Sci 8 Name:

 **Thermal Expansion Worksheet**  Block:

1. In your own words, define the term thermal expansion.
2. In terms of SPACING and ENERGY, describe what’s happening to the liquid particles inside a thermometer that enables the fluid level to rise.
3. When the lid of a jar is stuck tight, explain, using KMT which method will help to loosen the lid: running the lid under cold water or hot water?
4. The Eiffel Tower in Paris is 324 meters tall. Would you expect it to be taller or shorter on a hot day?
5. Explain using the word volume, how a small amount of water can break rock over time.
6. What is the structure on the right and why is it important for bridges?

*Consider the experimental set up on the left to answer the following questions.*

1. If the flask on the left were heated, what would happen to the water level in the tube?
2. Use KMT (using terms like spacing and particle energy) to explain the relationship between volume and temperature of water.
3. How is this model is like, and not like, an ocean? (How is this model useful? What are the deficiencies?)

1. As Earth’s atmospheric temperature rises from global warming,
2. What will happen to the temperature of the water?
3. Will this have any effect on sea levels?
4. As global temperatures rise, what will happen to the land ice? How will this affect sea levels?
5. Parts of Richmond are at 0 m above sea level. These cities must maintain dykes and levees (embankments) to prevent flooding. What might happen to these cities if the ocean levels rise a few feet?