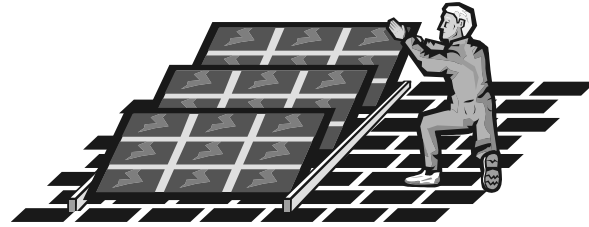


SOLAR WATER HEATING CONTEST



Goal: To build a small solar water heater that will heat 300ml of water inside an aluminum soda can to the highest possible temperature in 60 minutes using solar energy as your *only* heat source.

Procedure:

Each team is to build a solar water heater of their own design using the following materials:

Cardboard boxes	Aluminum foil	Clear plastic wrap
Black Spray paint	White spray paint	Silver spray paint
Balsa wood	Thread and string	Wire
Duct tape	Masking tape	Wood glue
T-pins Tacks	Exacto knives	scissors
Rulers	wire cutters	pliers
power drill	saws	thermometer

Rules:

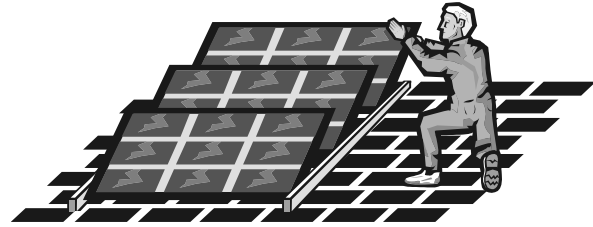
The entire device, when fully deployed for solar heating, may not be more than 70cm wide x 50cm tall x 50cm deep. Only the materials listed can be used in the construction of your team's solar water heater. The soda can with the 300ml of water can be placed anywhere in your solar oven, but no water may leak out the top hole. The can must be-easily accessible at the end of the contest so that the water temperature can be measured.

Day 1	Explanation of project and discussion of solar physics principles. Each student is to design their own solar oven
Day 2 (Block)	Team discussion and team design; examination of materials, Construction of solar ovens
Day 3 (Final Day)	Finish construction and testing set-up of solar ovens

Points: **50 points** for each person on the team for the successful construction of a solar water heater

In addition: First Place (the hottest water)	<u>15 extra bonus points</u>
Second Place	<u>10 extra bonus points</u>
Third Place	<u>5 extra bonus points</u>

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