

The image features a stylized atomic symbol with a central blue nucleus and two blue electrons orbiting in black elliptical paths. The symbol is set against a large, light green circular background. Overlaid on this graphic is the text "The Atoms Family" in a bold, yellow, bubbly font with a black outline and a slight drop shadow.

The Atoms Family

**The Atoms Family was created by Kathleen Crawford, 1994
Presentation developed by Tracy Trimpe, 2006, <http://sciencespot.net/>
Edited by Mrs. Bartels, 2008**

The Atoms Family Story

In the center of Matteredville, there is a place called the Nucleus Arcade, where two members of the Atoms Family like to hang out. **Perky Patty Proton**, like her sisters, is quite large with a huge smile and eyes that sparkle (+). Patty is always happy and has a very positive personality. **Nerdy Nelda Neutron** is large like Patty, but she has a boring, flat mouth and eyes with zero expression (o). Her family is very apathetic and neutral about everything. Patty, Nelda, and their sisters spend all their time at the arcade.

Name:

Patty Proton



Description:

Positive

Favorite Activity:

Hanging out at the Nucleus Arcade

Name:

Nelda Neutron



Description:

Neutral

Favorite Activity:

Hanging out at the Nucleus Arcade

Around the Nucleus Arcade, you will find a series of roadways that are used by another member of the Atoms Family, Enraged Elliott Electron. Elliott races madly around the Arcade on his bright red chrome-plated Harley-Davidson. He rides so fast that no one can be sure where he is at any time. Elliott is much smaller than Patty and Nelda and he is always angry because these bigger relatives will not let him in the Arcade. He has a frown on his face, eyes that are squinted with anger, and a very negative (-) attitude.

Name:

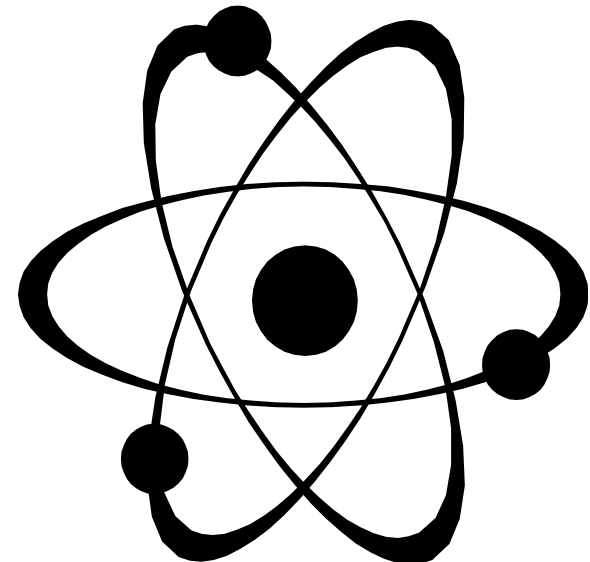
Elliott Electron

Description:

Negative

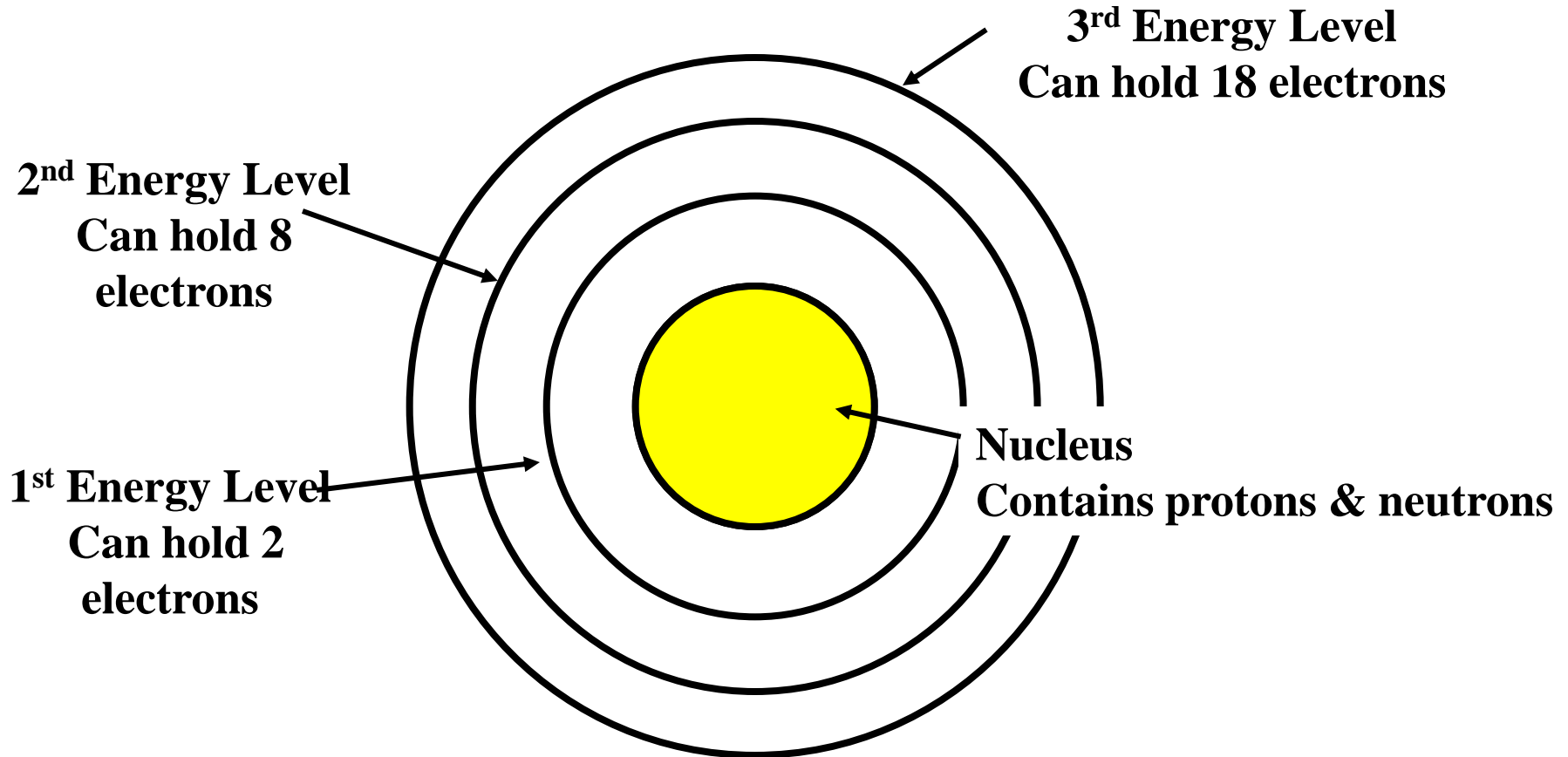
Favorite Activity:

Racing around the arcade



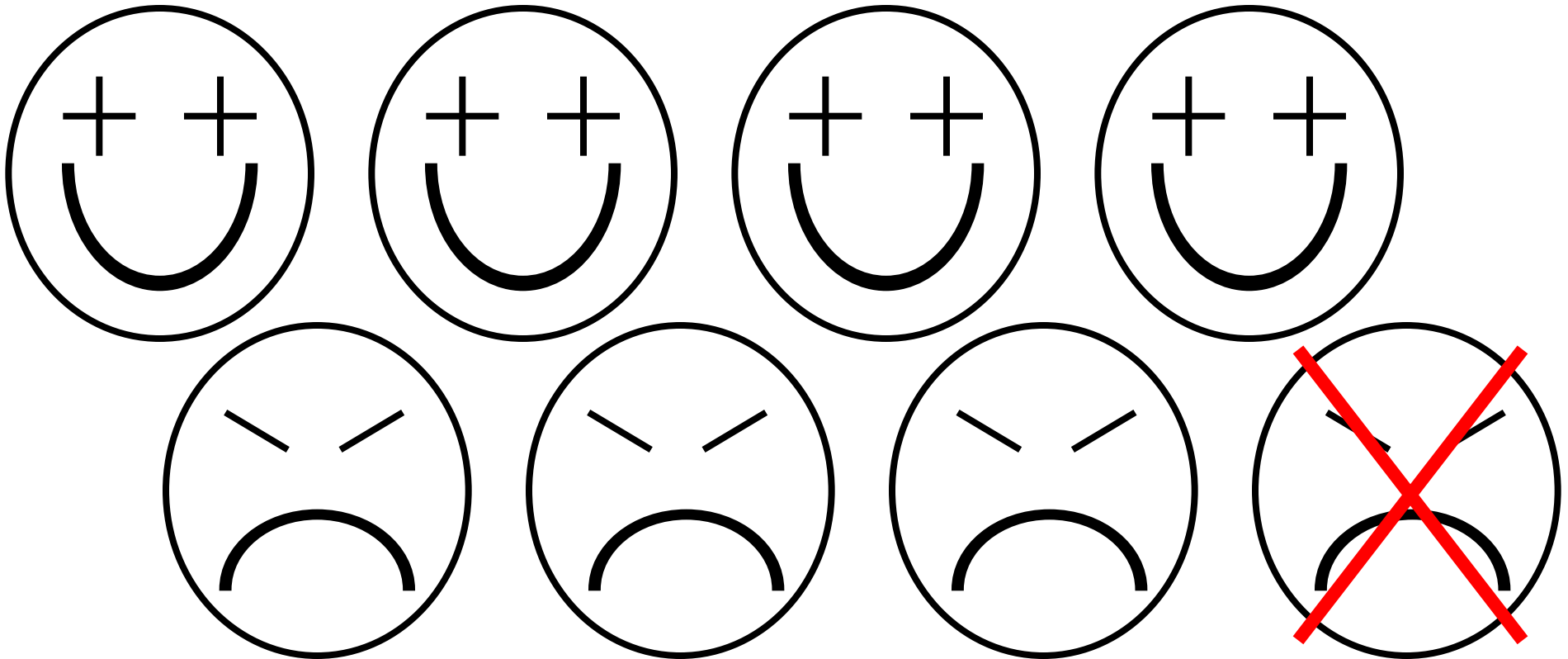
The first energy level can only hold only two Electron brothers. The second energy level can hold 8 brothers. The third energy level can hold 18 of the brothers.

Matterville

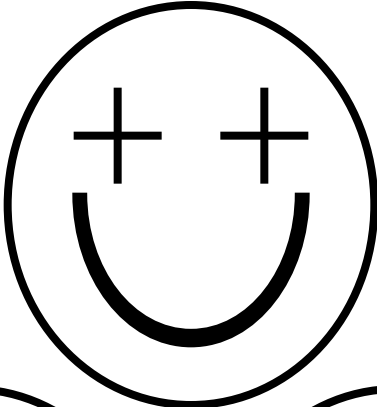
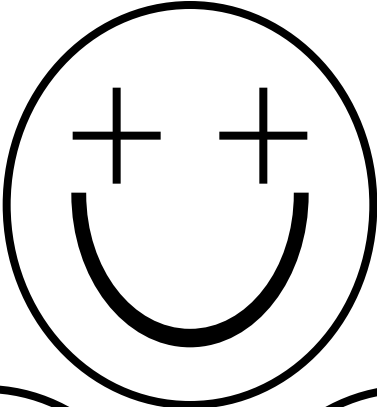
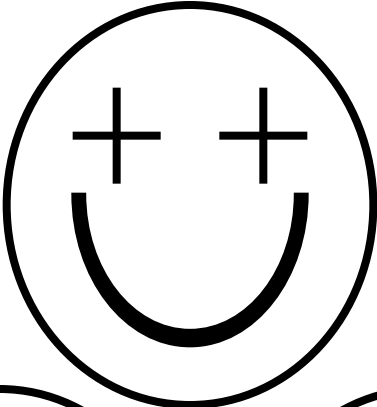
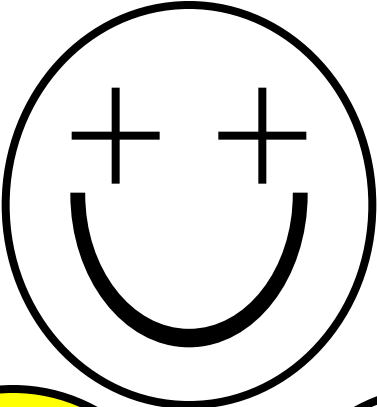


The morale of Matterville is stable as long as each negative Electron brother is balanced out by one positive Proton sister. The number of residents in Matterville depends on the Proton and Neutron families.

Challenge: What would happen to the morale of Matterville if one Elliott Electron was kidnapped?



Challenge 2: What would happen to the morale of Matterville if one Elliott Electron moved to Matterville?



Chorus:

They are so small.
(Snap, snap)
Round like a ball.
(Snap, snap)
Make up the air.
They're everywhere.
Can't see at all.
(Snap, snap)



1st Verse:

They're tiny and they're teeny,
Much smaller than a beany,
They never can be seeny,
The Atoms Family.

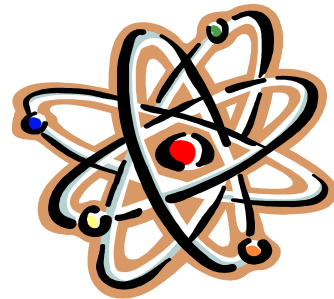
2nd Verse:

Together they make gases,
And liquids like molasses,
And all the solid masses,
The Atoms Family

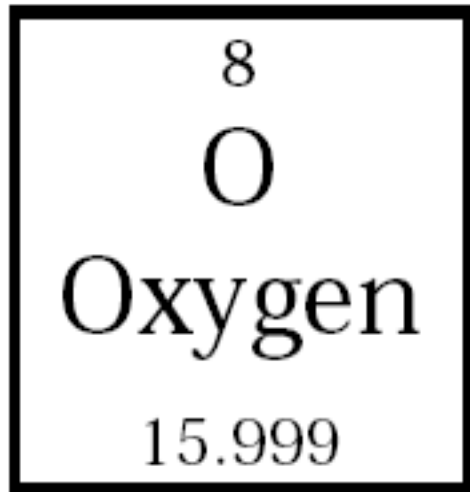
Chorus

3rd Verse:

Neutrons can be found,
Where protons hang around;
Electrons they surround
The Atoms Family.
(Snap, snap)



The Atoms Family - Atomic Math Challenge



← Atomic Number

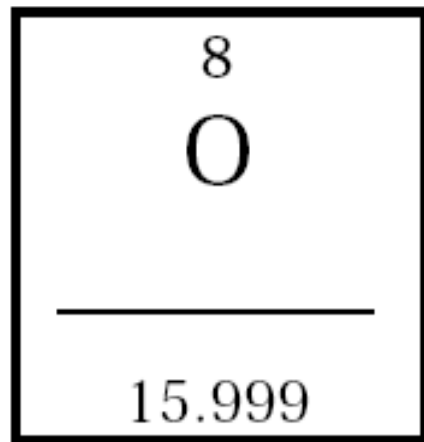
← Element Symbol

← Element Name

← Atomic Mass

Atomic number equals the number of protons or electrons.

Atomic mass equals the number of protons + neutrons.



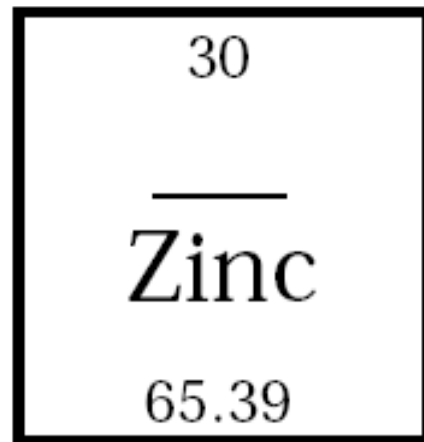
Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____



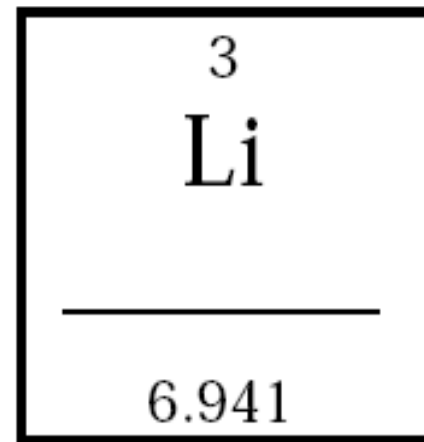
Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____



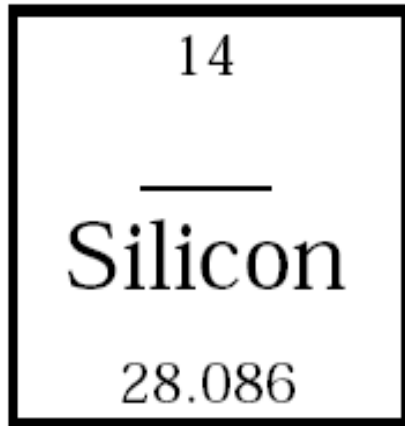
Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____



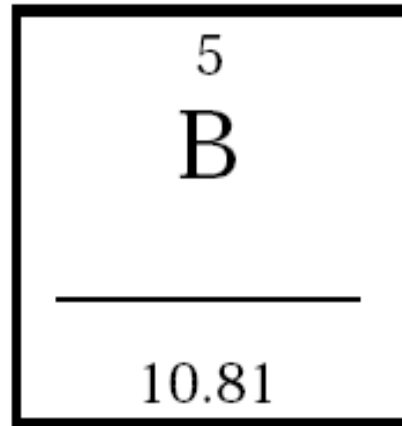
Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____



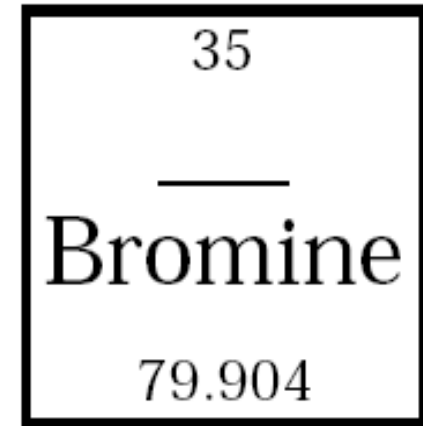
Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____



Atomic # = _____

Atomic Mass = _____

of Protons = _____

of Neutrons = _____

of Electrons = _____

Assignment: Finish the rest of the worksheet.

“The Elements” by Tom Lehrer

There's antimony, arsenic, aluminum, selenium,
And hydrogen and oxygen and nitrogen and rhenium
And nickel, neodymium, neptunium, germanium,
And iron, americium, ruthenium, uranium,
Europium, zirconium, lutetium, vanadium
And lanthanum and osmium and astatine and radium
And gold, protactinium and indium and gallium
And iodine and thorium and thulium and thallium.

There's yttrium, ytterbium, actinium, rubidium
And boron, gadolinium, niobium, iridium
And strontium and silicon and silver and samarium,
And bismuth, bromine, lithium, beryllium and barium.

There's holmium and helium and hafnium and erbium
And phosphorous and francium and fluorine and terbium
And manganese and mercury, molybdenum, magnesium,
Dysprosium and scandium and cerium and cesium
And lead, praseodymium, platinum, plutonium,
Palladium, promethium, potassium, polonium,
Tantalum, technetium, titanium, tellurium,
And cadmium and calcium and chromium and curium.

There's sulfur, californium and fermium, berkelium
And also mendelevium, einsteinium and nobelium
And argon, krypton, neon, radon, xenon, zinc and rhodium
And chlorine, cobalt, carbon, copper,
Tungsten, tin and sodium.

These are the only ones of which the news has come to Harvard,
And there may be many others but they haven't been discovered.