

# Calorimetry Poster Project

## Overview

You will collaborate with your group to develop a model of particles and energy flow in your food calorimetry lab as well as redesign the lab to improve the amount of energy transferred from the food to the water in the can.

## Directions

In the format of a poster:

- Develop a model of experiment before redesign
- Write an explanation of model
- Propose an experiment redesign with justifications for the changes being made
- Develop a model of experiment *redesign*
- Write an explanation of how redesign improved the energy transfer

## To get at least a B

Title

- Highly visible and relevant

Procedure

- Clear, communicates all steps
- Relevant to their experiment
- Format of procedure is legible and in list format

Model

- Includes macroscopic (large image) and microscopic (particle model) visuals
  - Lab set-up & particle model are clear
- Particle Model of Liquid
  - Clearly shows movement of particles of liquid inside of can
  - Utilizes arrows to show speed of particle movement
  - Utilizes dotted lines to show attractive interactions between particles
- Energy Flow
  - Labeled arrows clearly show where energy is coming from and going to
  - Particle model clearly shows where energy is coming from

Written Explanation

- Shows clear understanding of energy flow and Kinetic Molecular Theory as it applies to particle motion.
- Demonstrates understanding that particles interact and can stick to each other in various ways
- Shows substantial understanding of how bonds are broken and made that causes changes in energy and how it is measured using support from evidence

Modification

- Clearly identifies what was changed in procedure
- Justifies why these changes were made
- Evaluates and accurately explains how the changes affected their experiment including intermolecular forces and/or total bond energy, supported by evidence

Overall Appearance

- Poster clearly communicates information
- Color is used