic subjects and is also an environmentalist.

Harriet also lives in Harvard. She loves her friends, tries to be kind to everyone, and enjoys skiing and hiking great mountain distances with her family.

OUR PROJECT:

Our project involved solar ovens. We wanted to find out whether a solar oven with more or less surface area would gain heat faster and, therefore, be more efficient. Our interest stemmed from an overall concern for making such an oven available to third world countries.

We made the ovens out of glass containers that were different sizes but by the same manufacturer, thus keeping the design materials constant. We ran an experiment to test our hypothesis by baking cookies in the ovens and monitoring the temperature at 10-minute intervals. We took notes and did research at various steps in the process and had an "awesome" time!

Our hypothesis was supported by the experiment, demonstrating that the larger the surface area, the faster and more efficiently the solar oven would heat. We enjoyed meeting and making friends with the students in the other groups at the fair and felt good about our third place regional finish. We are looking forward to the statewide competition!