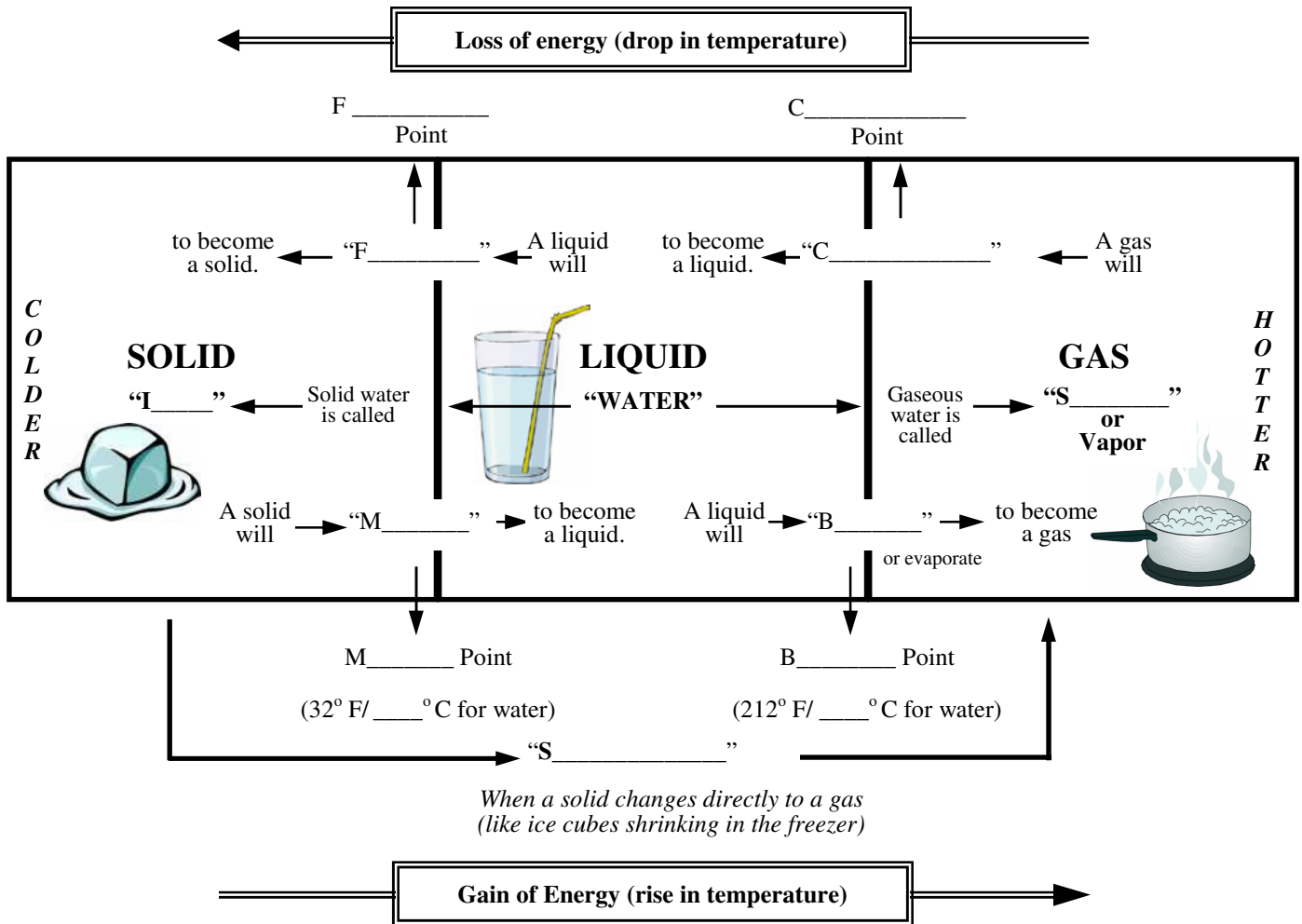


A-Day: Due Wed., Jan 21
 B-Day: Due Thurs., Jan 22

2009 Heat 1

1. The following diagram will help you remember the terms we use for water. Fill in the blanks.



2. Give definitions for the following.

- A. _____ Temperature at which a solid turns to a liquid.
- B. _____ When a gas turns to a liquid.
- C. _____ When a solid skips the liquid phase and jumps straight to a gas.
- D. _____ Process in which a liquid turns to a gas.

3. Gain or lose energy?

- A. _____ When water freezes.
- B. _____ During sublimation.
- C. _____ When water boils.
- D. _____ When ice melts.
- E. _____ During condensation.
- F. _____ When water turns to steam.

4. Solid, Liquid, or Gas?

- A. _____ Water at 50° C.
- B. _____ Water at 120° C.
- C. _____ Water at 10° F.
- D. _____ Water at -5° C.
- E. _____ Water at 100° C.
- F. _____ Water at 285 K.

$$\begin{aligned} -Q_{\text{hot}} &= Q_{\text{cold}} \\ -m_h c_p (T_f - T_i)_h &= m_c c_p (T_f - T_i)_c \\ -18(129)(T_f - 80) &= 20(4186)(T_f - 10) \end{aligned}$$