



# Do Now ... May 30, 2017

Obj: Analyze data from exothermic reactions (burning food).

Copy and do:

List the steps explaining how you would determine how much energy (Calories or Joules) is in an Oreo cookie?

# Tuesday, May 30, 2017

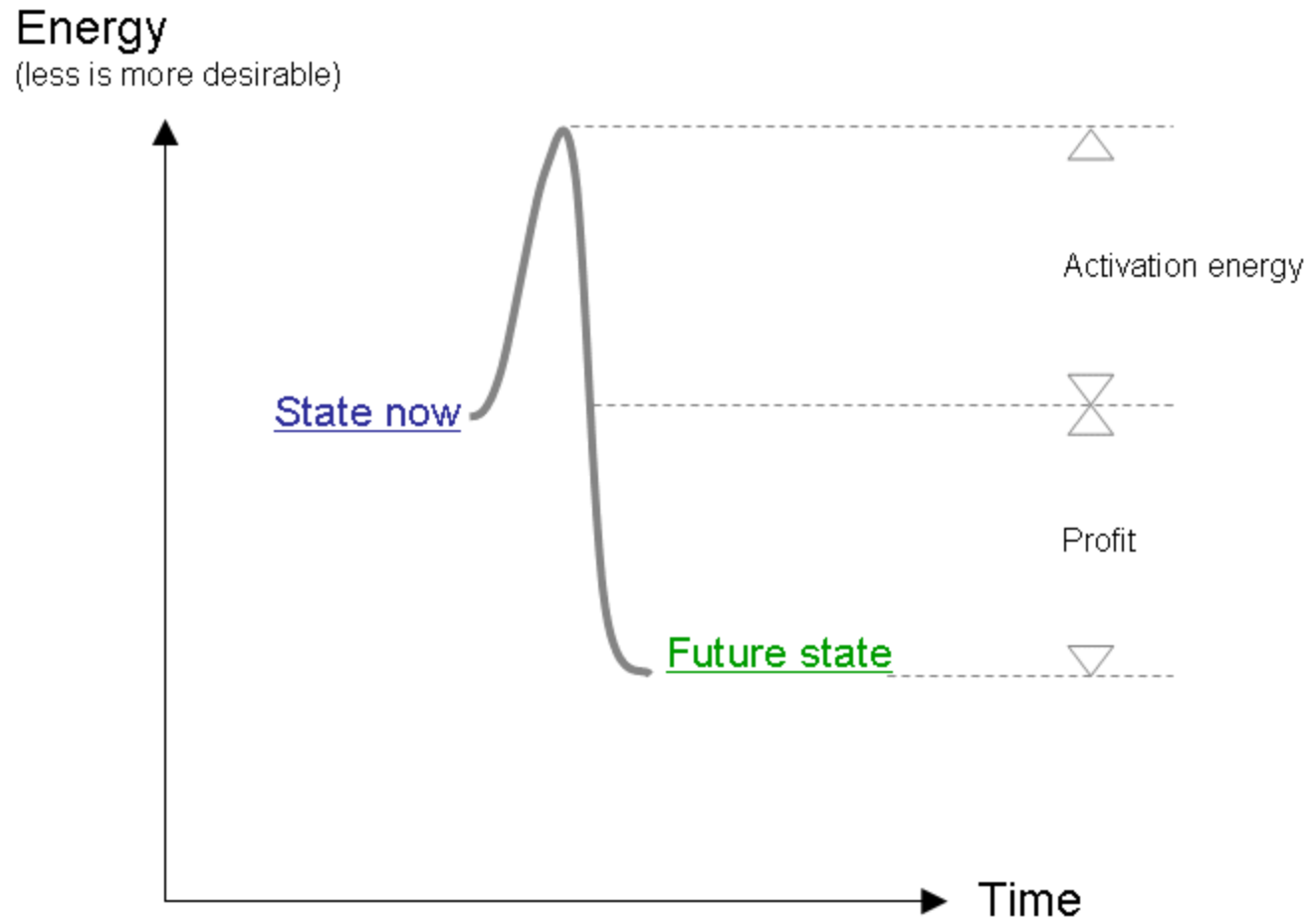
## Today:

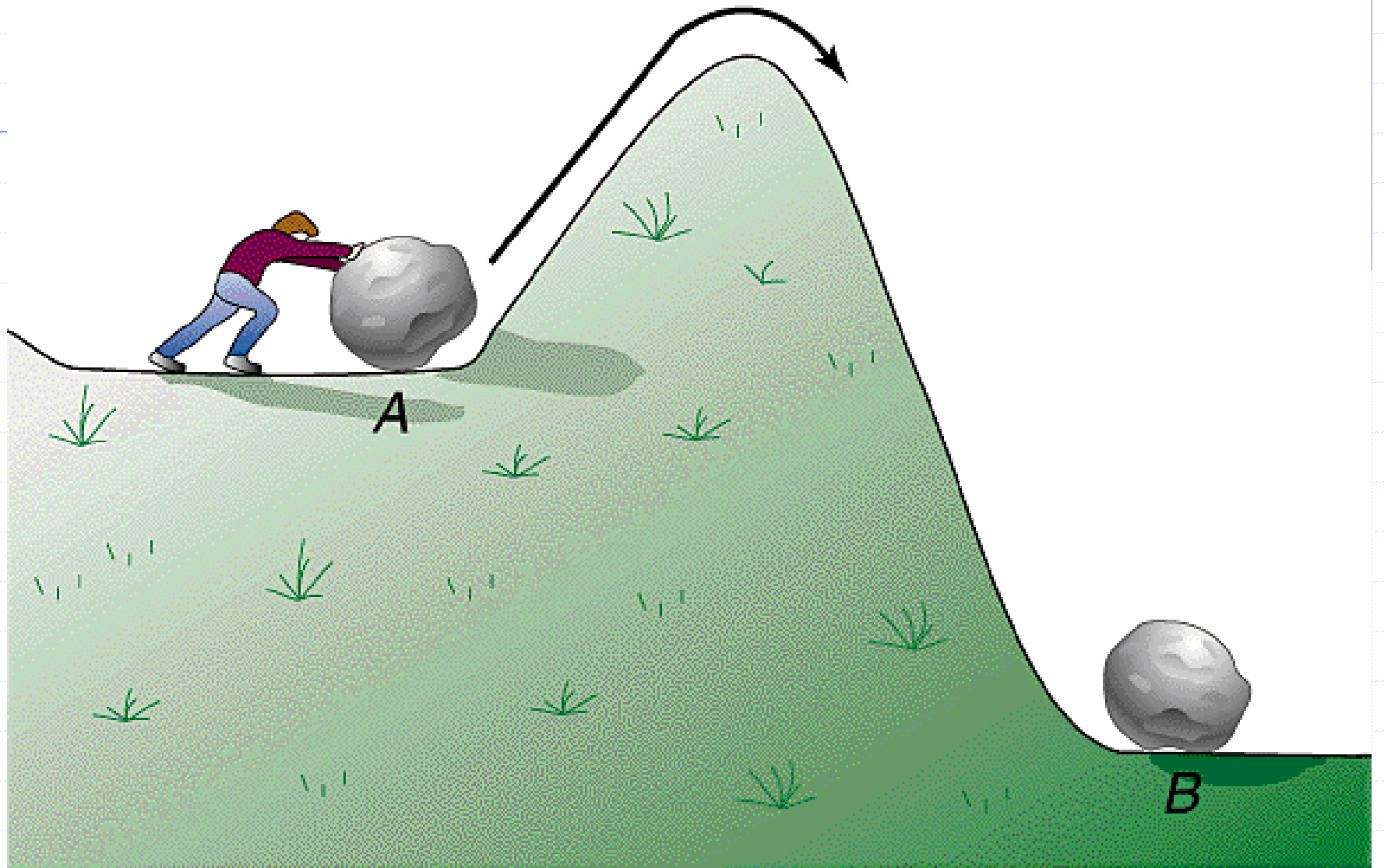
W-Up, Complete Calculations from Burning Food Lab, Demo, Activity: Thermochem

**Homework:** Finish Lab, [Google Form](#)

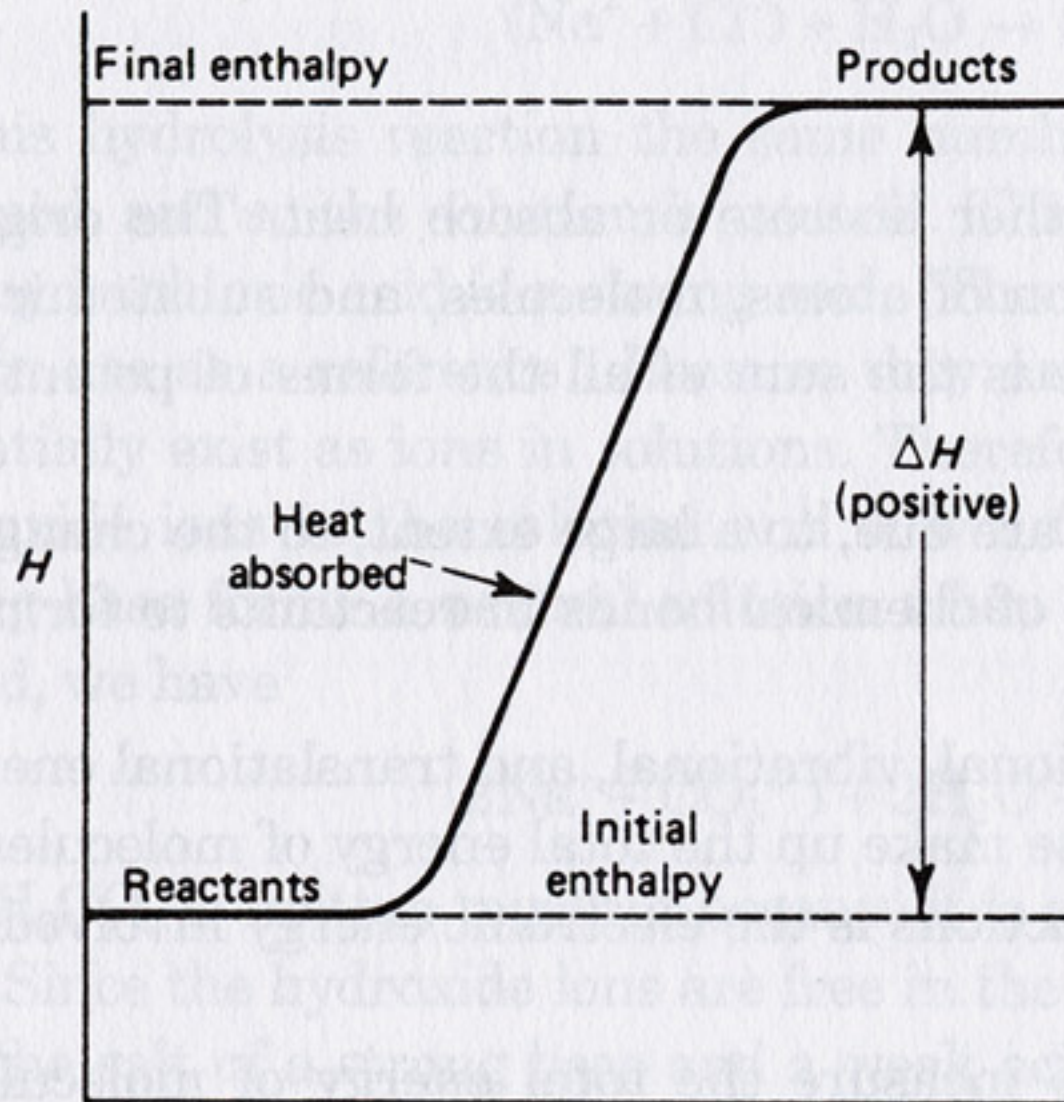
Note: RQAs on Mon and Tues.

# Graph of Exothermic Rxn



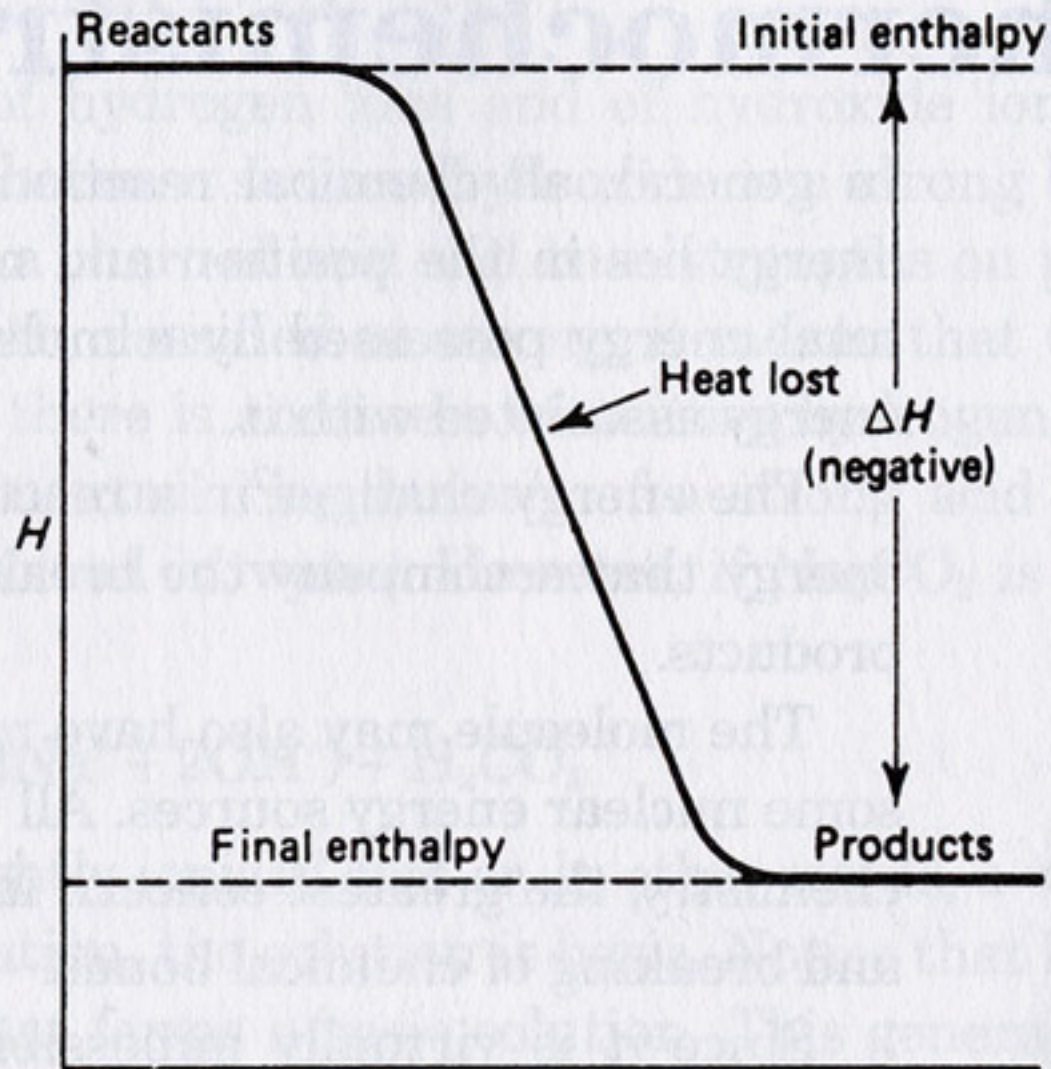


# Graph of Endothermic Rxn



*Course of Endothermic Reaction*

# Graph of Exothermic Rxn



*Course of Exothermic Reaction*





# Do Now ...May 31, 2017

Obj: Describe and calculate entropy and enthalpy.

Copy and do:      Terms: positive, negative

When  $\Delta H$  is \_\_\_\_\_ and  $\Delta S$  is \_\_\_\_\_,  $\Delta G$  will always be \_\_\_\_\_ and the chemical reaction will be spontaneous.



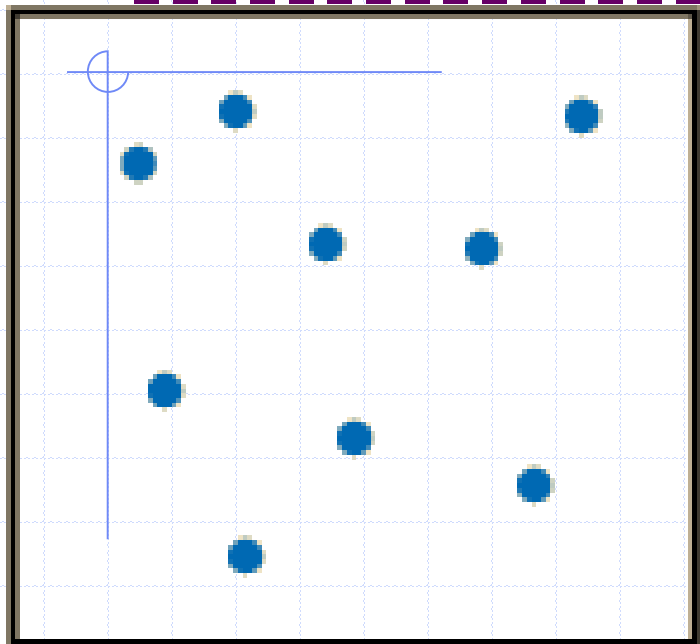
# Wednesday, May 31, 2017

**Today:**

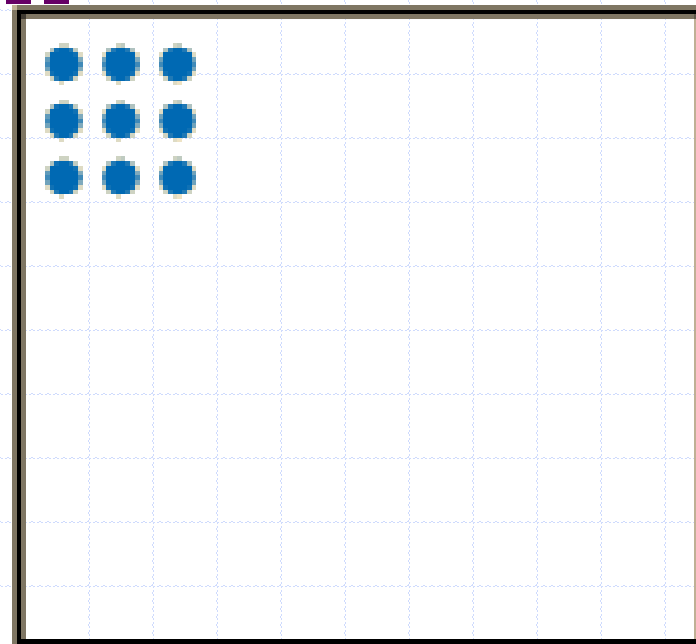
W-Up, Notes & Practice: Entropy & Enthalpy,  
Open Note Quiz

**Homework:** Complete Practice

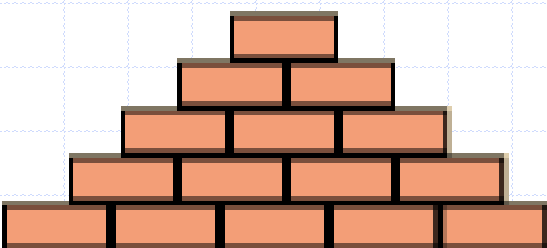
If the particles represent gas molecules at normal temperatures inside a closed container, which of the illustrated configurations came first?



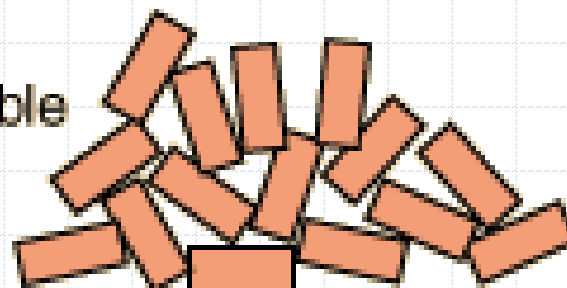
Time's  
arrow



If you tossed bricks off a truck, which kind of pile of bricks would you more likely produce?



Disorder is  
more probable  
than order.







# Do Now ... June 1, 2017

Obj: Prepare for RQAs on Monday and Tuesday.

Copy:

Water has a specific heat of \_\_\_\_\_ J/g°C which means it can \_\_\_\_\_.

List three real-life examples of how the high specific heat of water is used.

# Thursday, June 1, 2017

**Today:**

W-Up, RQA Preparation

HW: Prepare RQA on Mon & Tues.

# Energy Changes

**Energy changes** in a reaction are due mostly to changes in potential energy from breaking chemical bonds (in the reactants) and forming new bonds (in the products).

Reactants → Products

# First Law of Thermodynamics

**First Law of Thermodynamics** states that energy cannot be created or destroyed.

The amount of energy in a system stays the same.

Also called the Law of Conservation of Energy.

# Exothermic Reaction

Reactants  $\rightarrow$  Products + Energy

Heat is released.

$\Delta H$  = energy used in bond breaking reactions -  
energy released in bond making products

So the sign of  $\Delta H$  is: Negative



# Endothermic Reaction



Heat is absorbed.

$\Delta H$  = energy used in bond breaking reactions -  
energy released in bond making products

So the sign of  $\Delta H$  is: Positive