Monday, March 16th

Learning Target : I can determine the relative acidity of solutions using indicators to measure pH.

Homework: Worksheet due Thursday

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

What does acid-base theory tell us is the difference between acids and bases? Name at least 2 parts.

1. Acid donates H^+ / Base accepts H^+ } Brønsted-Lowry theory
2. Acid produces H_3O^+ (hydronium ion) / Base produce OH^- (hydroxide ion) } Arrhenious theory

Reminder: Acids/Bases Quiz Friday

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

AGENDA

9th period

- Neutralization: Acid/Base Matching Game (35 min)
- Exit Tix (5 min)

Neutralization: Acid/Base Matching Game

Write the general chemical equation for a neutralization reaction:

Acid + Base → H_2O + Salt

Example:

Write balanced chemical equations for these neutralization reactions.

Be sure to: 1) balance the reaction 2) include phases

$Ba(OH)_2(aq) + HCl(aq) \rightarrow$ $H_2O(l) + BaCl_2(aq)$ (base, acid; +2, -1)

$Al(OH)_3(aq) + H_2SO_4(aq) \rightarrow$ $H_2O(l) + Al_2(SO_4)_3(aq)$ (base, acid; +3, -2)

1. Go back and circle all of the strong acids. Table K * HCl, HNO_3, H_2SO_4
2. Go back and put a box around all of the strong bases. Table L: anything w/ OH^-

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

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.

$$Ba(OH)_2 + 2HCl \rightarrow 2H_2O + BaCl_2$$

Tuesday, March 17th

Learning Target : I can predict the products of a neutralization reaction.

Homework: Worksheet due Thursday

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

Finish the neutralization reaction and balance the equation.

1 H_2SO_4 + 2 NaOH --> $2H_2O + Na_2SO_4$

Reminder: Acids/Bases Quiz Friday

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

8th period
- Finish Neutralization Reactions (20 min)
- Lab 18: Acid/Base Indicators (60 min)

9th period
- Lab Debrief (10 min)
- Exit Tix (5 min)

Lab 18 info...

-Liquid indicators only need one drop per solution.

-6 litmus papers per group (rip in half to get 11)

-Correction: NO congo red or methyl orange... change to thymol blue and bromcresol green.

-Lab must be handed in by the end of 9th period.

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

What is the color of the indicator thymol blue in a solution that has a pH of 11?

(1) red
(2) blue
(3) pink
(4) yellow

Explain how you got your answer.

Table M

Wednesday, March 18th

Learning Target : I can apply my understanding of acid-base vocabulary to questions.

Homework: Worksheet due Thursday

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

***Use your reference tables.** M

Which indicator is yellow in a solution with a pH of 9.8?

A. methyl orange
B. bromthymol blue
C. bromcresol green
D. thymol blue

Reminder: Acids/Bases Quiz Friday

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

9th period

- Make yourself a vocabulary cheat sheet to use for the Kahoot game. (25 min)
- Kahoot: Acid/Base Vocab (15 min)

Winner will earn a free class work grade.

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

n/a

Thursday, March 19th

Learning Target : I can use titration to determine an unknown concentration of an acid with a known concentration of a base.

Homework: Worksheet due today... hand in to bin

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

1. **What is the purpose of titration?** **(Hint: Look at your cheat sheet)**

To determine the unknown concentration.

2. Using $M_AV_A=M_BV_B$: **What is the concentration (Molarity) of 20 mL of HCl that is titrated with 10 mL of 1M NaOH?**

$(X)(20) = (1)(10)$

$20X = 10$

$X = .5\ M$

Reminder: Acids/Bases Quiz tmw

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

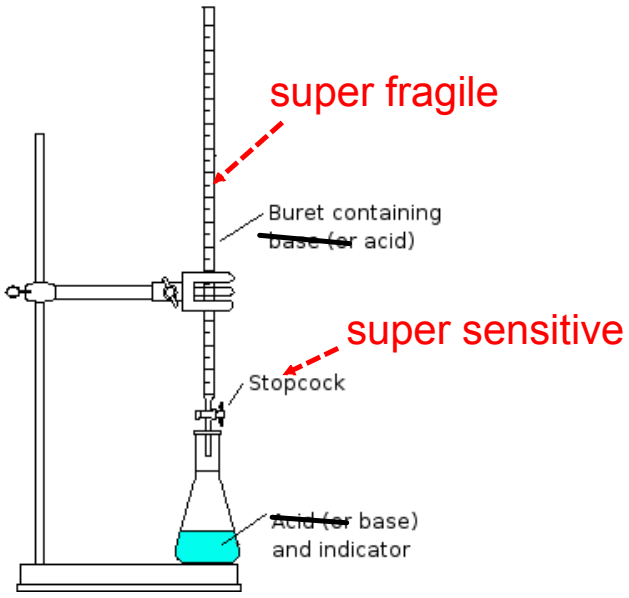
8th/9th period

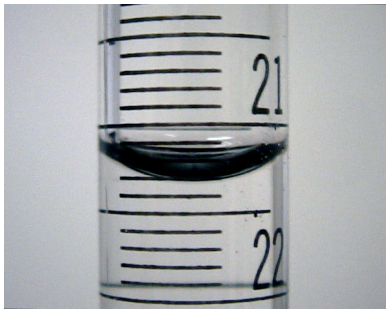
- Titration Lab (70 min)
- Finish early... Make up work
- Exit Tix (5 min)

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

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 is the volume?

What is the concentration of the acid if you use 0.1 M NaOH?

--Going to slowly add acid to the base until the pink color is gone. That's how you know you've added enough.

--Then use titration equation to solve for the unknown concentration.

Friday, March 20th

Learning Target : I can apply my knowledge of acids and bases to quiz questions.

Homework: n/a

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

1. What is the concentration of 30 mL of HCl when it is neutralized with 20 mL of 3M NaOH?

$M_A V_A = M_B V_B$

$X(30) = (3)(20)$

$\frac{30x}{30} = \frac{60}{30}$

$X = 2\ M$

2. What is the concentration of 15 mL of NaOH when it is titrated with 30 mL of 1M HCl? ← A, B

$M_A V_A = M_B V_B$

$(1)(30) = x(15)$

$\frac{30}{15} = \frac{15x}{15}$

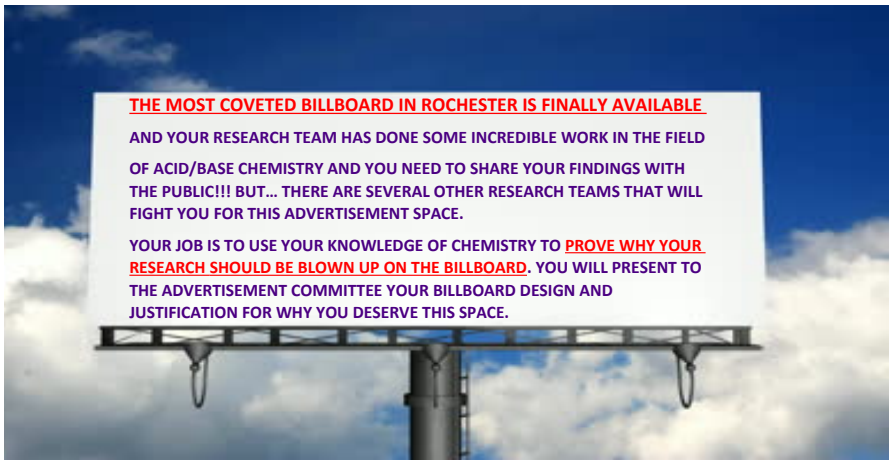
$X = 2\ M$

Reminder: As you enter checks in first 10 minutes only

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

9th period

- Acids and Bases Quiz (25 min)
- Choose a final acids and bases project for next week (20 min)



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

n/a