# 10.2 The Flow of Energy

# Due Date:

**A. Thermodynamics**

The study of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is called thermodynamics

What is the first law of thermodynamics?

What is internal energy? What equation do we use to calculate internal energy? *\*Make sure to include what each variable represents\**

Thermodynamic quantities always consist of two parts:

q is equal to +x where the positive sign indicates that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. q is equal to –x, where the negative sign indicates that the systems energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If the system does work on the surroundings, w is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If the surroundings do work on the system, w is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**B. Measuring Energy Changes**

How is a calorie different from a Calorie?

What is the conversion factor for converting from calories to Joules?

Define Specific heat capacity

Where would you find the values for specific heat capacity?

Fill in the boxes below

Write the specific heat capacity equation below. \*Make sure to include what each variable represents\*