**Solar Oven Project**

Planet Holloway Physics

**Objective**: Build a working solar oven capable of boiling 500 ml of water in 30 minutes. Research and explain the physics concepts involved in a solar oven.

**Requirements**: The oven must be entirely of your own creation and not assembled from a kit. The oven must be made of materials that will not catch fire while in use. The oven must be free standing. No toxic paints or materials may be used on the interior of the oven. If glass is used, the edges must be dulled so as to not create a hazard. Ovens deemed unsafe for any reason will not be tested.

There are lots of great websites to help with your design, but the oven must demonstrate the following concepts

* Passive heating
* Reflection
* Insulation
* Heat reservoir
* Specific heat capacity
* Conduction, Convection and Radiation
* Focusing or concentrating heat (optional)
* Greenhouse effect

For each concept above, include a diagram of your model showing the concept and a paragraph describe how your model incorporates that concept. (Describe what the concept does in that part of your model).

**Grading:**

150 points possible: (170 max)

50 - 100 points for a working model. Points awarded for quality (better heating means a higher score) Temperature based on solar conditions on day of testing.

10 points for each concept correctly identified and explained.

Good luck and have fun!