

Monday, March 9th



Learning Target: I can use observations in lab to determine

how a reaction shifts from a stress.

Homework: n/a



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

Before reaction

10 H₂ and 7 O₂

⇌

After reaction

10 H₂O and 2 O₂

If you add more H₂ to the reaction, what will happen to the amount of O₂ and the amount of H₂O?

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.



8th period

- LAB 17: Equilibrium (70 min)

9th period

- Systems in Nature Activity (20 min)
- Exit Tix (5 min)

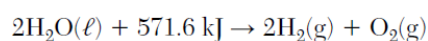
Important Lab Notes

- Label all test tubes and beakers as told with masking tape and a marker.
- NO CHEMICALS DOWN THE DRAIN.
- Wash all glassware before and after use.
- Wash your hands before leaving the room.

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



Given the balanced equation representing a reaction:



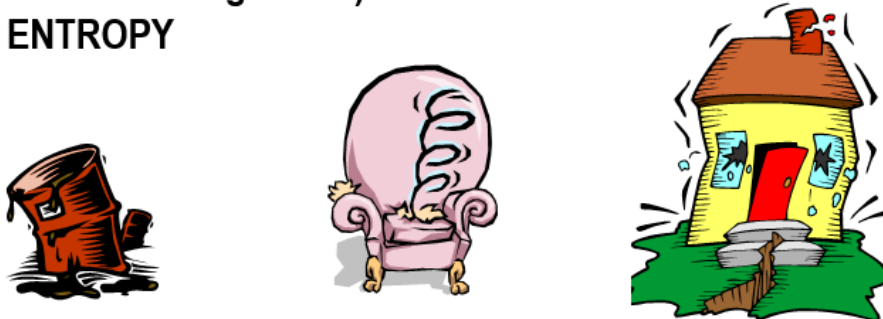
What occurred as a result of this reaction?

- (1) Energy was absorbed, and entropy increased.
- (2) Energy was absorbed, and entropy decreased.
- (3) Energy was released, and entropy increased.
- (4) Energy was released, and entropy decreased.

Explain WHY.

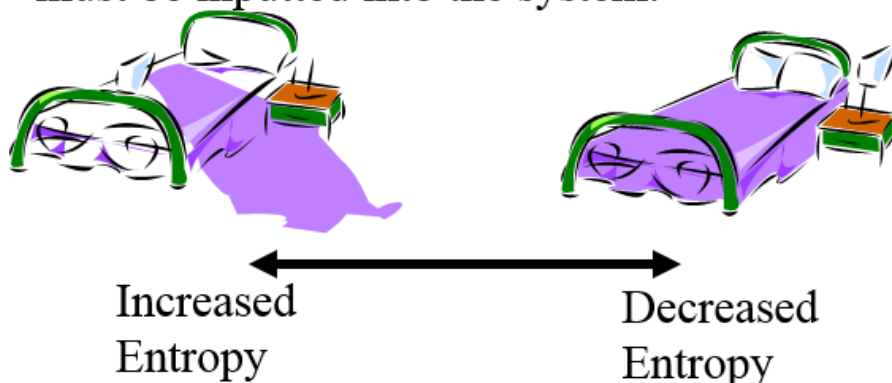
Notes on Entropy

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



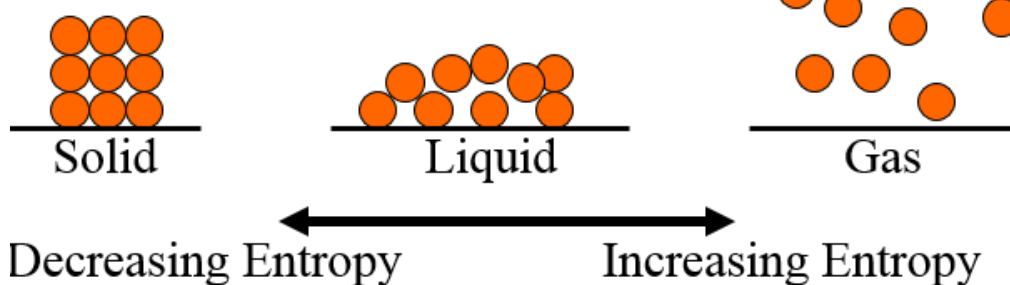
Systems in nature favor **HIGH** entropy and **LOW** energy.

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



Work done to order system

Entropy and Phases of Matter



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)

Systems in nature favor... (circle the correct word)

HIGH/LOW entropy

and

HIGH/LOW energy

--Which has greater entropy... Ice cube OR steam?

solid

gas

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.



9th period

- Jeopardy Review Game (45 min)

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.

Thursday, March 12th

Learning Target: I can differentiate between acids and bases.

Homework: n/a

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

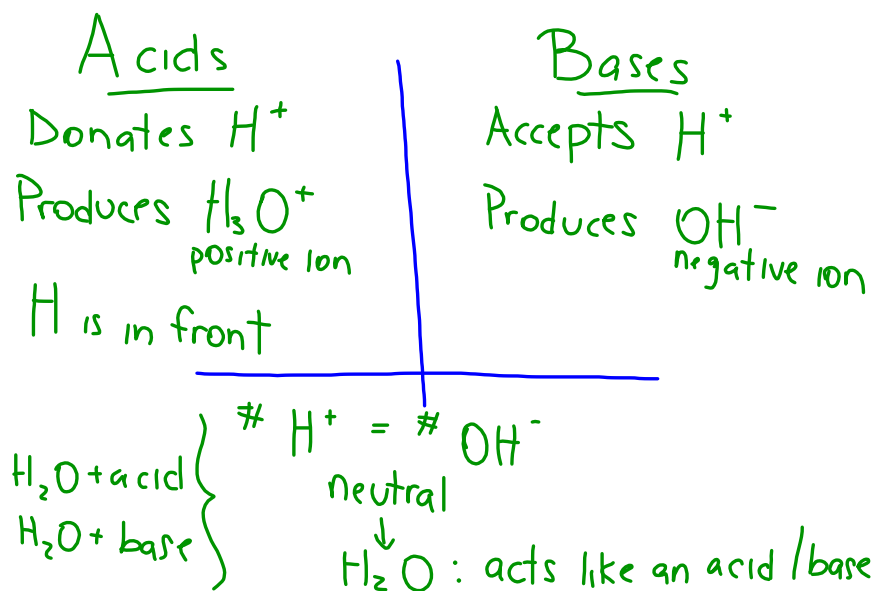
If you need to make up the test from yesterday, tell me right away.

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.

9th period

- Review Exam (20 min)
- Intro to Acids and Bases Packet (25 min)
- Finish early... Make up work

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

What are the differences between acids and bases?

Friday, March 13th



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 Wednesday, tell me right away.

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

1. KOH Base $\text{K}^+ \text{OH}^-$
2. HCl Acid $\text{H}^+ \text{Cl}^-$
3. HClO_4 Acid $\text{H}^+ \text{ClO}_4^-$
4. $\text{Mg}(\text{OH})_2$ Base $\text{Mg}^{2+} \text{OH}^-$

Reminder: Beware of the clock. It lies.

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



8th period

- Dissecting Regents Questions (45 min)

9th period

- Acid/Base Scavenger Hunt (45 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 than 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.

What is the difference between Arrhenius acids and bases and Lewis acids and bases?

--Come up with a mnemonic or creative method for remembering the differences of these



— base



— salt

Help! The base
is under assault!

Intro for 8th period activity...

Question from Wednesday'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?
What does a chemical rxn do?
What is reaction rate? 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 acid-base theory?
What's the diff. between donor & acceptor.
What is H^+ ? acid?

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 do we need to learn this unit?

What is...

- the difference between acids & bases?
- aqueous?
- acid-base theory?
- hydronium ion?
- the pH of 11 mean?
- "Substance yield"
- is acid or base donor or acceptor?

• acceptor?

• Arrhenious?

• Indicator thymol

• compound?

• concentration?

• I-II for acids & bases mean?

• H^+ or H^-

• balanced equation?

What does it mean for something to be neutralized?