

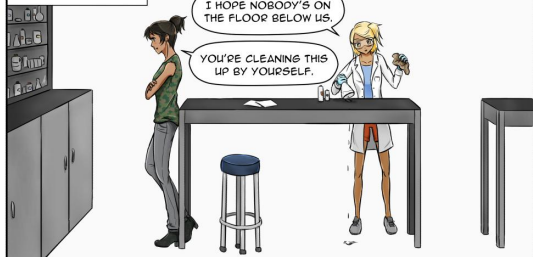
I DID IT! I CREATED
THE **WORLD'S MOST
POWERFUL ACID!**

THIS CAN, LIKE,
BURN THROUGH
ANYTHING!

Fluorine



TEN SECONDS LATER



FLUOROANTIMONIC ACID (H_2FSbF_6) IS THE STRONGEST ACID KNOWN.

"GAS LAWS"

SO WHAT ARE
THE PROJECT
REQUIREMENTS
AGAIN,
TUNGSTEN?

001
H

008
O

074
W

"IN GROUPS OF
2 OR 3, CONSTRUCT A
COMIC THAT CREATIVELY
DEMONSTRATES AT LEAST
THREE GAS LAWS."

AHH, WHY
DOES IT HAVE TO
BE DRAWING?

I'M BAD AT ART.

IT DOESN'T HAVE
TO LOOK GOOD AS LONG
AS IT MAKES SENSE.

WHICH LAWS
DO YOU GUYS
WANT TO DO?

I'LL DO
AVOGADRO'S
LAW.

OKAY,
HYDROGEN'S
TAKING
AVOGADRO'S.

OXYGEN, DO
YOU WANT TO DO
BOYLE'S LAW?

FINE WITH
ME...

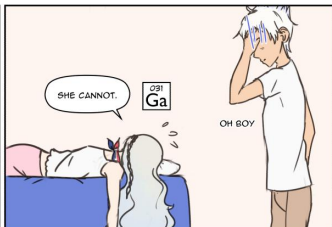
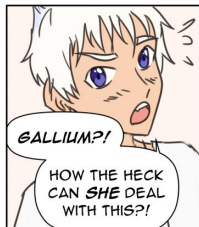
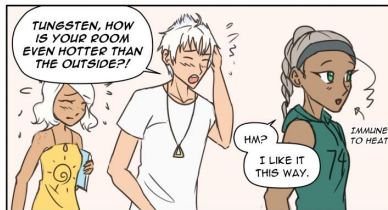
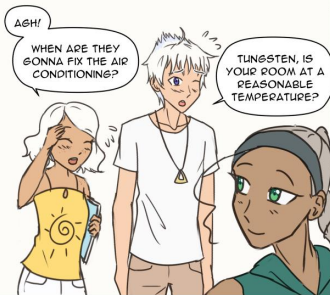
AND I'LL DO
GAY-LUSSAC'S
LAW.

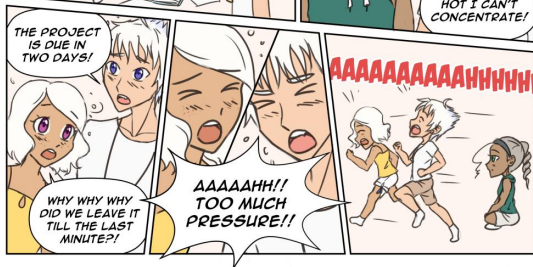
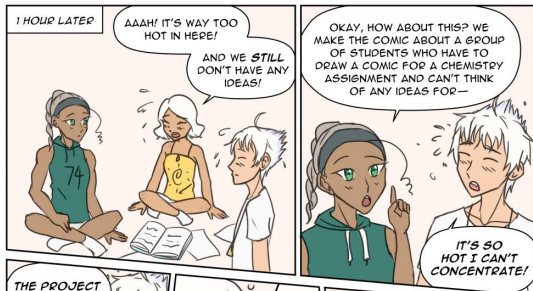
...ACTUALLY,
CAN WE MOVE
TO A PRIVATE
ROOM?

YEAH, IT'S WAY
TOO BUSY HERE.
IT'S STRESSING
ME OUT.

I THINK IT'S FINE...

BUT OKAY.





AVOGADRO'S LAW: "TOO MANY PEOPLE!"

THE MORE MOLECULES THERE ARE, THE HIGHER THE PRESSURE, AND VICE VERSA.

$$(P_1/N_1 = P_2/N_2)$$

BOYLE'S LAW: "THERE ISN'T ENOUGH SPACE TO WORK HERE!"

THE SMALLER THE VOLUME, THE HIGHER THE PRESSURE, AND VICE VERSA.

$$(P_1V_1 = P_2V_2)$$


GAY-LUSSAC'S LAW: "IT'S TOO HOT! I CAN'T CONCENTRATE!"

THE HIGHER THE TEMPERATURE, THE HIGHER THE PRESSURE, AND VICE VERSA.

$$(P_1/T_1 = P_2/T_2)$$

(ALL THESE LAWS ASSUME THAT EVERYTHING ELSE STAYS THE SAME.)

THESE LAWS AFFECT ONLY GASES, SUCH AS HYDROGEN AND OXYGEN, AND NOT SOLIDS OR LIQUIDS.



A cartoon illustration of a girl with brown skin, wearing a green hoodie with the number '74' and white shorts. She has a blue sweat drop on her forehead and is looking down with a thoughtful expression. A speech bubble next to her contains the text: "GASES SURE GET UNDER PRESSURE REALLY EASILY, DON'T THEY, GALLIUM?"

MMMPH



"ELECTRONS"

MON
DIEU!

WHY DO YOU
HALOGENS LIKE
THIS STUPID CARD
GAME SO MUCH?!

087
Fr

ELECTRO-
NEGATIVITY:
0.7

HEY! WHAT'S
WRONG WITH
ELECTRONS?!

THEY ARE
JUST PIECES OF
COLOURED PAPER!
WHAT IS SO FUN
ABOUT THAT?

HEY EVERYONE!
ELECTRONS, IT IS
A DUMB GAME,
N'EST-CE PAS?

013
Al

ELECTRO-
NEGATIVITY:
1.61

014
Si

ELECTRO-
NEGATIVITY:
1.90

015
P

ELECTRO-
NEGATIVITY:
2.19

...I GUESS
IT'S KIND
OF DUMB.

HMP?

ARSH,
SEGMENTATION
FAULT...

WHAT?
NO IT'S
NOT!

I AGREE
WITH FRANCIUM.
IT'S A WASTE
OF TIME
SOMETIMES.

083
I

ELECTRO-
NEGATIVITY:
2.66

THANK YOU, IODINE!

017
Cl

ELECTRO-
NEGATIVITY:
3.16

I REALLY LIKE
ELECTRONS...

BUT FLUORINE HERE
IS, LIKE, THE NUMBER
ONE FAN.

009
F

ELECTRO-
NEGATIVITY:
3.98

I JUST NEED
ONE MORE TO
COMPLETE THE
SECOND SET!

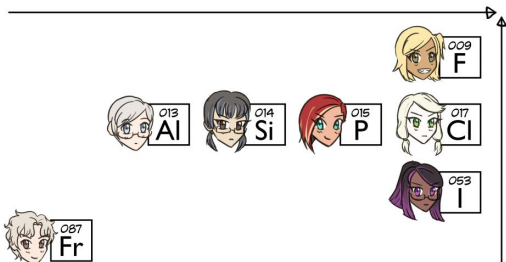


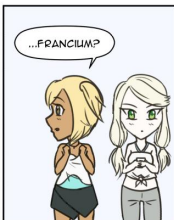
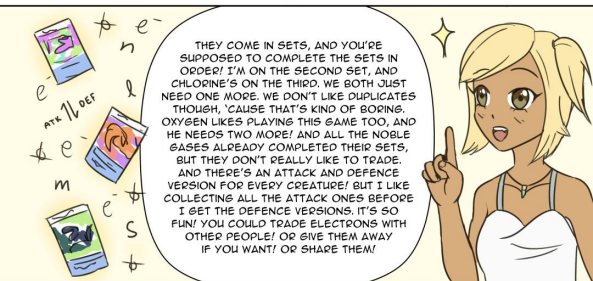
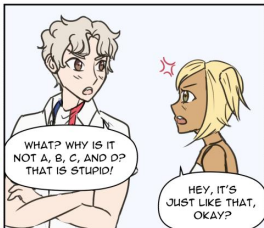
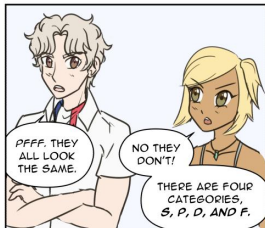
IT'S THE
SUPER RARE 2P6
ELECTRON!!

ELECTRONS: A TRADING CARD GAME THAT SOME OF THE STUDENTS (MAINLY FLUORINE AND THE HALOGENS) AT ACADEMY 118 LIKE TO PLAY. THE ALKALIS (MAINLY FRANCIUM AND CESIUM) THINK IT'S REALLY ANNOYING.

ELECTRONEGATIVITY: HOW MUCH A STUDENT LIKES COLLECTING ELECTRONS.
(THE RELATIVE TENDENCY OF AN ATOM TO ATTRACT ELECTRONS TO ITSELF.)

AS YOU GO UP AND TO THE RIGHT ON THE PERIODIC TABLE, ELECTRONEGATIVITY INCREASES. THAT WOULD MAKE **FLUORINE** THE MOST AND **FRANCIUM** THE LEAST ELECTRONEGATIVE ELEMENT. HOWEVER, STUDIES SUGGEST THAT CESIUM IS LESS ELECTRONEGATIVE THAN FRANCIUM DUE TO RELATIVISTIC EFFECTS.





THE THREE MAIN RULES OF ELECTRONS (AS EXPLAINED BY FLUORINE):

1. **AUFBAU PRINCIPLE:** COMPLETE THE SETS IN ORDER!

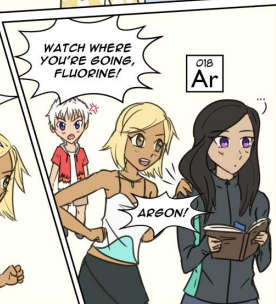
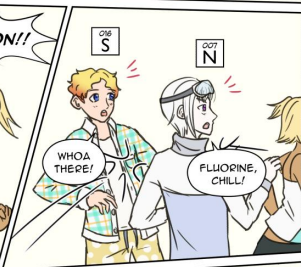
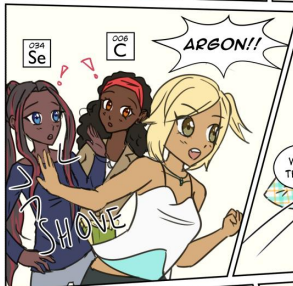
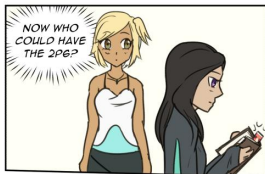
(SHELLS OF LOWER ENERGY LEVELS MUST BE FILLED BEFORE FILLING HIGHER ENERGY LEVELS.)

2. **HUND'S LAW:** COLLECT ALL THE ATTACK VERSIONS IN A CATEGORY BEFORE YOU GET THE DEFENCE VERSIONS!

(ONE ELECTRON GETS PUT INTO EACH ORBITAL IN A SUBSHELL BEFORE DOUBLING UP.)

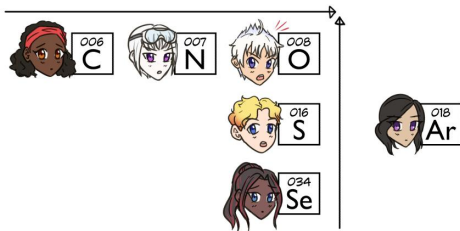
3. **PAULI EXCLUSION PRINCIPLE:** NO DUPLICATES!

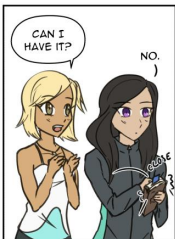
(NO TWO ELECTRONS IN AN ATOM CAN HAVE THE SAME FOUR QUANTUM NUMBERS.)



AS YOU GO UP AND TO THE RIGHT ON THE PERIODIC TABLE, THE REACTIVITY OF NON-METALS INCREASES. THE MOST REACTIVE NON-METAL IS **FLUORINE**.

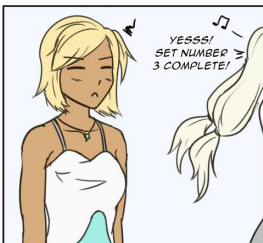
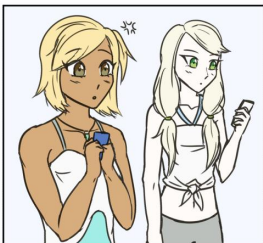
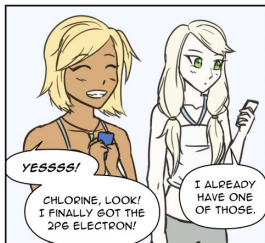
IN GENERAL, NOBLE GASES SUCH AS **ARGON** ARE UNREACTIVE.





YOU LOST MY PAGE.



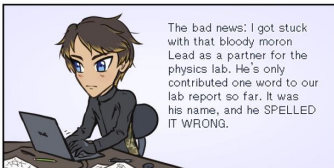
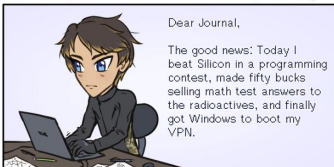


ARGON IS THE MOST UNREACTIVE NOBLE GAS SCIENTISTS HAVE FORCED TO REACT, ALBEIT UNDER EXTREME CIRCUMSTANCES. IT FORMS THE COMPOUND *ARGON FLUOROHYDRIDE* (HArF).

THE CHLORINE ATOM NEEDS A 3P6 ELECTRON TO COMPLETE ITS OUTER SHELL, SO THAT ITS ELECTRON CONFIGURATION LOOKS LIKE THAT OF ARGON'S. THE FLUORINE ATOM NEEDS A 2P6 ELECTRON.







"OXYGEN'S BIRTHDAY"

»SIGH«
WHAT A
LONG
DAY.

008

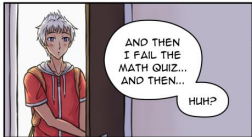
O

FIRST I MESS
UP MY LITERATURE
PRESENTATION...THEN
I GET DETENTION
FOR SETTING THE
CHEMISTRY LAB
ON FIRE AGAIN...



AND THEN
I FAIL THE
MATH QUIZ...
AND THEN...

HUH?



SURPRISE!!

007

N

006

C

016

S

015

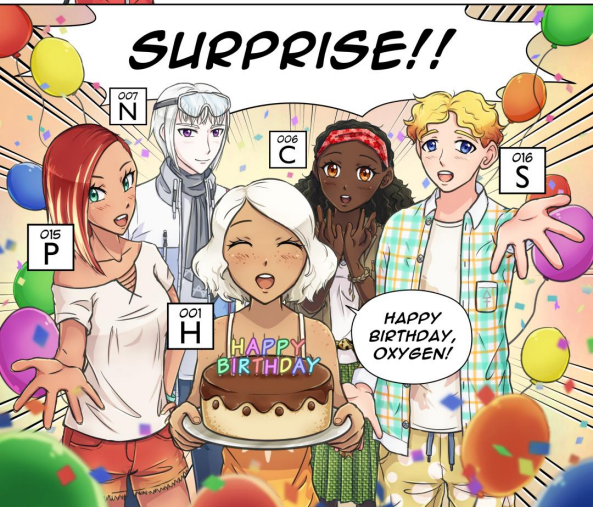
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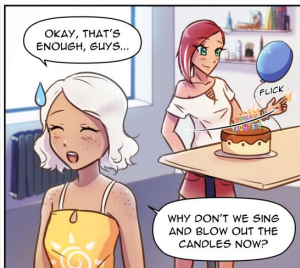
H

HAPPY
BIRTHDAY,
OXYGEN!

HAPPY
BIRTHDAY







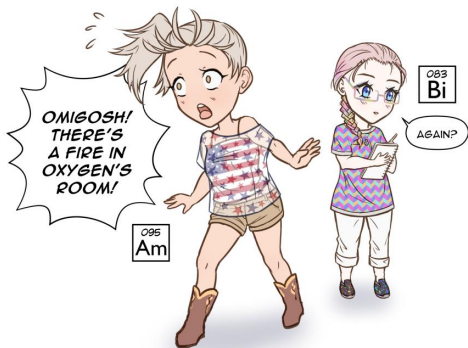
HAPPY BIRTHDAY TO YOU, HAPPY BIRTHDAY TO YOU,
HAPPY BIRTHDAY DEAR OXYGEN, HAPPY BIRTHDAY TO YOU!



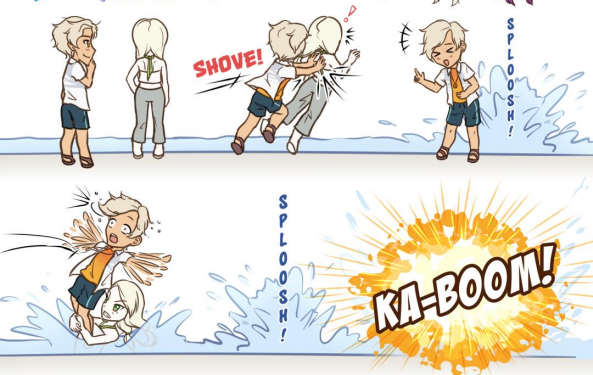


COMBUSTION (FIRE!) HAPPENS WHEN FUEL REACTS WITH AN OXIDIZER TO RELEASE HEAT. **OXYGEN** IS THE MOST COMMON OXIDIZER, BUT IT ISN'T THE ONLY ONE; OTHER CHEMICALS SUCH AS FLUORINE AND SULFURIC ACID WORK AS WELL.

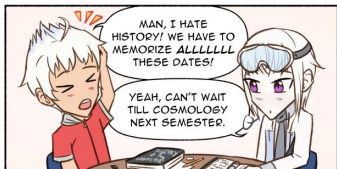
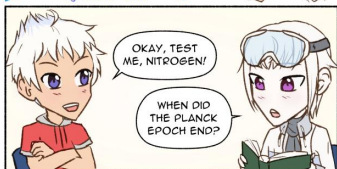
EVER SEEN A HYDROGEN BALLOON BEING IGNITED? THIS LEADS TO EXPLOSIVE RESULTS, ESPECIALLY WHEN THE GAS IS MIXED WITH OXYGEN.



(AMERICIUM AND BISMUTH ARE USED IN SMOKE DETECTORS)



SODIUM'S REACTION WITH WATER CAN RELEASE SO MUCH HEAT THAT THE SODIUM CATCHES FIRE, BURNING WITH A CHARACTERISTIC YELLOW-ORANGE FLAME.











HOW TO DISTRACT YOURSELF FROM THE PANDEMIC

**THE IRON
METHOD:**
WORK OUT
ALL DAY



**THE
NEODYMIUM
METHOD:**
LISTEN TO
UPBEAT
MUSIC



**THE
SILICON
METHOD:**
LIVE IN THE
COMPUTER
WORLD







HOW TO *SURVIVE* IN THE VIRUS *APOCALYPSE*







HOW TO COMBAT QUARANTINE LONELINESS



