

PSC 320 Activity #1 Calorimeter

1. Make a calorimeter: Make a calorimeter by burning a candle and heating some water with it! The goal is to measure the input and output energy so you can calculate the efficiency of the energy conversion process.

- 1) Draw the energy conversion flow chart for your calorimeter.
- 2) Measure the input energy and the output energy
- 3) Measure the input power and the output power
- 4) Estimate the efficiency of the energy conversion in your calorimeter
- 5) If you want to and you have time, you could try to make some revision to your device to improve the efficiency, and repeat the above activities. Did your revision improve the efficiency?
- 6) Now, please use your calorimeter of known efficiency to measure the energy density (caloric content) of some food – like nuts.

2. Work on the problem set until class is over... OK? Ask me if you have questions.