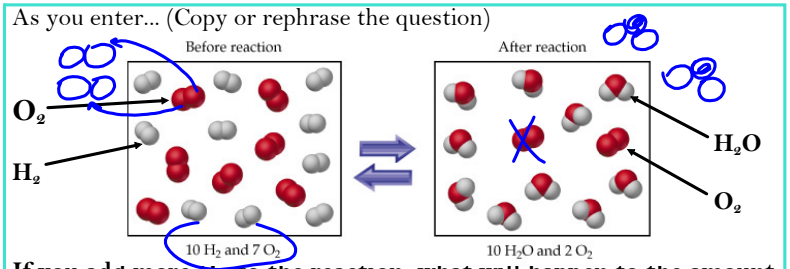
Monday, March 9th

Learning Target : I can use observations in lab to determine how a reaction shifts from a stress.

Homework: Study for Test

As you enter... (Copy or rephrase the question)



If you add more H_2 to the reaction, what will happen to the amount of O_2 and the amount of H_2O?

Shift right, O_2 ↓, H_2O ↑

EXAM Wed, March 11th --> so all assignments due Wed.

Big Idea: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

3rd period

- LAB 17: Equilibrium (45 min)
- Today: Experiments 1 and 2 + Questions
- Tomorrow: Experiment 3 and Review for Exam

Important Lab Notes

--Label all test tubes and beakers as told with masking tape and a marker.

--NO CHEMICALS DOWN THE DRAIN.

--The leftover solution in experiment 1 can be put aside on the counter with your names on it for tomorrow.

--Wash all glassware before and after use.

--Wash your hands before leaving the room.

Tix out the door (Don't forget your name.)

Which statement describes a chemical reaction at equilibrium?

(1) The products are completely consumed in the reaction.
(2) The reactants are completely consumed in the reaction.
(3) The concentrations of the products and reactants are equal.
(4) The concentrations of the products and reactants are constant.

Tuesday, March 10th

Learning Target : I can understand that systems in nature favor high entropy and low energy.

Homework: Study review packet for test tomorrow

As you enter... (Copy or rephrase the question)

In lab yesterday... identify one chemical you added to your solution and the change in color your observed. Explain the color change, if there was one.

$Fe(NO_3)_3 + KSCN \rightleftharpoons FeSCN + KNO_3$

Pale brown — dark red

EXAM tomorrow --> so all assignments due tmw

Big Idea: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

3rd period
- Finish LAB 17: Equilibrium (50 min)

4th period
- Quick Entropy Notes (15 min)
- Jeopardy Review Game (30 min)

Important Lab Notes

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--Wash your hands before leaving the room.

Tix out the door (Don't forget your name.)

Which statement describes a chemical reaction at equilibrium?

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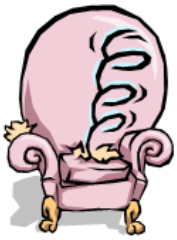
Notes on Entropy

An object or system will naturally proceed from a state of order to disorder (will break down, become unorganized). Disorder is also known as ENTROPY



Systems in nature favor HIGH entropy and LOW energy.

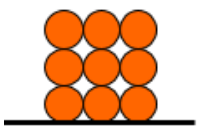
To make a system more ordered, energy or work must be inputted into the system.

Increased Entropy ⟷ Decreased Entropy

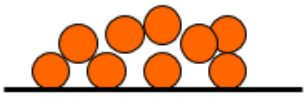
Work done to order system

Draw this

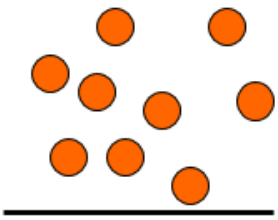
Entropy and Phases of Matter



Solid



Liquid



Gas

Decreasing Entropy ⟷ Increasing Entropy

Thursday, March 12th

Learning Target : I can determine what information I will need to learn to be successful in the acids and bases unit.

Homework: n/a

As you enter... (Copy or rephrase the question)

If you need to make up the test from yesterday, tell me right away.

Question: What do you know about acids and bases?

What are the differences between them?

Reminder: I will be after school until 4 pm.

Big Idea: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

3rd period
- Review Exam (20 min)
- New unit: Acids and Bases
- Dissecting Regents Questions (30 min)

4th period
- Intro to Acids and Bases Packet (45 min)
- Finish early... Make up work

1. Read & Annotate front page.
2. Answer Questions with a partner.
3. Hand in when done.

Tix out the door (Don't forget your name.)

What is the difference between an acid and a base?

Acid

- H_3O^+ is product
- H in front
- H is given away

Base

- OH^- is produced
- Gets H

H_2O

Not an acid/base

BUT it plays the role of an acid/base

Question from yesterday's exam...

For a given chemical reaction, the addition of a catalyst provides a different reaction pathway that

A) decreases the reaction rate and has a higher activation energy
B) increases the reaction rate and has a lower activation energy
C) decreases the reaction rate and has a lower activation energy
D) increases the reaction rate and has a higher activation energy

What information did we need to know in order to answer this question correctly?

What is a catalyst?
How a reaction works
What is activation energy?

Annotate this question...

Which statement describes one acid-base theory?

(1) An acid is an H^+ acceptor, and a base is an H^+ donor.
(2) An acid is an H^+ donor, and a base is an H^+ acceptor.
(3) An acid is an H^- acceptor, and a base is an H^- donor.
(4) An acid is an H^- donor, and a base is an H^- acceptor.

What information do we need to know in order to answer this question correctly?

What is an acid-base theory?
What's an H^- acceptor and donor?
What's the difference between + & − H.

On the lab tables are previous regents exam questions on acids and bases.

- Do not try and answer the questions.
- In a group of 3-4, annotate the questions and determine what information we will need to learn about in order to answer these questions correctly. I will ask you to share out after.

**Purpose of Activity: Take charge of your own learning and see what concepts you will be tested on before we begin the unit. It will give you a better understanding of what you are expected to learn.

What is...
- Calcium
- Concentration
- an aqueous solution
- hydronium
- pH
- acid-base theory
- molarity
- titration
- electrolyte
- Arrhenious acid?
- phenophthalein?

What does...
- it mean to produce a solution?

How does...
- an indicator affect a solution?
- process affect an acid concentration

Friday, March 13th

Learning Target: I can differentiate between acids and bases.

Homework: n/a

As you enter... (Copy or rephrase the question)

If you need to make up the test from Wednesday, tell me right away.

Classify the following as an acid or a base and explain:

1. KOH Base
2. HCl Acid b/c H is in front
3. $HClO_4$ Acid
4. $Mg(OH)_2$ Base

OH^- = hydroxide

K = potassium

H^+ H^-

Reminder: Beware of the clock. It lies.

Polyatomic Ion = Table E

many atoms

Big Idea: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

3rd period

- Acid/Base Scavenger Hunt (30 min)
- Exit Tix (5 min)

Find all of the acids and bases scattered around the classroom. If you complete the entire sheet correctly, you will receive a prize. First one done will receive a free classwork grade.

Where to look...

-Look high, look low.

-Not higher then the cabinets.

-Not within drawers or cabinets.

-Only within the classroom.

*Moving any of the cards = no prizes and everyone will ignore you for the rest of the day for ruining the fun.

Tix out the door (Don't forget your name.)

Which compounds are classified as Arrhenius acids?

(1) HCl and NaOH
(2) HNO_3 and NaCl
(3) NH_3 and H_2CO_3
(4) HBr and H_2SO_4

Explain WHY for full credit.