

ICP Do Now- get out your quantitative energy worksheets

Energy constants (H₂O)

334 J/g Heat of fusion

2260 J/g Heat of vaporization

2.1 J/g°C Heat capacity (c) of solid water

4.18 J/g°C Heat capacity (c) of liquid water

Answer the problem below:

How much energy does it take to vaporize 200 g of water?

- What are you solving for? J
- Which energy constant do you use? H_v
- Set up and solve the problem

$$\frac{2260 \cancel{\text{J}}}{\cancel{\text{g}}} \times \frac{200 \cancel{\text{g}}}{\cancel{\text{g}}} = 452000 \text{ J} = \text{J}$$

Energy (heat) transfer

	How energy is transferred	Examples	Model
Conduction			
Convection			
Radiation			

Hot Cans, Cold Cans

Goal: Keep a soda can of hot water warm and also be able to let a can of hot water cool as much as possible. You must bring in materials to create your can containers and start from "scratch" (no manufactured items to keep things warm or cold).

You will be graded on how well you collect your data and on how you tried to prevent/increase heating through all three types of heat transfer

How will you build your cover to increase/decrease heat transfer due to...

A) conduction

B) radiation

C) convection

What materials do you need to bring next class?