Objective: SP2: Students will evaluate the forms and transformations of energy and the significance of energy in understanding the structure of matter and the universe.

Strategies:
1. Students will complete lab in groups of 2-3: Thermal Expansion of Water
2. Discuss results from lab and any inconsistencies between results and students’ prior knowledge.
3. Lecture and demonstrate the thermal expansion of matter
   a. Physically using “jumping disks”: disks are bimetallic wafers made of two metals with different coefficients of thermal expansion.
   b. Mathematically

Review:
1. Temperature, density
2. Viscosity

New Work:
1. Practice problems determining the coefficient of thermal expansion for various substances.
2. Prepare a lab report showing the data obtained graphically.

Assessment:
1. Give a quiz over practice problems to check for understanding.
2. Use attached rubric to grade lab report.