**Solar Cookers**  Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Introduction: 3 in 7 people today lack modern fuel to cook food <https://www.solarcookers.org/> . Solar cookers are gaining popularity as a solution to this problem while also helping to conserve wood and prevent pollution. Solar cookers can also be used to pasteurize household drinking water making it safe to drink. For this design experiment your group will be designing and engineering a solar cooker. Answer the questions below to plan and conduct your experiment.

**Prelab Questions:**

1. Why is is important that we find renewable energy sources and use them instead of nonrenewable resources?
2. Why do you think so many people choose to use nonrenewable energy sources even though they are obviously harmful to the Earth?
3. Use this link to read about solar energy <https://www.eia.gov/kids/energy.php?page=solar_home>
   1. What is solar energy?
   2. What is a solar cooker?
   3. What are some ways (other than a solar cooker) people are using the energy from the sun?
   4. What are the benefits to using solar energy?
   5. What are the limitations to using solar energy?
   6. What are concentrating collectors and why are they useful?

**Designing Your Solar Cooker**

1. Use your computer to research some different designs of solar cookers.
2. What types of solar cookers include easy to find materials?
3. What are some materials that you could use from your house to build a solar cooker?
4. Draw or describe the design for a solar cooker that you will create tomorrow.
5. Decide which group member is going to bring which materials.

**Conclusion Question**

1. What did you observe during this lab. Why do you think your solar cooker was or was not a success.
2. Based off your observations what are two things you would do to improve your solar cooker.
3. Think about our variables that affect the rate of reaction (temperature, volume, surface area, concentration) What would you do to speed up the cooking process?
4. What type of energy is coming into this system?
5. What type of energy is going out of this system?