Intro Physics Journal Extra Credit

You may earn weekly extra credit by submitting entries to a "Physics in Everyday Life" journal. You may submit up to one entry per week until classes end on June 10.

This is *EXTRA* credit, and is not meant to replace your other assigned work!

Each entry must include:

1) Something you have observed or experienced that week.

2) A link between that experience and a physics concept you learned in IP this year.

3) An explanation of the physics concept.

4) An explanation of how your specific experience or observation relates to the concept or concepts identified.

5) A diagram, sketch, or photograph of the observation or event.

The following is an example of the writing portion of a journal entry:

This afternoon I made myself some hot tea. Because the weather had finally gotten warm, I decided to make my tea into Iced tea. First I let my tea cool to room temperature. It reached ***thermal equilibrium*** *with the kitchen. Then I added iced cubes to my tea. The ice cubes melted (got warmer) and the tea got cooler. This was an example of* ***heat transfer by conduction****. Because the iced tea is a liquid****, heat was also transferred by convection.***

Solid water (ice) melting to liquid water is an example of ***phase change.*** *Heat energy from the room temperature tea was absorbed by the molecules of frozen water. When they had enough additional energy, the ice turned to water, a higher energy phase. The heat lost by the water molecules was not enough to change them to their solid phase. The water just became cooler.*

I also noticed that the table under the glass got cooler. Some of the heat energy from the table was absorbed by the cooling iced tea – ***heat transfer by conduction.***

I also noticed that water condensed on the outside of the glass. Heat energy from the air around the glass was absorbed by the glass and the iced tea. The air had water vapor in it. The water was in the gas phase. As the water molecules in the air transferred some of their energy to the iced tea, they ***lost enough energy to change phase into liquid.***