

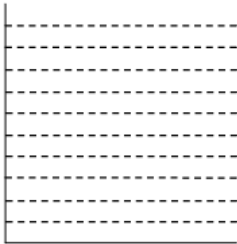
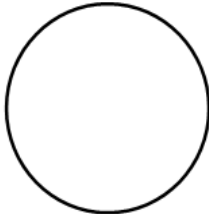
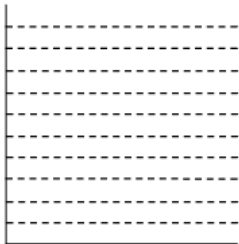
(Edited version for public review)

1.3 Act 4

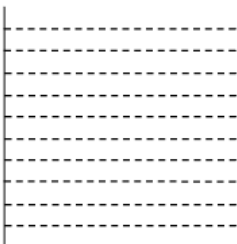
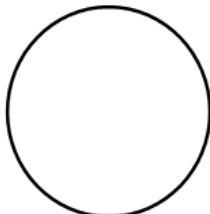
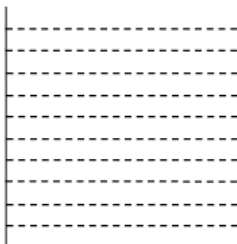
Energy Bar Charts

Directions: For each of the situations described below, use an energy bar chart to represent the ways that energy is stored in the system and flows into or out of the system. Next to each chart add a brief description of how the arrangement and motion of the particles change from the initial to the final state.

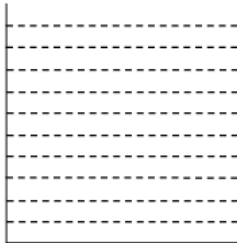
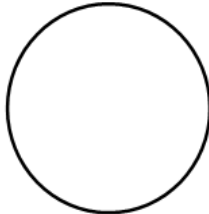
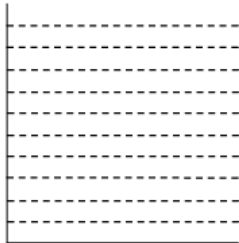
1. A cup of hot cocoa cools as it sits on the table.

Initial	Energy Flow	Final
		
E_{th}		E_{th}

2. A can of cold soda warms as it is left on the counter.

Initial	Energy Flow	Final
		
E_{th}		E_{th}

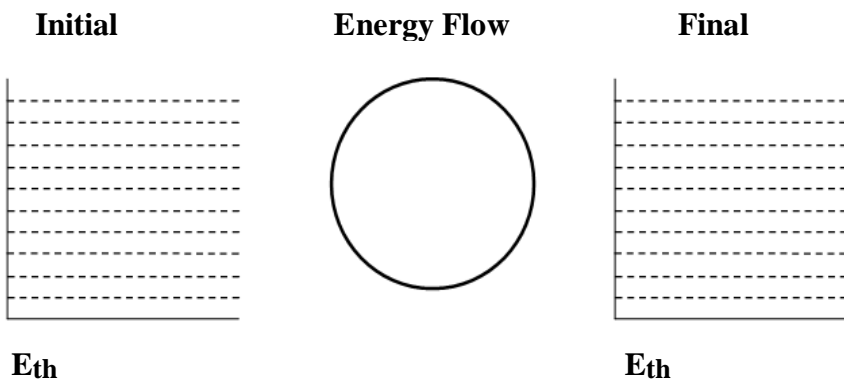
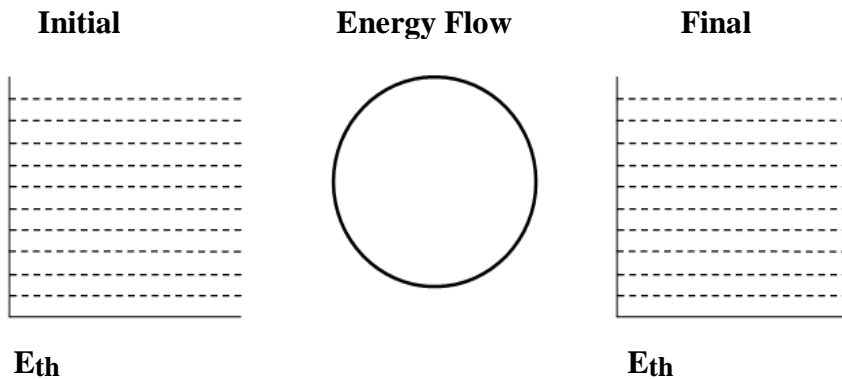
3. A tray of water (20 °C) is placed in the freezer and turns into ice cubes (- 8 °C)

Initial	Energy Flow	Final
		
E_{th}		E_{th}

in #3 go?

4. Where does the energy that leaves the system

5. One of the ice cubes described in #3 is placed in a glass of room temperature (25 °C) soft drink. Do separate bar charts for the ice cube and the soft drink.



Describe how the arrangement and the motion of the particles

(Additional materials available in members' resources)

6. Suppose someone in your class said that when water freezes, it is because ...

(Additional materials available in members' resources)