

Free Reading Sample

Magical Elements of The Periodic Table

Presented Alphabetically By

The Metal Horn

92	238.0	28	58.69	27	58.93	86	222	16	32.06
U		Ni		Co		Rn		S	
Uranium		Nickel		Cobalt		Radon		Sulfur	



By Sybrina Durant with Illustrations By Pumudi Gardigawasaam

The unicorns of the Metal Horn Unicorn Tribe present

“Magical Elements Of The Periodic Table.”

In this unique alphabet book, members of the Metal Horn Unicorn Tribe from Unimaise present 25 Magical Elements of the Periodic Table (plus 1 alloy) in alphabetical order. Each member of the tribe has a metal horn and hooves. They also have magical powers based on the properties of their metals.



Alumna starts out the book by introducing the very necessary metal, Aluminum, on her element page.

Dr. Zinko rounds out the alphabet by presenting facts and other fun information about the metal, Zinc, on his element page.



Other members of the Metal Horn Unicorn Tribe, plus some of their magical elemental friends, will give some great insight into the properties of 23 additional pure metals from the periodic table.

There is one special unicorn in the book whose horn and hooves are an alloy created by combining copper and zinc.



Cornum, the Brass-Horned unicorn will reveal some interesting things about that metal.



While not all elements in the Periodic Table are represented by letters of the alphabet, some in this book, are introduced by alternate designations. For instance, Tungsten is also known as Wolfram so “W” is used as the entry for that alphabetical letter in this book. The letter “W” is also used as the atomic symbol for Tungsten in all periodic tables.

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 elements known today. You may be surprised at how prominently they feature in our every day lives.

Each element 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 unicorn themed Periodic Table at the back of the book. It features the 26 unicorns from the Metal Horn Tribe plus 92 more unicorns from the Unicorn Reader / Unicorn Writer collection of tee shirts from Sybrina Publishing. Get them all at <https://amzn.to/3IOLmbN>

Remember, “No metal – No Magic. . .and No Technology”.

It’s Techo-Magical.

Note: The Metal Horn Unicorns from Unimaise are featured prominently in fantasy books, for all ages, written by Sybrina Durant. Get them all at Sybrina.com. Follow [sybrinablueunicorn](https://www.instagram.com/sybrinablueunicorn) on Instagram, The Blue Unicorn Book Store on Facebook, [@sybrinad](https://www.pinterest.com/sybrinad) on Pinterest and [Sybrina_SPT](https://twitter.com/Sybrina_SPT) on Twitter.

13 26.98 Al aluminium	92 238.0 U uranium	M	11 22.99 Na sodium
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Presents Aluminum

Symbol : Al Atomic Number : 13 Atomic Mass : 26.98



Aluminum Metal

- Discovered 1825 in Denmark
- Solid & Non-ferrous
- Electrical conductor
- Paramagnetic
- Ductile and Malleable
- Post-transition (or other) metal

No Metal

Alumna The Aluminum Horned Unicorn

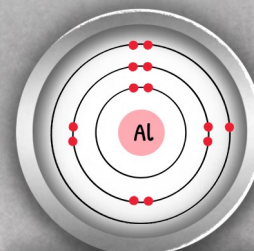


Aluminum occurs in many rocks but is mainly mined from Bauxite Ore. Some of the largest deposits of Bauxite Ore are in Australia.

No Magic

Alumna's Magical Abilities

- She can see the Future
- Alumna is the most learned of all the metal horned unicorns
- She is the Oracle of the tribe of the Metal Horned Unicorns



Atomic Structure

AL 13
Aluminum

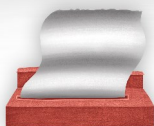


Airplanes

Uses For Aluminum



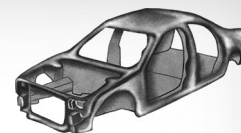
Aluminum frameworks are used in building construction



It is used as wrapping for cooking and baking



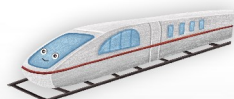
Low cost cooking utensils are made from Aluminum



An Aluminum-Manganese alloy (3105) is used to make car bodies.



Aluminum has long been used for packaging



It is used for high speed rail trains



Light weight electrical power lines are Aluminum



Airplanes are constructed from Aluminum to be lighter in weight

Did You Know?

- Aluminum is in our food and in our water. It used for packaging and preparation, as additives and preservatives, and more. The average person eats 7-9 milligrams of aluminum per day but the body absorbs less than 1% of it. Most aluminum passes out of your system through your kidneys within 24 hours. Though high level Aluminum exposure has been linked to dementia, impaired neural function and lung irritation, scientists say those impairments are never caused by routine, dietary exposure.
- Aluminum is the third most abundant metal in the Earth's crust and the third most abundant element overall.
- When subjected to a grinder, things made from aluminum do not give out sparks.

27 58.93 Co cobalt	86 222 Rn radon	92 238.0 U uranium	M
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Presents Brass (An Alloy of Copper and Zinc)

Copper Symbol : Cu Atomic Number : 29
Zinc Symbol : Zn Atomic Number : 30



Brass Metal

Metal Facts

- Discovered 2,000 years ago in Asia
- Solid & non-ferrous
- Electrical conductor
- Diamagnetic
- Ductile and malleable
- Alloy—not on periodic table

No Metal

Cornum The Brass-Horned Unicorn

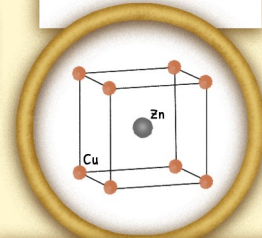


No Magic

Cornum's Magical Abilities

- His horn can sound like any musical wind instrument

Brass is not an element on the periodic table but it is one of many Alloys created from combining metals. Brass is created by combining Copper and Zinc to create a new metal.



Crystalline Structure

Uses For Brass



Springs made from brass wire are strong as well as pretty



Brass is used for musical instruments because it produces rich tones and sounds



Brass lanterns are strong and durable



Brass pipes and water faucets are resistant to corrosion and germs



Brass has been used for door knobs and strike plates since 1846

Regular steel and iron screws can corrode from prolonged exposure to wind, sun and rain. Brass plated screws are corrosion resistant.

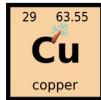


Magnetic compasses were first used by the Chinese around 1100 CE. Brass housings are not magnetic and do not affect compass readings.



Did You Know?

- Yellow, gold and red brass are used for musical instruments. Yellow brasses are known for having a bright and tighter timbre, whereas gold brass has a broader, richer, and deeper tone. Red brasses have softer sounds.
- Brass is resistant to bacteria, making it that much more useful for fixtures like door handles that multiple people touch. Few things are touched as often per day as a door handle, so it is good that brass is nearly self-sanitizing.
- Brass is commonly found on electrical board switches, sockets, relays, and terminal blocks, too.



Presents Copper

Symbol : Cu

Atomic Number : 29

Atomic Mass : 63.55



Copper Metal Element Facts

- Discovered about 10,000 years ago in China
- Solid & non-ferrous
- Electrical conductor
- Diamagnetic
- Ductile and malleable
- Transition metal

No Metal

Cuprum The Copper-Horned Unicorn

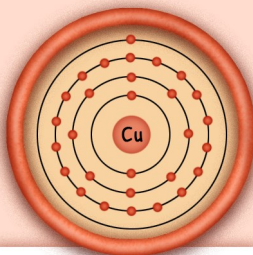


Copper ore is called chalcopyrite. Some of the largest deposits are in Chile.

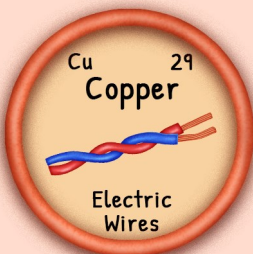
No Magic

Cuprum's Magical Abilities

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

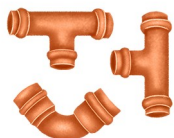


Atomic Structure



Electric Wires

Uses For Copper



Copper can protect water from germs. It can protect skin from bacteria, too.



Electrical wires are made from copper



Most coins are metal sandwiches. Today, pennies are made of 97.5% Zinc discs coated with 2.5% Copper plating.



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



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

Did You Know?

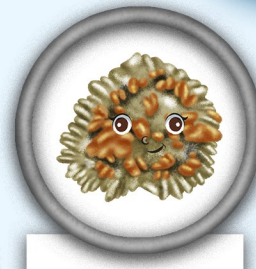
- Copper pennies were solid copper up until 1857. Old pure copper pennies are worth about 3 cents.
- Our ancestors stored water in copper vessels before drinking it. It was believed that the process killed harmful bacteria in water. We know, today, that copper is anti-bacterial.
- We eat copper every day. Some of the best dietary sources are seafood, whole grains, lentils, nuts, seeds, cereals, potatoes, peas, chocolate and dark green leafy vegetables. It maintains the human nervous and immune systems.
- Otzi the Iceman, a male from 3300 - 3200 BC, was found with an axe blade of 99.7% pure copper.



66 162.5 Dy dysprosium	15 30.97 P phosphorus	14 28.09 Si silicon	E
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Presents **Dysprosium**

Symbol : Dy Atomic Number : 66 Atomic Mass : 162.5



Dysprosium Metal

Element Facts

- Pure form not isolated until the 1950's
- Solid
- Electrical conductor
- Strongly paramagnetic
- Not ductile or malleable
- Rare earth (tech) Lanthanide

No Metal

Dypsie The Dysprosium-Horned Unicorn



Dysprosium is mined from monazite, a phosphate mineral. Some of the largest deposits are in India.

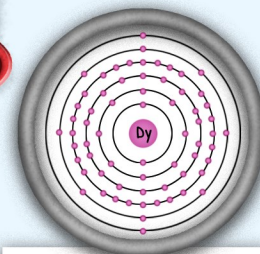
No Magic

Dypsie's Magical Abilities

- She is hard to catch—can flash in and out of situations



Dy 66
Dysprosium
Wind Turbines



Atomic Structure

Uses For Dysprosium



Permanent magnets in electric cars are made from it



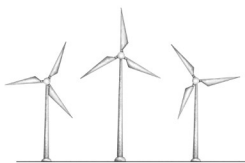
Dysprosium is used for sonar sensors that gauge distance between objects at close range



Various types of data-storage applications employ Dysprosium compounds



It soaks up neutrons in nuclear control rods



Wind generators utilize Dysprosium magnets



It helps create super strong magnets



Dysprosium can be added to drugs to make them easier for the body to absorb



A chemical compound of Dysprosium and Iodide Lights up High Intensity Discharge (HID) stadium lamps fast

Did You Know?

- Dysprosium is derived from the Greek word 'dysprositos', which means 'hard to get'.
- Cement made from an alloy of Dysprosium oxide and Nickel is used make the rods that cool nuclear reactors.
- Terfenol-D (a Terbium, Iron and Dysprosium alloy) is used in a speaker called the 'SoundBug', which turns any flat surface into a speaker. Terfenol-D has the largest room temperature magnetorestriction of any known material.
- Magnets made with Dysprosium are very hard to de-magnetize. They are used in electric vehicles and MRI machines.

Alloys

An **alloy** is a mixture of chemical elements of which at least one is a metal. An alloy is a solid. Unlike chemical compounds with metallic bases, an alloy will retain all the properties of a metal in the resulting material, such as electrical conductivity, ductility, opacity, and luster, but may have properties that differ from those of the pure metals, such as increased strength or hardness. In some cases, an alloy may reduce the overall cost of the material while preserving important properties. In other cases, the mixture imparts synergistic properties to the constituent metal elements such as corrosion resistance or mechanical strength. Some of the most common alloys are

<p>Amalgam =</p> <p>Used for dental fillings and mining</p>		+		+		+			
	45% min / 55% max		22% min / 32% max		12% min / 30% max		12% min / 24% max		
<p>Brass =</p> <p>Used for decoration, plumbing, instruments</p>		+		+	<p>May also include iron, lead, manganese, aluminum, silicon and other elements.</p>				
	65% min / 90% max		10% min / 35% max						
<p>Steel =</p> <p>Used for structures, cutlery, car bodies, rails</p>		+		+	<p>May also include manganese, silicon, copper, nitrogen, niobium, titanium,</p>				
	50% min / 99% max		0.1% min / 2.5% max						
<p>White Gold =</p> <p>Used for jewelry</p>		+		+		+		<p>Often plated with rhodium to enhance whiteness.</p>	
	75%		10%		10%		5%		

Some other common alloys are Bronze, Cast Iron, Cupronickel, Magnalium, Mischmetal, Nichrome, Nitinol, Pewter, Solder, Sterling Silver and Tungsten Carbide.

The above chart only shows a few of the hundreds of metal combinations. For instance, 24 carat gold is a pure naturally occurring yellow metal. There are four basic shades of gold alloys: yellow gold, white gold, rose gold, and green gold. A huge range of other colored golds are also possible, including red (gold and copper), grey (gold, iron and copper), purple (gold and aluminum), blue (gold and iron) and black (gold and cobalt), depending on the amounts of different metals alloyed together.



No Metal, No Magic

Song Lyrics

No metal, no Magic

No metal, no Magic

I can think of nothing more tragic

Than to have no metal or no magic

Metal makes everything magical.

Just ask a unicorn. . .

Preferably, one with a metal horn.

They'd say No metal, No magic.

Metal makes everything techno magical.

No metal, No magic

for two-leggers or unicorns.

No metal, No magic

Metal makes everything techno magical.

No metal, No magic

It's techno magical.

No metal, No magic

It might be very hard to believe but with

No metal, No magic

There'd be no technology.

No metal, No magic

No metal, No magic



Listen to this song at <https://youtu.be/tcB8KDWAd8w>

Watch the book trailer at <https://youtu.be/NIX9fE7GJRI>

Get These Fun Unicorn Periodic Table Activities at

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Unicorn Periodic Table

5 B Boron	33 I Iodine	7 N Nitrogen	8 O Oxygen
B Ga	O Ir	I Tl	G Tl
O Xe	I Ti	I Tc	N Cr
O P	O Pm	No Metal	B Sm
O Si	G Cu	B Br	N Bk
I Nb	G U	G Li	O Sb

Unicorn Periodic Table

5 B Boron	33 I Iodine	7 N Nitrogen	8 O Oxygen
N Mn	N Er	O Ir	O Xe
O Xe	O P	I Nd	O Si
I Bi	B Sb	No Metal	G Tl
O Ba	O Pm	G Cs	B Br
I Nb	G U	G Li	O Sb

Unicorn Periodic Table
Bingo—Comes with 32
unique Bingo cards



26 Magical Elemental Unicorn
Game Cards—Makes great
prizes. Fun to trade, too.

1

plus

A

Unicorn Horn

2

B

3

Alphabet

CLIP ART FOR YOUR GRAPHICS

C

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for all kinds of printable downloads to make learning fun.

I hope you enjoyed this sample



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purchase it in Hard Cover format**

ISBN # 978-1-942740-36-0