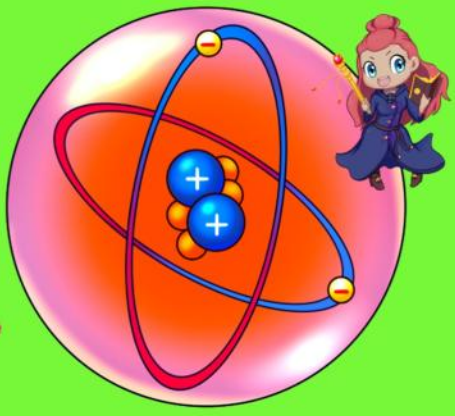
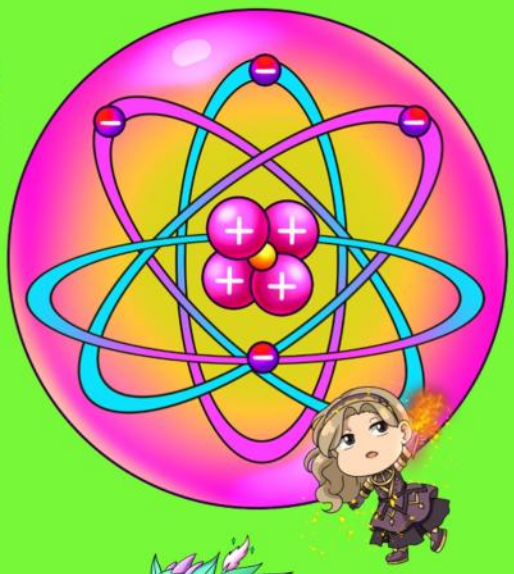
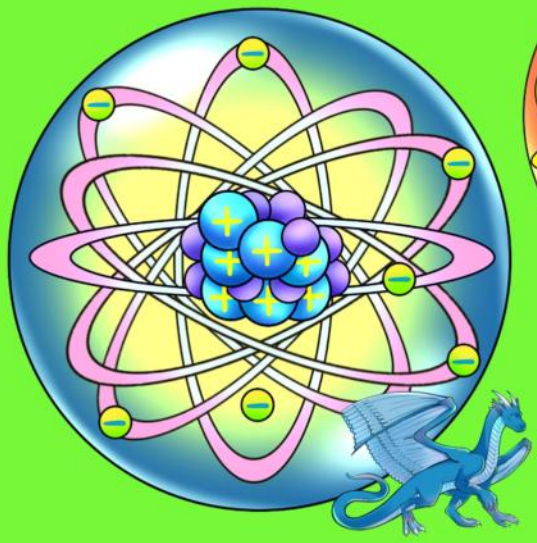
Magical Elemental Atoms





Count the Protons and Electrons



By Sybrina Durant with Illustrations By Pranavva

Magical Elemental Atoms

All periodic table elements are made up of atoms.

All elements, in their neutral atomic state,
have an equal number of protons and electrons.

In a normal state, atoms have the same number of positive protons and negative electrons, which makes their overall charge zero. Protons, which are +1 charged, tell us what kind of element it is, while electrons, which are -1 charged, balance this charge. This one-to-one relationship is very important for the atom to be neutral.

An atom is called “neutral” when it has no overall charge. To be balanced, there need to be the same number of protons and electrons. For instance, if an atom has 10 protons, it also needs 10 electrons to remain neutral.

The atomic number, shown on the periodic table, tells us how many protons are in an atom. For a neutral atom, this number also shows how many electrons it has. For example, a neutral iron atom has 26 protons and 26 electrons.

As stated, all elements have the same number of protons and electrons. But an element can also become an ion, which means the number of protons and electrons is not the same. This happens when an element gains or loses electrons during chemical reactions. For example, some metals, like those in the first two groups of the periodic table, often lose electrons, which makes them positively charged. These are called

Hydrogen

H

1 Proton

1 Electron

Hildy

Hetha

He

2 Protons

2 Electrons

Helium

Calcium

Ca

20 Protons

20 Electrons

Verly

Elements 21 thru 118

Instead of showing all the protons and electrons in all atoms, the next pages will have small spheres with 1 or 2 letter abbreviation labels for each element along with a number called the atomic number. The atomic number tells us how many protons and electrons are in that element. This way of showing the rest of the elements is helpful because, when the atomic number is over 20, there are just too many protons and electrons to easily show or count.

You might notice that most element symbols (letter abbreviations) are short forms that make sense, but some just don't. For example, the symbol for Potassium is K, because it comes from an old Latin word, "kalium." This name is linked to ash from plants because potassium was first found in potash. The name kalium helps avoid mix-ups with other elements.

Here are some other unusual element symbols:

Sb for Antimony: Sb is for "stibium," the Latin name for the mineral Antimony comes from. This mineral was often used in makeup and medicine in the early days.

Au for Gold: The symbol Au is from the Latin word "aurum," which means gold. In ancient Rome, gold was called aurum.

Pb for Lead: The symbol Pb is from "plumbum," the Latin word for lead, which relates to plumbing.

Ag for Silver: Ag comes from "argentum," the Latin word for silver. This word has roots in Sanskrit and means "shining."

Na for Sodium: The symbol Na is from "natrium," the Latin name for sodium. In English, we say "sodium," but the symbol reflects its historical name.

Sn for Tin: Sn comes from "stannum," the Latin word for tin and a name for an ancient mixture of silver and lead.

W for Tungsten: The letter W is used for tungsten because it was originally called wolfram. This name is from a mineral that was noticed to consume tin during heating, leading German smelters to call it "wolf's foam."

It could be that it might be easier to remember these particular atomic symbols simply because they are so different from the rest of them.

Enjoy!

Francine

Fr
87

Raele

Ra
88

Francium

Radium

Acamus

Ac
89

Thordis

Th
90

Actinium

Thorium

Protik

Pa
91

Uri

U
92

Proactinium

Uranium

What Does The Future Hold?

So—What Comes Next For The Periodic Table?

There are currently 118 elements in the periodic table.

Of those, 28 elements are not found in nature. That means they were man-made by nuclear reactions and they have super short life spans, rendering them virtually unusable for anything other than scientific research.

Most of the elements with lower atomic numbers are found in nature but a very few of the elements with lower atomic numbers, such as Technetium (43), Promethium (61), Astatine (85) and Francium (87), are not naturally found in nature and are only produced in nuclear reactors.

There's A Dragon In My Atom!

Wondering why dragons, unicorns, wizards, knights, and goblins are hanging out with the atoms in this book? Welcome to the Magical Elementals version of the periodic table! Here, every element has a personality, a role to play, and a story to tell. You've just met all of the elementals who introduce the 118 amazing known elements in the *Magical Elements of the Periodic Table* six-book series.

Think of the periodic table as a vast fantasy world, where nature's elements and man-made elements are represented by magical elementals, each with powers inspired by the real-world wonders of the element they represent.

First we have Dragons, which have long captured our imaginations, often as creatures of immense power and mystery. The transition elements they represent are powerful, fierce, and impossible to ignore. Carbon is like a shape-shifting dragon—it can be soft as graphite or hard as diamond, and it's in almost everything. Hydrogen may be small, but it fuels the stars—a tiny dragon with cosmic fire. Lithium helps power our devices and calm our minds. Oxygen keeps us alive and fuels fire. Titanium is tough and light, perfect for planes and medical implants. These elements don't just exist—they change the world around them.

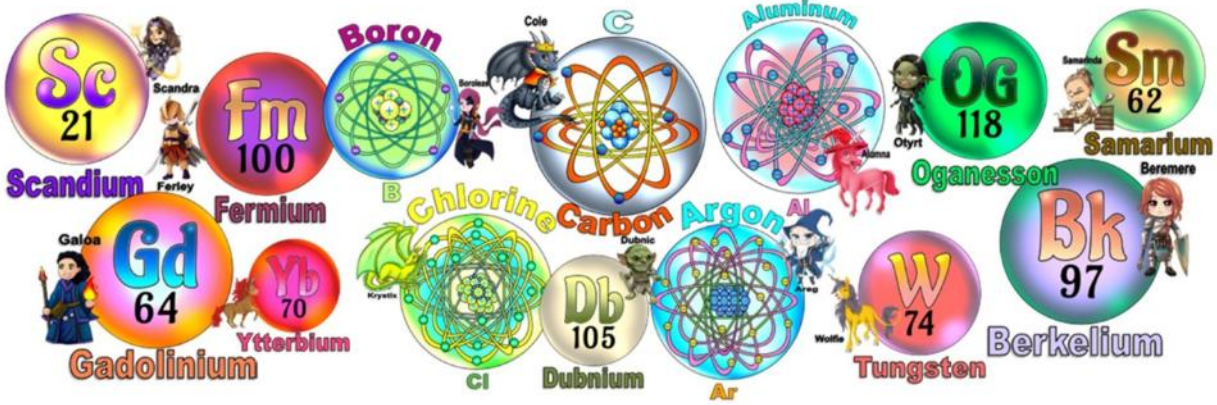
Next, we have the Wizards, who are often compared to the elements because, like fire, water, air, and earth, they are powerful, mysterious, and hard to contain. They tend to work alone and are often pushed to the edges of society. Some Wizards can be compared to noble gases like helium, neon, argon, krypton, xenon, and radon which stand quietly at the far right of the table. Just like wizards who keep to themselves, noble gases don't usually mix with others. They're calm and steady. But when they do get involved—like in neon signs or medical scans—they light up the world with brilliant glows. Only in rare moments do they join with other elements, much like wizards uniting for a secret, powerful ritual.

Magical Elements of The Periodic Table

Magical Elemental Atoms

Count The Protons and Electrons Graphics Package

Atom Spheres



Atom Spheres With Their Elemental Representatives

This zip file contains 2 graphic sets with .png files for all 118 elements currently known to exist on the Periodic Table as of 2026. The graphics were inspired by the "Magical Elements of The Periodic Table" 6 Book Series. Elements in those 6 books were represented by unicorns, dragons, wizards, knights and goblins. The message from the elementals is, "No Metal – No Magic. . .and No Technology".

Kids love magical things and with these fun representations you can show them the periodic table is full of magic. Use these graphics to enhance chemistry activities in school or at home. Print them out on sticker paper for some real fun.

Get This Graphics Set At MagicalPTElements.com

I hope you enjoyed this sample

The book is available in PDF and Soft Cover Formats.

Learn more about it at magicalptelements.com

Sybrina Publishing

If you love the book,

please spread the word to teachers,

home schoolers and anyone else who might enjoy it.