



## Solar Oven Project

Name \_\_\_\_\_ Date \_\_\_\_\_

Period \_\_\_\_\_ Group \_\_\_\_\_

The three most important skills that employers will be looking for in prospective employees for the foreseeable future are the ability to:

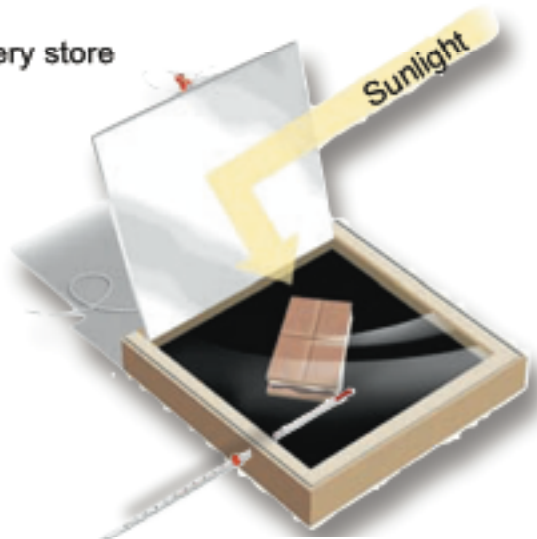
- 1-Think critically and find solutions to problems.
- 2-Communicate effectively to others which requires listening,reading,speaking and writing well.
- 3-Work with others in small and large group settings towards a common goal.

### OBJECTIVES:

- 1- Students apply what they've previously learned in science to construct an efficient design for a simple solar oven. Their design must achieve maximum heat gain and minimum heat loss. The design must allow for sunlight to reflect off the underside of the lid. The oven can NOT be readjusted once it is positioned. It must be left by itself, untouched and unmoved.
- 2- To test their design and demonstrate the power of the sun, the students' solar oven will need to get hot enough to actually cook something.
- 3- Students work cooperatively with other students in the planning, design, constructing and testing phases of this project. You will be graded on:
  - A.how you work with your group each day and the extent to which you help your group.
  - B.the neatness, legibility and completeness of what you have written and turned in to the teacher.
- 4-Students gain insight into saving energy by using solar power.

### MATERIALS (for each group of 3 or 4 students)

One flattened cardboard pizza box from a local pizza delivery store  
Newspapers  
Tape or glue  
Scissors  
Black paper napkins  
One clear roasting bag  
Aluminum foil  
A pencil  
A ruler  
Stapler  
String  
Thermometer  
Timer



### PROCEDURES

#### Planning Phase (Day 1)

Carefully examine the diagrams of the sample solar oven pictured on the front page. With objectives 1 and 2 in mind, use what you've previously learned in this course and discuss with your group what factors must be considered before you even begin to draw your design for your oven.

As you do this, keep your voices low enough for just the students in your group to hear what's being discussed. This way you won't be influenced by what other groups are saying and your group will not be giving away ideas to other groups.



