ESS 100 Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solar Oven Project

Experiments #1 and #2

**Testable Question #1**: How will adding a clear cover affect the oven’s temperature?

**Hypothesis:**

**Explain the reasoning for your hypothesis:**

**Experimental Variable**: *Covering*. In the first test, the cooker will be uncovered. In the second test, it will have a clear acrylic cover.

**Controlled Variables:**

* Same solar cooker (except for added cling wrap cover)
* Same lamp
* Same angle of lamp and box
* Same distance to lamp
* In both tests, data are recorded until temperature levels off
* Before each test, cooker is cooled to room temperature

**Data:** Highest temperature reached by cooker

 Uncovered Cooker: \_\_\_\_\_\_\_\_\_ Time to reach this temperature: \_\_\_\_\_\_\_\_\_\_

 Covered Coker: \_\_\_\_\_\_\_\_\_ Time to reach this temperature: \_\_\_\_\_\_\_\_\_\_\_

**Conclusion (Use your data to provide an answer to the testable question above.)**:

Adding a clear cover to the solar oven…

**Testable Question #2**: How will adding white and black material to the inside of the oven affect the oven’s temperature?

**Hypothesis:**

**Explain the reasoning for your hypothesis:**

**Describe the experimental variable (what you are changing)**:

**List some controlled variables (things you must keep the same):**

**Data:** Highest temperature reached by cooker

 Cooker with white interior: \_\_\_\_\_\_\_\_\_ Time to reach this temperature: \_\_\_\_\_\_\_\_\_\_

 Cooker with black interior: \_\_\_\_\_\_\_\_\_ Time to reach this temperature: \_\_\_\_\_\_\_\_\_\_

**Conclusion (Use your data to provide an answer to the testable question above.)**: