

# No Metal No Magic

Element 29


Cuprum, from The Magical Elements of the

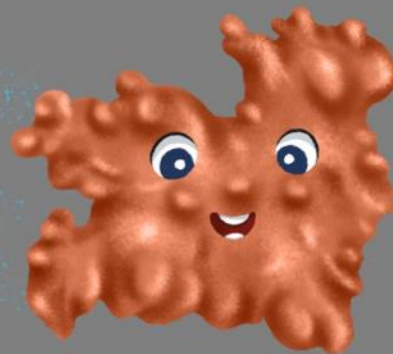
Periodic Table Series

Presents Copper

Cuprum



|                                                                                      |       |
|--------------------------------------------------------------------------------------|-------|
| 29                                                                                   | 63.55 |
|  |       |
| copper                                                                               |       |



Copper

*By Sybrina Durant with Illustrations by Pumudi Gardyawasam*

## Cuprum The Copper Horned Unicorn Presents Copper

This Element 29 book features the periodic table element, Copper. It is presented by Cuprum a member of the Metal Horn Unicorn Tribe from Unimaise. Each member of her tribe has a metal horn and hooves. They also have magical powers based on the properties of their metals.

Cuprum is just one of the 118 elementals who will present all of the Magical Elements of the Periodic Table to readers who are curious about the wonders of the world.



Cuprum introduces the very necessary element, Copper, in this book.

The Metal Horn unicorns from Unimaise and their other techno-magical unicorn friends are the perfect group to introduce you to metals and other elements in the Periodic Table. Hopefully, the Magical Elements of this periodic table book will spark an interest in the magical and real world properties of all the metals and other

Each page in this book contains terms that might not be completely familiar to the reader. Refer to the definitions in the back of the book to get a clear understanding of each meaning.

There is also a fun elemental themed Periodic Table at the back of the book. It features 118 elements presented by fanciful characters like unicorns, dragons, wizards, knights and goblins.. They want you to remember that if there's no metal...there's no magic or technology.

Remember, "No metal - No Magic. . .and No Technology".

It's Techo-Magical.

Note: Sybrina Publishing websites are [Sybrina.com](http://Sybrina.com) and [MagicalPTElements.com](http://MagicalPTElements.com). Follow [sybrinablueunicorn](https://www.instagram.com/sybrinablueunicorn) on Instagram, [The Blue Unicorn Book Store](https://www.facebook.com/theblueunicornbookstore) on Facebook, [@sybrinad](https://www.pinterest.com/sybrinad) on Pinterest and [Sybrina\\_SPT](https://twitter.com/Sybrina_SPT) on Twitter.

## Copper is a Transition Metal

Copper was discovered about 10,000 years ago in China, making it one of the oldest known metals used by humans.

Copper is solid at room temperature and is classified as a non-ferrous metal.

It is well-known for its excellent electrical conductivity properties, making it a widely used material in electrical wiring and components.

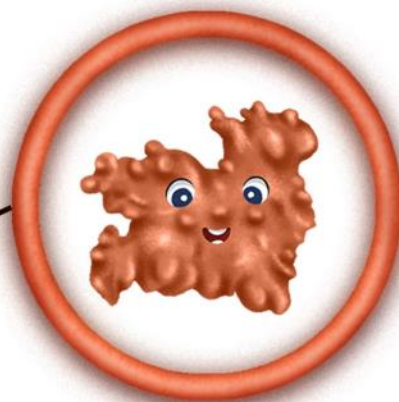
Copper is diamagnetic, meaning it is repelled by magnetic fields.

Copper is both ductile and malleable, allowing it to be easily shaped into various forms.

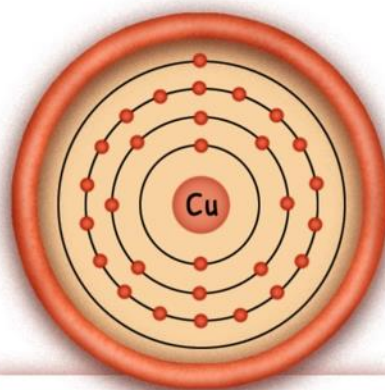
Copper is classified as a transition metal, which means it occupies groups 3 to 12 on the periodic table.

### LEGEND

|                                   |
|-----------------------------------|
| Alkali Metals                     |
| Alkali Earth Metals               |
| Transition Metals                 |
| Post-Transition (or Other Metals) |
| Metalloids                        |
| Non-Metals                        |
| Halogens                          |
| Noble Gases                       |
| Rare Earth Lanthanide Metals      |
| Actinide Metals                   |
| Super Heavy—Radioactive           |



Copper Metal



Atomic Structure

**Transition Metal**—The main metals are found in the middle and bottom rows of the periodic table. They look like metal, can conduct electricity, can bend and be shaped easily. The period 4 transition metals are scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, and zinc. The period 5 transition metals are yttrium, zirconium, niobium, molybdenum, technetium, ruthenium, rhodium, palladium, silver, and cadmium. The period 6 transition metals are lanthanum, hafnium, tantalum, tungsten, rhenium, osmium, iridium, platinum, gold, and mercury. The period 7 transition metals are the naturally-occurring actinium, and the artificially produced elements rutherfordium, dubnium, seaborgium, bohrium, hassium, meitnerium, darmstadtium, and roentgenium.

# Uses For Copper



Copper is used to clad metal art  
like the Statue of Liberty



It occurs naturally in our  
food and can keep you  
healthy.

# The Source of Copper



Copper ore  
is called  
chalcopyrite.  
Some of the  
largest deposits  
are in Chile.

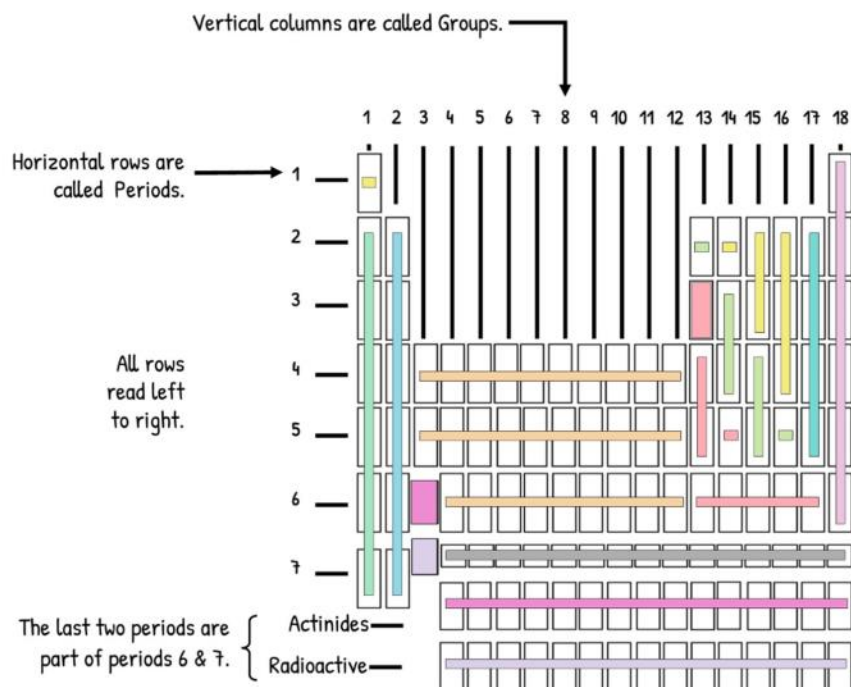
Copper is a shiny metal that has been important to people for a really long time because it's great at carrying electricity and can bend easily without breaking. It's used in making things like wires for electricity, materials for building, and electronic gadgets. Copper doesn't usually come by itself in nature, but is often mixed with other stuff like sulfur and iron in rocks underground.

To get copper, people have to dig underground in places where they think there might be copper. This digging can be done in open pits or underground tunnels. Once they find the copper, they need to crush the rocks to get the copper out. They use special chemicals to separate the copper from the other stuff in the rock. Then, the copper is

# Structure Of Elements In The Periodic Table

Periodic tables are laid out in rows and columns.

Each element is placed in a specific location because of its atomic structure. Elements are arranged in Families.



The Families are:

- Alkali Metals
- Alkali Earth Metals
- Transition Metals
- Post-Transition (or Other Metals)
- Metalloids
- Non-Metals
- Halogens
- Noble Gases
- Rare Earth Lanthanide Metals
- Actinide Metals
- Heavy-Radioactive

The term 'Element' is used to describe atoms with specific characteristics.

Every element in the first column or Group has 1 electron in the outer orbital (shell).

Every element in the second column (group two) has two electrons in the element's outer orbital.

The number designation of each Group represents the number of electrons in the element's outer orbital—except for Group 18, Period 1—Helium. It only has 2 electrons.

Those electrons, called Valence Electrons, are what chemically bond with other elements.

**Atomic Structure of Element:** The atomic structure of an element refers to the arrangement of protons and neutrons in the nucleus of the atom, and the electrons in the electron cloud around the nucleus. Group 1, Period 1—Hydrogen is the only element that has no neutrons.

**Atomic Number**— Indicates the number of protons in the nucleus and the number of electrons in the atom (Element).

**Element Symbol**— The identifying letters for the element are an abbreviation of the element name. Only one or two letters are used for element symbols. Cu = Copper

The Metal Horn Unicorn introducing this Element in the Magical Elements of the Periodic Table Book 1 is Cuprum the Copper Horn Unicorn.

Cu—Copper  
Group 11 — Period 4

29    63.55

Cu

copper

Cuprum

Money

Atomic Mass (or Weight) — Equals the number of Protons + Neutrons in the Element's nucleus.

Atom (Element)

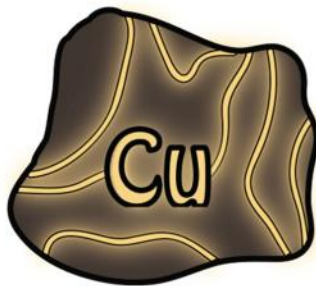
Protons and Neutrons in Nucleus

Element Name—  
The name of this element is Copper. It is a Transition Metal.

An every day use for the element.  
IE: Copper is used to make pennies.

Electrons

**Atomic Structure**



## What Makes Copper Seem Magical?

When you think of magic, you might imagine wands, spells, and mythical animals. What if I told you that one of the most fascinating things that could be considered magical is hiding in plain sight – in the form of a simple metal called copper? This incredible element, symbolized by "Cu" on the periodic table, is not just a metal; it's a remarkable substance that has been enchanting humans for thousands of years. Here's why copper seems truly magical!

First, let's dive into a little history. Copper is one of the first metals humans ever discovered, dating back to around 9000 BC. Its first uses were in tools and ornaments, and it quickly became popular due to its beautiful reddish-brown color and malleability. Imagine ancient craftsmen transforming raw copper into intricate jewelry and weapons! The allure of copper helped usher in various technological advances, giving birth to the Copper Age, one of the earliest periods of human civilization. It has popped up throughout history, from the intricate designs of Celtic jewelry to the Statue of Liberty, which is coated in copper and has turned green over time due to oxidation, showcasing nature's unique artistry.

What truly gives copper its magical aura is not just its past but its extraordinary properties today. For starters, copper is a fantastic conductor of electricity. In fact, it's one of the best materials for conducting electricity, which is why you see it in nearly every

Meet Cuprum the Copper-Horned Unicorn from the Metal Horn Unicorn Tribe. She is a magical creature with unique and captivating abilities. Being a mythical creature with a shimmering copper horn, Cuprum is known to possess special powers that are both fascinating and mystical.

One of Cuprum's most remarkable abilities is her horn's power to purify water. Whether it is dirty, contaminated, or simply not safe to drink, Cuprum's horn has the ability to purify it instantly into crystal-clear perfection. In a world where access to clean water is a luxury, Cuprum's ability to transform even the dirtiest of sources into pure, safe drinking water is nothing short of a miracle.

The magical powers of Cuprum go beyond just purifying water. She can also control tornados, which are a natural disaster that can often cause chaos and destruction. With a simple wave of her horn, Cuprum can manipulate the wind and redirect the course of tornadoes, ensuring that they don't cause any harm to people and property.

Another fascinating ability of Cuprum is her power to make water dance. She can control the water droplets, making them move in tandem with her movements. This creates a beautiful and mesmerizing display of water droplets that move in perfect harmony. It is rare to find such magical abilities in any creature, and Cuprum effortlessly reigns supreme in this regard.

Cuprum's abilities are not just captivating and magical. They serve a greater purpose, making her an important creature in the world. With her power to purify water, she can play a significant role in providing access to clean water all over the world. Waterborne diseases are still a significant problem in many countries, where clean water is not always accessible. In such places, Cuprum's power to purify water can make a significant difference in peoples' lives.

Similarly, Cuprum's ability to control tornados can save lives. Tornados can sometimes wipe out entire towns, and their impact can be devastating. Cuprum's ability to control them can significantly reduce the damage caused by them, and protect people's lives and property. Cuprum the Copper-Horned Unicorn's magical abilities have the potential to make a significant impact on the world.

Guided by her unwavering sense of justice, Cuprum only utilizes her formidable powers for the greater good, ensuring that her actions always align with the values of compassion and harmony. Cuprum stands as a symbol of hope and purity, a guardian of nature's most precious element, and a steadfast ally to those in need.

From purifying water to controlling tornados and making water dance, Cuprum's unique abilities set her apart from all other creatures. She is a gentle and compassionate soul, always driven by a profound sense of responsibility to make a positive impact on the world. She is wise beyond her years, understanding the importance of clean water for all living beings. With her graceful presence and unwavering determination, Cuprum inspires those around her to prioritize the preservation and accessibility of this precious resource.

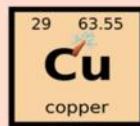
# CREATE YOUR OWN Magical Unicorn Elemental

## Cuprum The Copper-Horned Unicorn Presents Copper

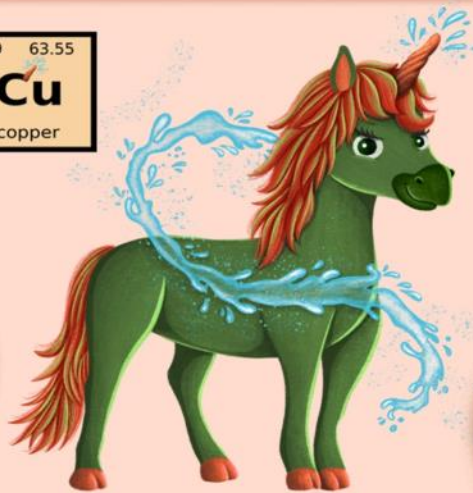
Symbol : Cu Atomic Number : 29 Atomic Mass : 63.55



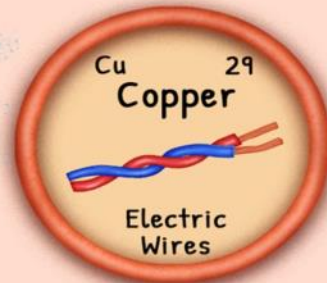
Magical Herd Crest Symbol



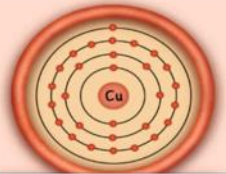
Copper is a Transition Metal



Mined From Chalcopyrite



Electric Wires



Atomic Structure

### Cuprum's Magical Abilities

- Her horn has the power to purify water
- Control tornados
- And make water dance

### Uses For Copper



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# Presents

Symbol:

Atomic Number:

Atomic Mass:

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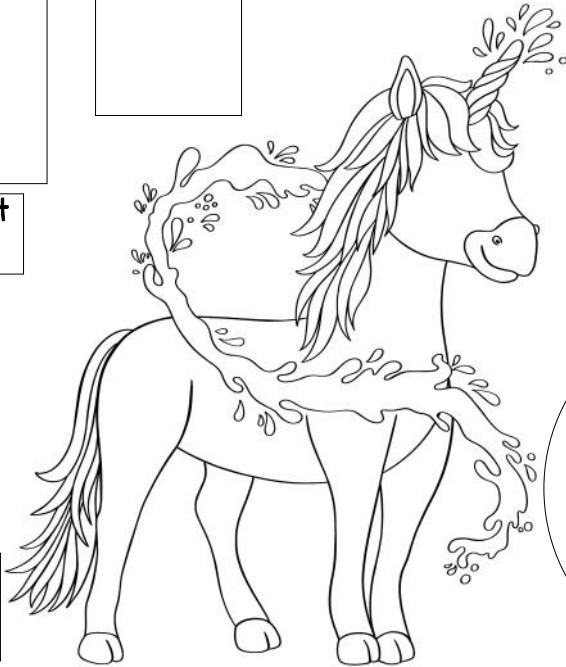
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Magical Herd Crest  
Symbol

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Magical Abilities

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Atomic Structure

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Uses For



# CREATE YOUR OWN Magical Unicorn Elemental

Students may either use a program like power point to cut and paste clip art into a Magical Unicorn Elemental Blank or, if they wish, they may draw everything themselves.

Place your unicorn name and related element here

Draw a Magical Herd Crest Symbol. Represent the elemental magic.

Draw a cute cartoon picture representing ore or other source of extraction

List what this element is mined or extracted From

Show the number of electrons in the atomic structure

Design a border that represents the element properties.

Draw the periodic Symbol for this Element

Show a cute cartoon picture of the element.

List the element type here. I.e: Rare Earth, Halogen, Etc.

Create a tag containing the element symbol, atomic number, name of element plus a picture of a use for the element.

Personalize this Magical Unicorn Elemental. List 1 or 2 of their magical abilities that are based on the properties of the element.

Show element Name

Draw or place clip art pictures here representing use of element

**Presents**

Symbol:      Atomic Number:      Atomic Mass:

Magical Herd Crest Symbol

Magical Abilities

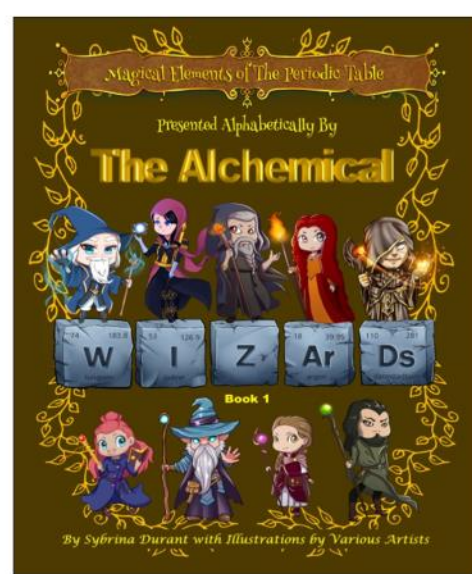
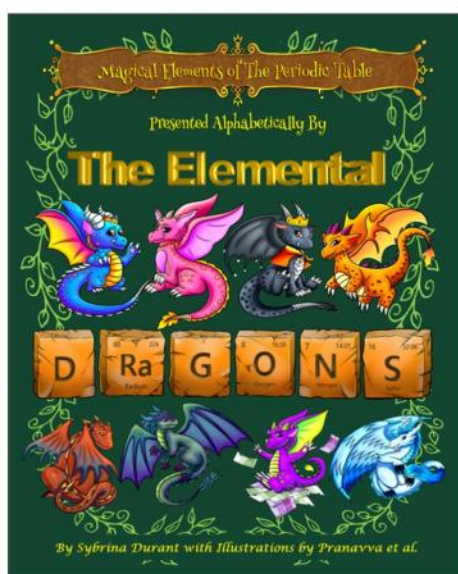
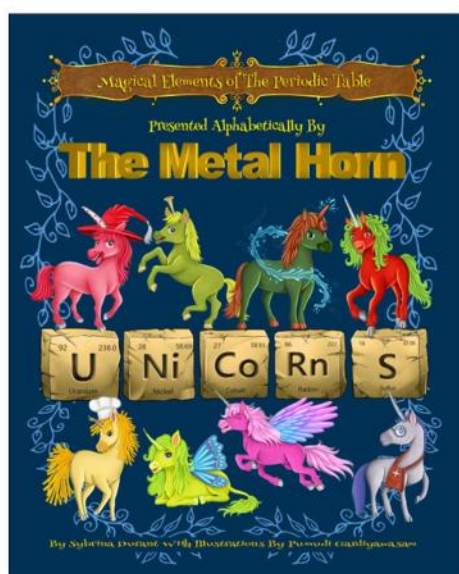
**Uses For**

Atomic Structure

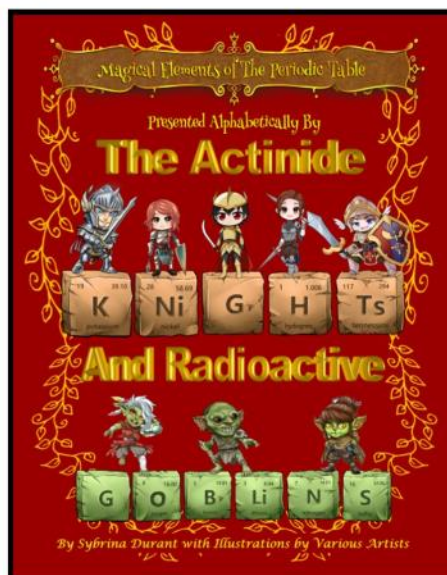
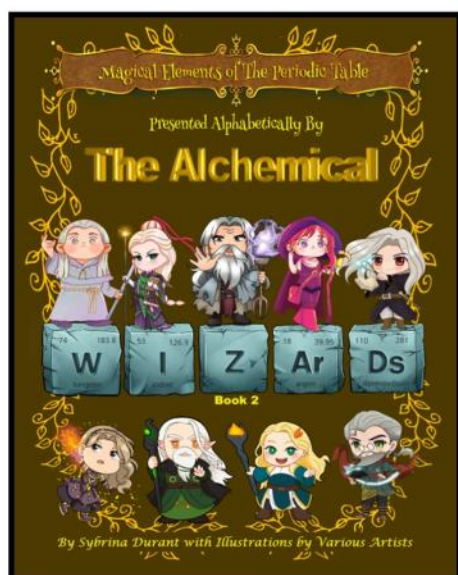
# Do Your Middle Graders Want To Know More From The Magical Elementals About The Periodic Table?

Get the accompanying books in print at all online book stores. Get the books and accompanying activities at [MagicalPTElements.com](http://MagicalPTElements.com).

## Available Now



## Coming Soon



# Also Available From Sybrina Publishing


## Magical Elemental-Themed Periodic Table

Magical elements from the Magical Elements of the Periodic Table books present all of the elements of the periodic table in fantastical and real life terms.


In the books, each elemental character has magical powers based on the properties of the elements that come from the land, air and water. They are the perfect group to introduce you to metals, metalloids, non-metals, halogens, noble gases and much more.

Unicorns, dragons, alchemists, knights, and goblins will show you how people of this world always have and always will depend upon the elements that our earth provides for all of our needs.

Use this Periodic Table as you would any other to spark an interest in the magical and real world properties of all the elements known today. You may be surprised at how prominently they feature in our every day lives.



**No Metal**



Actinium To Zirconium

**No Magic**

Remember, "No Metal—  
No Magic."  
... And no technology.

**It's Techno-Magical**


|   |                                         |                          |   |                            |                                    |                             |                        |                             |                  |                                      |                                 |    |                         |                     |                         |                     |                      |                           |    |                            |                               |                      |                         |                                  |                             |   |                      |                         |                            |                    |                                 |                               |                                |                       |                             |                        |                                |   |                                   |                               |                          |                              |                               |                            |                                   |                                    |                          |                            |                            |   |                                       |                                      |                             |                                 |                            |                                  |   |                                 |                            |   |   |   |    |    |    |    |    |    |    |
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| 1 | H<br>Hydrogen<br>Tuffa<br>Manufacturing | He<br>Helium<br>Balloons | 2 | Li<br>Lillian<br>Batteries | Be<br>Benji<br>Musical Instruments | B<br>Boris<br>Peanut Butter | C<br>Caleb<br>Charcoal | N<br>Nita<br>Food Packaging | O<br>Ozzy<br>Air | F<br>Flora<br>Strong Bones and Teeth | Ne<br>Nora<br>Advertising Signs | 13 | Al<br>Alma<br>Airplanes | Si<br>Simo<br>Glass | P<br>Pete<br>Fertilizer | S<br>Sue<br>Matches | Cl<br>Clara<br>Pools | Ar<br>Aria<br>Light Bulbs | 14 | Ga<br>Gail<br>LED Displays | Ge<br>Gertie<br>Camera Lenses | As<br>Asha<br>Poison | Se<br>Selma<br>Printers | Br<br>Brenda<br>Photography Film | Kr<br>Kylie<br>Detox Lotion | 3 | Ca<br>Cathy<br>Teeth | Sc<br>Sally<br>Bicycles | Ti<br>Tilly<br>Antibiotics | V<br>Vana<br>Steel | Cr<br>Crista<br>Stainless Steel | Mn<br>Mimi<br>Earth Motocross | Fe<br>Fiona<br>Bicycles Chains | Co<br>Cora<br>Magnets | Ni<br>Nix<br>Guitar Strings | Cu<br>Cupcake<br>Money | Zn<br>Zoe<br>Burrhead Locknuts | 4 | Sr<br>Sue<br>Night Vision Goggles | Y<br>Yoda<br>Computer Screens | Zr<br>Zoe<br>Microscopes | Nb<br>Nora<br>Mag Lev Trains | Mo<br>Maximo<br>Cutting Tools | Tc<br>Tina<br>Radio Active | Ru<br>Ruth<br>Electrical Switches | Rh<br>Rhonda<br>Finish for Jewelry | Pd<br>Paddy<br>Cosmetics | Ag<br>Agneta<br>Ventilator | Cd<br>Celia<br>Power Tools | 5 | In<br>Iker<br>Liquid Crystal Displays | Sn<br>Sue<br>Liquid Crystal Displays | Sb<br>Sue<br>Fire Retardant | Te<br>Tina<br>Vulcanized Rubber | I<br>Ivy<br>Circuit Boards | Xe<br>Xena<br>Lead to Lead Acids | 6 | Fr<br>Frank<br>Cancer Treatment | Ra<br>Rita<br>Luminescence | 7 | 8 | 9 | 10 | 11 | 12 | 15 | 16 | 17 | 18 |
|---|-----------------------------------------|--------------------------|---|----------------------------|------------------------------------|-----------------------------|------------------------|-----------------------------|------------------|--------------------------------------|---------------------------------|----|-------------------------|---------------------|-------------------------|---------------------|----------------------|---------------------------|----|----------------------------|-------------------------------|----------------------|-------------------------|----------------------------------|-----------------------------|---|----------------------|-------------------------|----------------------------|--------------------|---------------------------------|-------------------------------|--------------------------------|-----------------------|-----------------------------|------------------------|--------------------------------|---|-----------------------------------|-------------------------------|--------------------------|------------------------------|-------------------------------|----------------------------|-----------------------------------|------------------------------------|--------------------------|----------------------------|----------------------------|---|---------------------------------------|--------------------------------------|-----------------------------|---------------------------------|----------------------------|----------------------------------|---|---------------------------------|----------------------------|---|---|---|----|----|----|----|----|----|----|

**LEGEND**

- Alkali Metals
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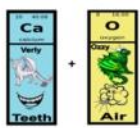
Alloys are created when 2 or more metals are combined. Compounds are created when 2 or more non-metals are combined.

**EXAMPLE OF A COMPOUND**




Quincy

Quick Lime =  
Used for Concrete



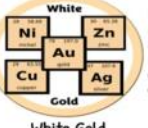
Both Carbon and Oxygen are reactive nonmetals.

**EXAMPLE OF AN ALLOY**



White Wing

Used for jewelry, dental amalgams plus connectors, and switch and relay contacts for electronics.



White Gold

Includes 58.5 % gold, 22% copper, 8% zinc, 1% nickel, 4.5% silver and possibly other elements.

*Sybrina.com*

Would you like a 24" x 36" poster of the Magical Elemental-Themed Periodic Table from The Magical Elements of the Periodic Table books? The best place to get a high quality poster size print is at <https://bit.ly/49QMxBT> It will look great on a classroom or kid's room wall.

# I hope you enjoyed this sample



**The book is available in PDF and Soft Cover Formats.  
Learn more about it at [magicalptelements.com](http://magicalptelements.com)**

## Sybrina Publishing

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please spread the word to teachers,  
home schoolers and anyone else who might enjoy it.**