

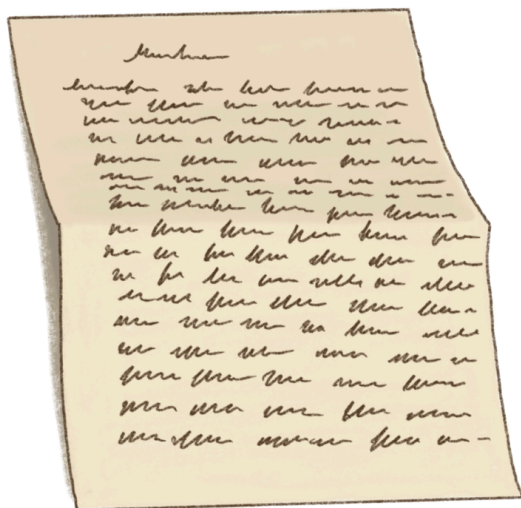
The feelings behind Magascience

At the beginning of the school year we were very scared of making an entire science magazine. While time pass, making the magazine was big challenge. In LED classes we made all things related with the magazine. When our teachers finally told us our roles, we were chief editors. When we got this roll we knew we needed to make the science magazine fun and interesting, and to overcome the challenge we needed to work as a team. In one week our entire team worked very hard for making this incredible project. All my teammates were stressed and gave all their effort for the magazine. After all the work we made an excellent magazine, as editor in chiefs we really hope you enjoy it.

Jacobo Sánchez and Benjamin Marquez

Index

Chemical Chronicles pg:5



Periodic poetry:pg 13

Breaking the rocks: secrets
behind the earths crust. : pg 20



Fun Facts:35

Science Interviews: pg 37

3

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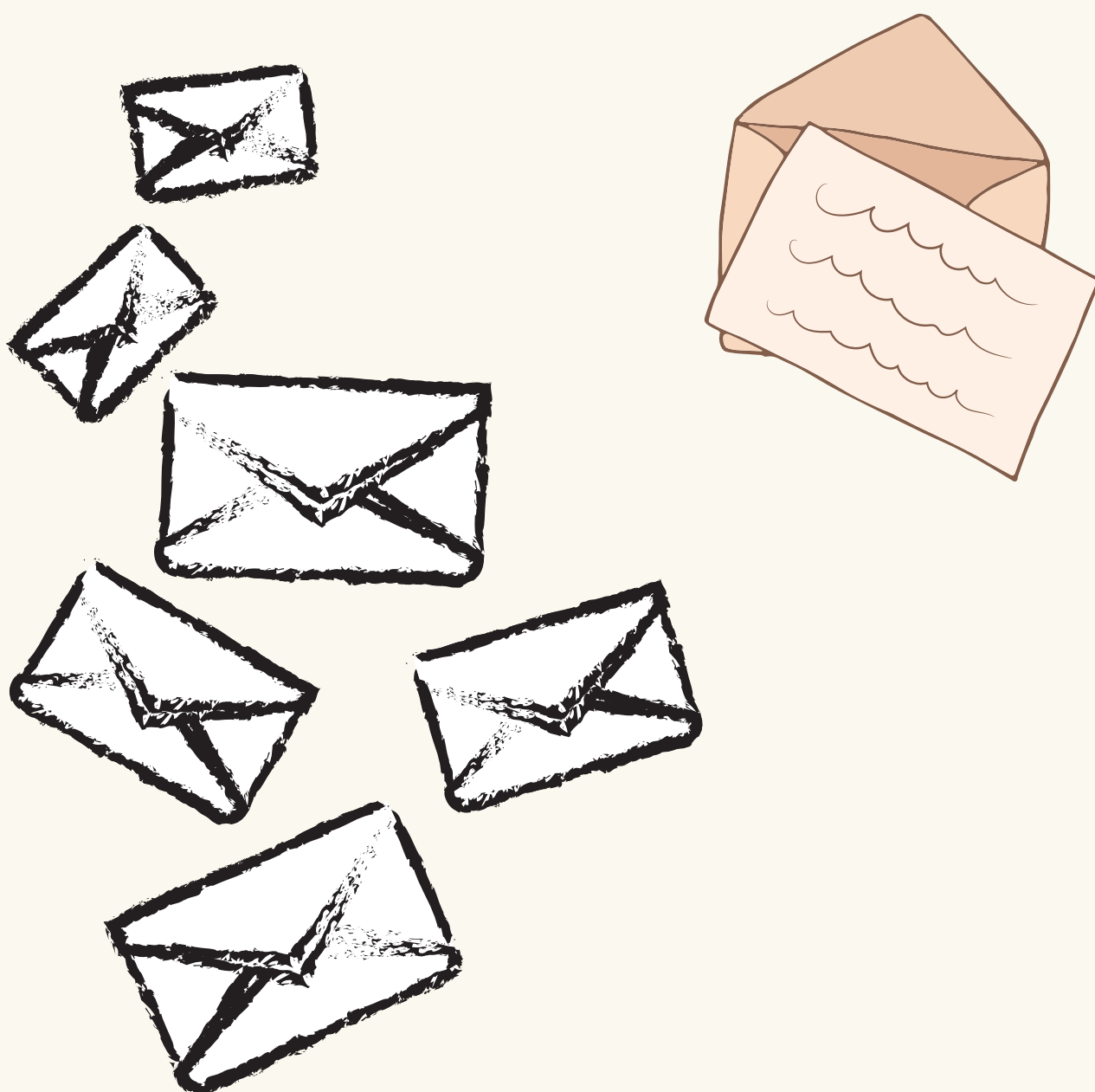
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Chemical Chronicles

Intriguing letters registered recently



Letter by Krypton

Atmosphere (right up)

23 sept 2025

Estimated photographers of all the world ,

I hope you're taking beautiful photos with me and your cameras , I'm sure you don't know of my existence. Well I'm writing this letter for two reasons , first I would like to thank you because all of you (if you're a professional photographer) use me to take fantastic photos and make a clear image while someone is running or while a formula 1 car is racing . The second reason is because (if you've ever noticed) I would like to tell you that I'm PRESENT in your accurately captured photos of high resolution .

Now I am Krypton but I burn in anger when people confuse me with the krypton in Superman, well I'm NOT the one shown in the movie. My atomic number in the periodic table is 36, my symbol at the periodic table is Kr and my atomic weight is 83.798. I'm found in very small amounts (one in a million) in the atmosphere. My physical state is gas, but don't worry, I'm a Nobel gas (as krypton I am not dangerous chemical reactions). I'm also used in highly sensitive cameras in ion lasers or scientific research. If I'm new to you, let me tell you that I was discovered in 1898 (I know I have my years) and my name Krypton means hidden in Greek .It's important you know that I'm always there while you're taking photos of something in movement . I also help because I'm an insulating gas which means I reduce heat transferred through windows .

Please I hope that you've learned about me in this letter and always know that I'm present when taking photos . Solid krypton

So me a Nobel gas it's my time to vanish in a flash 📸

Krypton (not the one of Superman)

By: Emilio Camacho



Photo: Devrimb/Getty Images

Tuesday September 23rd 2025,
in an ore deposit in USA

Letter from tellurium

Dear solar panel constructors,

I am tellurium and I am a very important element, and I have some characteristics and secrets that can change solar panels completely. So I am excited to tell you all these things.

Some scientists have discovered that I can be very useful for solar panels, so I feel you should use me more for them. I first have to tell you some facts and important things you need to know about me. I was discovered in 1782 by the Hungarian Franz-Joseph Muller von Reichenstein. I am very strange on earth, even stranger than gold, so I am really difficult to find, but with a bit of search you will find me. I have the atomic number 52 and I am in the group number 16 of the elements in the periodic table. And I have 6 valence electrons.

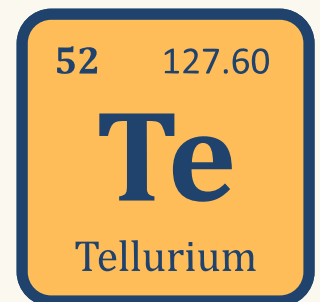
Now I want to tell you some more important things for you to understand why I am so important for solar panels. I am going to show you some characteristics and some secrets about me. I have a melting point of 449.5 degrees Celsius, that is low compared to other metals, so I am easily manipulated. I have a mass of 127.60 approximately . My state at room temperature is solid. I have a silvery-white color, so when you search for me, search for that kind of color. I have a density of about 6.24/cm³. My boiling point is 988 degrees Celsius, that is very high compared to other elements. I am a metalloid, that means I have characteristics from metals and also from nonmetals. I have 2.1 of electromagnetivity according to the scale. But I am dangerous so if you are going to use me you should be careful because I am toxic, but that doesn't mean that I can't be used to make solar panels, the only important thing is that you have to use me carefully.

I already showed some secrets about me, but now you should see why I am useful for solar panels. I think, as I already said before, that I am useful for solar panels, so now you are going to see why I am useful. First of all, I have a lot of solar cells. That is the most important component when you do a solar panel, I also absorb the light, so I can convert sunlight into electricity easily. I can be used because I can make thin panels, and with less materials. Compared to silicon panels, I can make a solar panel with less cost and more easily. And last, I have a very good stability and durability so I can make a solar panel that lasts a long long time.

So now you know, you should use me to make better, cheaper and easier solar panels, with less material because I have very useful and incredible characteristics.

By: Thomas mendoza

In solidarity, tellurium.



Letter of Yttrium

Hi I am Yttrium and I am an element from the periodic table. I am writing to you today because I want to tell you a lot of secrets about me and who I am. I know you discovered me. I look like a shiny silvery-white metal when freshly cut but I can turn into a dull gray surface if I am exposed to air for a long period of time. Also you can find me in minerals.

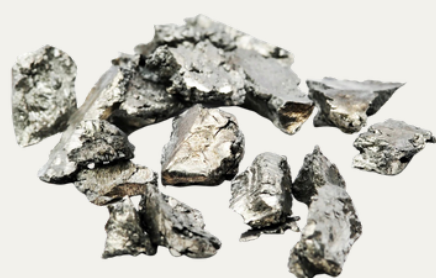
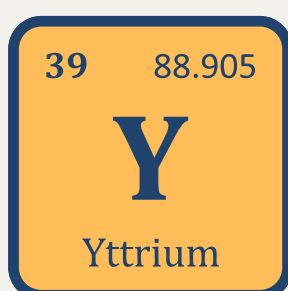
I cannot remain silent while I work on LEDs and phosphors for TV, computer screens. I also created the red color in old televisions or computers. Another thing is that I am a transition metal and I am a solid element. My symbol in the periodic table is Y and the atomic number is 39. You can find me in China, Australia, USA, India and Brazil a lot. I was named after Ytterby, a village in Sweden where I was first discovered.

I am essential in the production of lasers and microwave filters. I am also used in ceramic and glass to make them heat resistant. I'm a radioactive isotope used for cancer treatments. Nevertheless my radioactive isotopes must always be handled with great care in medical use. I'm usually not toxic but I can be dangerous in powdered form because of the risk of fire or explosion.

To conclude, I am a very special element that has a big role in technology, medicine and science .

Sincerely, Yttrium

Author: Carmen Dreyer



Letter from Cadmium

Dear humans,

I am Cadmium, everyone calls me Cd. I am a soft metal that can be found in zinc ores, I also have a bluish tint that was used by many famous painters. But I'm writing this letter to you because I have something to tell you. I am a toxic element, but you need me for many things and that's why you can't stop producing me.

I'm feeling sad because I am dangerous for you, but you need me. I am important to you in many ways, one of them is when you export me. If you don't export me, many countries will lose money because they can't sell me, and some countries will lose materials because they don't have me to make their projects or their things. You also need me because I can help you make inventions and advance on technology that may help you in the future. For those reasons you need me in your lives and that's why you can't stop producing me, but don't forget that I'm toxic, and if you don't use me carefully or for the right things, I could be a very dangerous element. But don't use me for nuclear weapons, use me for your communal benefits.

To rap up you can use me for many things that can help you, but you need to be very careful with me. I hope you use me and for good things, but be careful with me.

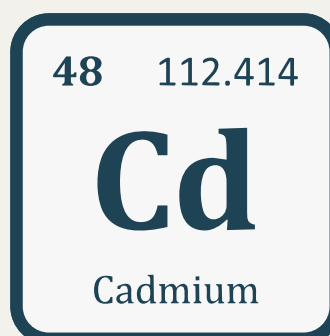
Your dear element, Cadmium. (Cd)

author: Nicolas Lopez

images by :

canva

Wikipedia, authors Author
[Alchemist-hp \(talk\)](#) (www.pse-mendelejew.de)



Letter from Neodinium

Bogotá, September 23, 2025

Dear Carl Aurer von Welsbach

Carl! I am infinitely grateful to you. You were the person who discovered me! You were the one that separated me from Praseodymium!

Before you discovered me and Praseodymium we were considered only a substance, the didymium, but you were trying to separate it and it resulted in Praseodymium and I! All that time that we were considered “didymium” we were two elements that were mixed together, all that time was a torture but then you discovered us! At that time I was really happy because after years of being together I was finally able to be alone. So that’s the reason why I’m writing this, because I want to tell you how I have been used all these years and what are the amazing things that humans can do with me. But before telling you what humans do with me I want to say thanks, because nothing of these could have happened without you.

I'm really glad that you discovered me because if you had not discovered me, many things maybe would not exist. For example, powerful magnets. I'm used to NdFeB magnets (Neodymium-Iron-Boron), which are the strongest type of permanent magnets. These are used for hard drives, electric motors (EVs, drones), headphones, speakers and wind turbines. I'm also used in lasers, class ceramics, (to color glass and ceramic), and also used for lighting. That's awesome, if you haven't discovered me all those things would n't exist!.

All this time the scientists had discovered many things about me. For example, my Atomic Number is 60, my Atomic Mass is approximately 144.24 u. My physical properties are: look Silvery-white, but I can oxidize quickly when I'm exposed to air and get a slightly pinkish or a yellowish tint. My phase at room temperature is solid. My density is about 7.01 g/cm³. But my melting point is approximately 1024°C (5565 °F). I'm relatively soft and malleable for metal. I'm also weakly attracted to magnetic fields. My chemical properties are: I react slowly with cold water, and rapidly with acids. I form a protective oxide layer in the air. My oxidation states are commonly +3 and sometimes +2.

Carl, you were an incredible person! All my time on earth I will be glad that you discovered me. And I want to see you one last time. I miss you.

From the heart of Neodymium.

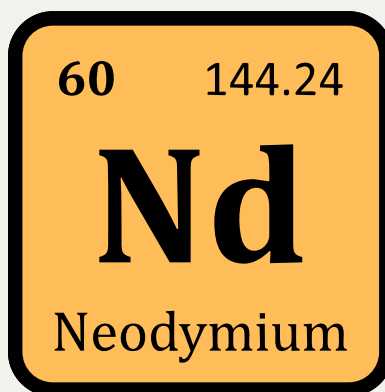


Image by canva



Author:

GOKLuLe 虞樂

By: Camila Rincon



Periodic Poetry



Canva

The frustration of Mendeleev

A dark grey room Walls dripping stress
alchemists working with their new experiments,
air thick with the worst emotions.

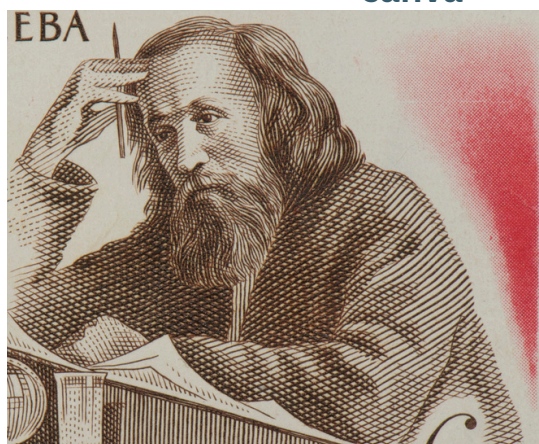
It weighs you down,
exhausts you,
turns your thoughts into knots

It speaks in voices
that say too much
without meaning,
reaching for easy answers
because the hard ones are too much

I don't get how the pieces fit,
So many numbers, none of it clicks!
Mendeleev saw it all so clear,
But I just sit and scratch my ear.
Why's this element over there?
It's like the table doesn't care!

Mendeleev placed each piece with care,
Predicting gaps that weren't yet there.
Though his table shines so bright and true,
The mystery still feels hard to do.
new experiments,

Image by
canva



Johan Baptista and the legendary gas.

in the middle of the backyard a serious man stood.

taking charcoal and putting it in a bowl.

he heated it at high temperature and a little mountain formed.

This mountain was ash and it was little indeed compared to the charcoal that was heated.

The spirit of the wood escaped again only leaving ashes as he escaped.

The man was angry so he tried again only that now he used a container.

So he took the same materials and sealed the container well.

He heated the container and flop!

The container was magically a big balloon,
for the spirit of the wood cannot move

The man's face shined like gold

For the man learned how to trap the spirit of the wood

It was very violent and whispered a lot fizz and zoom

And it whispered a name which fitted him a lot

"Gas, gas," the spirit said

So the man decided that was his name

The man had discovered a new element

So he tried with more things and more spirits surged

So this is the story of gas and the man

By:Samuel Jaimes

Johan Baptista van Helmont



Author: Mary Beale

Chimestry French Revolution

He discovered elements, heart of periodic table
water with two particles of hydrogen and one of oxygen
Lavoisier came, to discover all his thoughts.

As shining as a star
Lavoisier he was
With effort and glad
The king of gases he was.

Antoine
Lavoisier



Image by canva

Crack and boom you would hear
sounds on your heart you would fell
Materials broken or something exploded
Don't be anxious be pacient and calm.

Acrostic

- L: lethal for the people and for animals when they have contact with those toxic materials.
- E: explosive because some people use lead to make fireworks.
- A: affects gastrointestinal problems and other problemátic problems that can be very toxic for you.
- D: difficult to process in the body because your body does not work properly with toxic elements.

By Emiliana Ossa

Old Chemists

In an island full of animals and nature,
first chemists worked with care and dedication.
They were not scientists and in laboratories they do not worked
but they were like beavers, always dedicated to their jobs.

The metals sound **CLANG** when the wind blows.
Chemists work with fire as a good tool.
Working and working more metals were found,
hoping to discover the metal's souls.

Working and working hard
observing, observing every day,
they discover inventions
that change the world.
now now now
more metals are used
more metals are found
thanks to these chemists, their knowledge is sound.

Acrostic

Oxygen helps humans breathe
Xtra important for life
Y ou need it to live
G ives energy to plants and animals
E very creature needs it
N ever gone, always around

By Maria Velez



By Camila Rincon

Dalton atoms

A chemist called John Dalton that was experimenting atoms, he mixed hydrogen and carbon, and he created more chemical things. But does he do it in the wrong or the right way? However, he got exactly the right way all of the time!

He also used black and white marbles, for every white marble there is one black marble. Dalton put symbols to the elements, like water, hydrogen, and oxygen.

A man called Jöns Jakob Berzelius has the idea, he got the idea of representing atoms by letters. like O for oxygen or Co for cobalt, but Dalton did not like Berzelous. But now it is known that way.

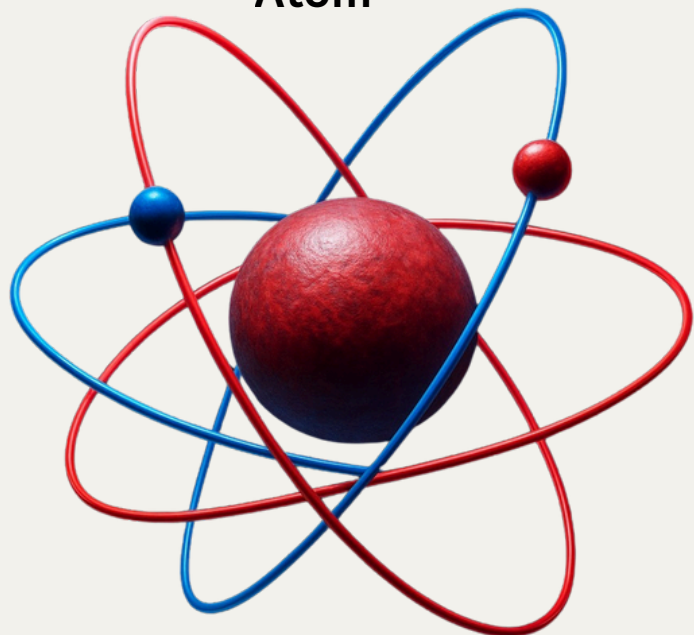
by Santino Herrera

John dalton

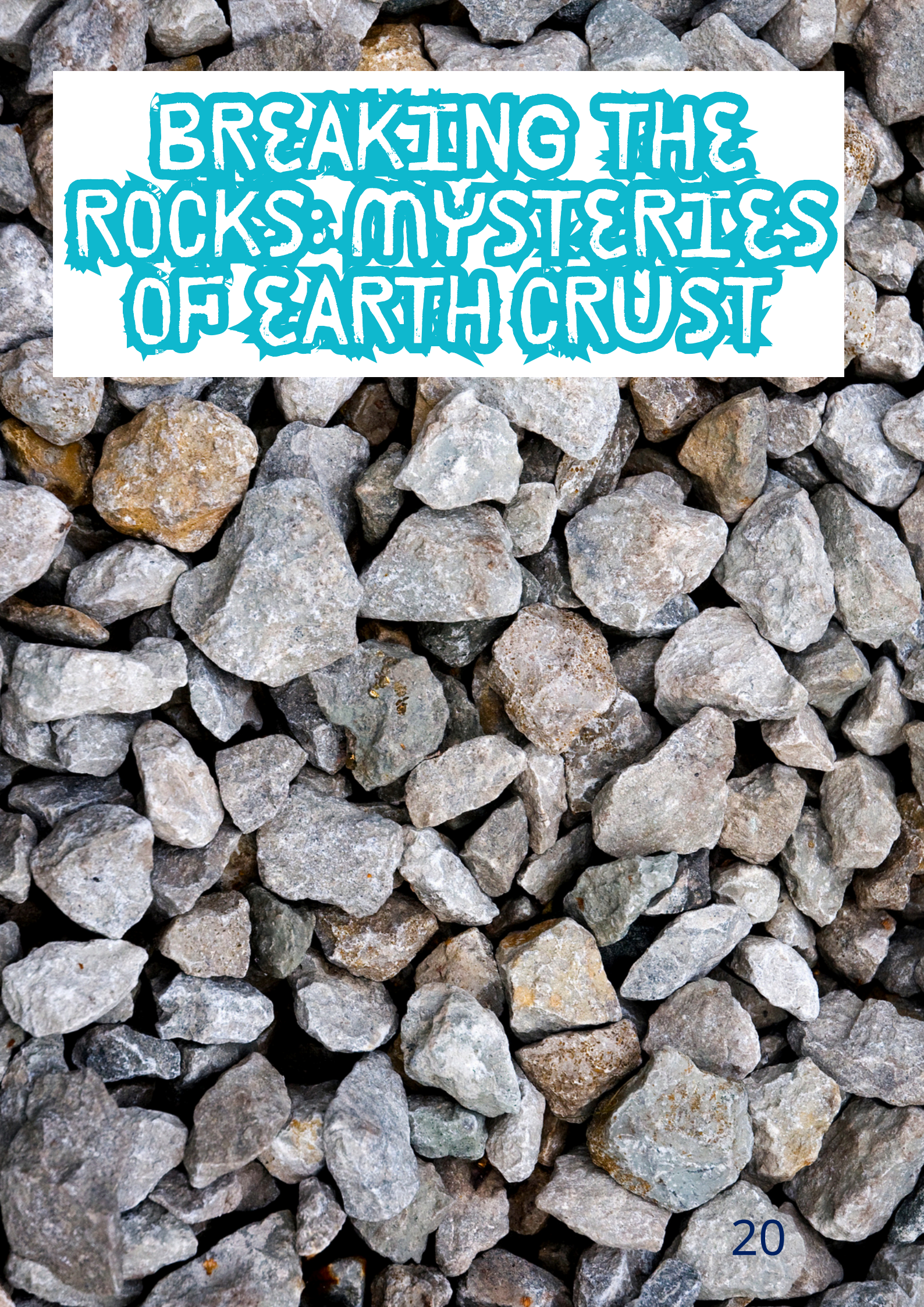


Image by: Charles Turner

Atom



By chat GPT



BREAKING THE ROCKS: MYSTERIES OF EARTH CRUST

The toxic metals: Lead and mercury

Did you know you may have interacted with two dangerous metals? These are Lead and Mercury. They have been used since ancient times by different communities like Romans and Chinese peoples. Nowadays they are still being used in a lot of stuff around the world. Lead and Mercury have been used generation after generation because their valuable properties outweigh their poisoning capabilities. They can be prevented but people need to know how. Additionally Lead and Mercury's compounds like tetraethyl lead and methyl mercury are also poisonous and can be found in large amounts over the world. These metals can be very poisonous but they have different properties that make them different.

Lead, a post-transition metal, easily malleable and corrosion resistant. Although it has been used in large quantities since ancient times, it is scarce on earth's crust. Lead is a soft silvery white material often found on large deposits around the world. This metal's symbol is Pb an abbreviation for the Latin word plumbum. Its atomic weight is 207.2 and its atomic number is 82. Lead's melting point is approx 327.5 degrees and its boiling point is at 1749 degrees this assures that lead has a low melting point and a much higher boiling point. Additionally a lead atom has a crystal structure formed by 82 protons, 125 neutrons and 82 electrons. A curious thing about lead is that when it is exposed to air, bulk lead develops as a protective shield. This shield is Lead Carbonate (PbCO_3) effectively protecting lead from further reaction with the atmosphere. This particular element is poisonous to the human body. Children can absorb more lead than adults because their bodies are growing. Some symptoms can include abdominal pain and diarrhea followed by vomiting. When it enters your body it interferes with neurological processes and reduces IQ. But when it is not enough to do that it can be stored inside teeth and bones for decades. Lead contamination can be on water, soil and even air!

Mercury, a transition metal, liquid at room temperature, used since ancient times because of its natural tendency to be liquid. It could be transformed into solid easily. Alchemists had a very profound interest in it because it was the only metal that was in a liquid state at room temperature. Also called quicksilver, Mercury's symbol is Hg standing for the Latin word Hydragyrum meaning liquid silver. This is because it has a silvery color and its liquid. This metal's melting point is quite curious, it melts at -38 degrees because it is liquid at room temperature. Its boiling point is 356 degrees. A neutral mercury atom has 80 protons, 80 electrons and 121 neutrons. Its atomic mass is 200.59 atomic units. In the past Mercury was used by many communities without alert of its dangerous properties. Mercury has been used by the Egyptians for cosmetics found in tombs dating back to 1500 BC. Greeks used it in ointments and ceremonies from Aristotle's time. Also Chinese people thought that Mercury would prolong life so they used it in medicines and health elixirs. As a result many people died from ingesting medicines that contained Mercury including Chinese emperor Qin Shi Huang. Mercury is poisonous and can enter your body and accumulate in your body tissue. When this happens some symptoms are rashes and birth problems.

Mercury and lead have different properties but can be similar in some characteristics. They have been used throughout history in different forms and ways. For example both metals were discovered at the same period, being some of the first elements to be discovered! They continued to develop through time and created compounds and alloys. Also they have different properties like Mercury is liquid at room temperature while lead is solid and soft. While lead is a post-transition metal, Mercury is a transition metal. Both are very poisonous to the human body. They were both used in ancient times without awareness of their poisonous properties. Today lead is still being used in things like paint, ceramics, pipes and plumbing tools. Some accidents have happened because some pipes started giving off some particles of lead and that intoxicated people. Mercury is used in amalgams for gold and silver extraction, thermometers and barometers.

Finally lead and Mercury are useful but they are poisonous for humans. Today the poisonous properties are still being ignored. Because of that humans need to be careful with these metals. To prevent these metals you can wash your hands frequently before eating and after being outside. Also eating a well balanced diet can prevent poisoning. Eating large amounts of fish can also be a significant source of mercury. Their compounds are also poisonous and you need to be careful around these metals.

By Benjamin Marquez.

The sons of carbon

Did you know that the "lead" in pencils is graphite and not lead? Or that diamond is 99.05 percent carbon? Diamond and graphite are really similar materials because they are both made out of carbon but in the deep they are really different things. Graphite is so soft that you can write with it while diamond is so strong that you can only scratch it with other diamonds. The reason for this is the two dimensional molecular structure in graphite which is soft and slippery between atoms while the three dimensional crystal structure of diamond is hard on every side and place of the organization . This article will explain three important topics: the creation and properties of diamonds, the creation and properties of graphite and the differences between them based on their atomic structures.

The creation and properties of diamond

Most diamonds were created about 3 billion years ago. They were created about 150 to 200 km below the surface. The temperature there is between 900 to 1,300 Celsius . And to finish, the pressure that diamonds have is about 500,000 times the one we feel on the surface(or about 45 to 60 kilobars). This will be like being at the core of earth with an incredible temperature and thousands of tons of rock on top of you. These conditions are really extreme so they are not easy to recollect. This is also why diamonds are so scarce. Because of these conditions, diamonds are not always pure of Carbon.

They are about 99.05 percent carbon and 0.5 percent made of other compounds and elements. Atoms in diamond have an isometrical organization that makes them the same size and strength in every part of the diamond. This is why diamonds can be scratched only with other diamonds. These make diamonds the strongest compound on earth.

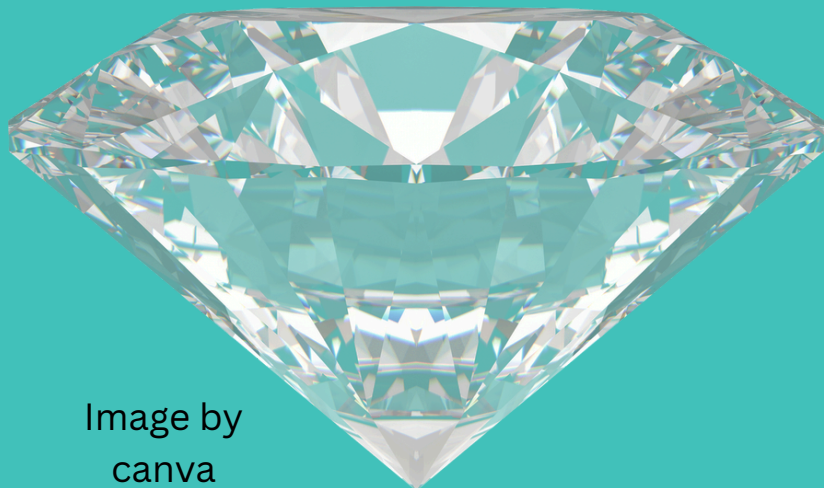


Image by
canva



(Image credit: Bjoern
Wylezich/Shutterstock)

While diamond is a luxury and a really hard material, graphite is the opposite, a soft material used in a simple way every day: pencils. This material has really strange properties. For example, it is a non-metal compound but it has similarities with metals. For example, graphite is a good conductor of electricity and of heat because the bonds between atoms let electrons move freely through the layers of it. This makes graphite really useful in other ways and not just pencils. It is also used in some batteries and because of the great conduction of electricity and heat. Another strange property of graphite is that it can maintain its same strength and stability at high temperatures of 3,600 degrees Celsius. The last important thing is his atom organization. The bonds between atoms are similar to flakes. This makes the bonds really weak and this is why you can write with it. Now we can compare this two compounds: graphite and diamond



Image by
canva



Author: Marie-Lan Taÿ
Pamart

As we said before, the difference between diamond and graphite is its atomic organization. Another but not so relevant difference is its hardness. Diamond has a hardness of 10 (the maximum) while graphite has between 1 and 2. But this is also because of the atoms organization. Graphite has a two dimensional molecular structure. Its atoms are hexagonally (or flakes- like) organized . This makes them slip on top of each other and this makes it really soft. While this is really soft, diamond organization is really hard. It has a three dimensional crystal structure that makes all atoms have a strong connection and not decompose into pieces. Its atoms have an isometric organization. Isometric means that it has the same size and force in each bond between atoms. This is the great difference between diamond and graphite. They are made exactly by the same material but have a different atom organization.

After this we could state that these compounds have 2 differences. The first one, and most relevant is the difference between the atom organization and structure. And the second one,(but not so relevant)is the differences in the hardness. Knowing this, each time you use a pencil you would remember that could been diamond if the atoms were made differently and that the "lead" in it is not lead, but graphite.

by: Gabriel
Maya



Why is gold so valuable compared to other elements?

Have you ever wondered why gold is so valuable? Gold is very valuable compared to other elements but. Why is gold so valuable? Here we are going to tell you some reasons why gold is so valuable

Why is gold so valuable? Gold is very valuable because of three reasons. The first reason is his scarcity, gold has many scarcity. Also because of his malleability the malleability makes it very useful to make collars and more kinds of jewelry. The last reason why gold is is because of its durability, so gold's durability is one of the big factors of gold to be very valuable. It is very durable compared to other elements. Also gold acquisition is very important because it demands mastery of a safe and reliable transport to be transported from remote mines to the gold markets where the gold is sold. One last thing that makes gold be very valuable is because it has historical value because it was used back then to buy territory.

Other elements aren't as valuable as gold because of these three things. First, because of their durability so as commented before, gold is very durable, so some other elements aren't as durable as gold. So what is the matter if you buy a collar made of an element that is very expensive but the collar breakers very easily so you need to buy more collars every time the collar breaks. Also other elements aren't that valuable because of their rarity, so gold is not that rare but there are other elements that are less rare than gold so if the element is valuable but everyone has some of it then everybody is rich. So the value of the element wouldn't make sense. One last thing that makes some elements less valuable is the historical value because gold has lots of historical value because it was used for many things back then.

What is the difference between the costs of gold and other elements? Gold is very valuable. But what is the difference between the costs of, for example, gold and silver? The difference between the costs of gold and silver is very surprising. The difference between costs of gold and silver per oz is about 3,551 dollars! That's too much of a gap of costs. Also the difference between gold and other elements in cost is that on the gold market gold increases the value more than it decreases so it is more expensive now than it was in 2020 so it has increased value over the past few years. So most people invest more on gold than on other elements. And also some difference with other elements is that it is more stable in value so meanwhile some elements value is a roller coaster that goes up and down every short time gold value is more calm and it increases value sometimes. Also gold is not so easy for it to decrease value so if you invest in gold you mostly finish winning money.

In conclusion, gold is more valuable than other elements because of many things. So if you are going to invest in an element you should do it in gold because it increases value fastly and almost never decreases. So all this is the reason why gold is so valuable compared to other elements.

By Daniel Trujillo



Mercury and Lead

Have you ever seen in the news reports you need to change the water pipes of your house because they have lead? Or also you need to replace your thermometer because it has mercury? Through this 100 years, most houses in America have these dangerous metals. For a long time ago, many things had lead and mercury and they are very harmful for humans. People have these metals in their homes and houses, these mistakes can affect our future.

Mercury is a very impressive element from the periodic table and has many uses for things nowadays. Mercury was discovered in Egypt in 1500 BC. This metal occurs naturally in Earth crust, in a mineral called cinnabar. You can find mercury near volcanoes or hot springs. Nowadays, Over 90 percent of mercury comes from China, this metal is very common in China. Mercury is so abundant in China because they mine a lot of gold. When you mine gold you can find lots of cinnabar, where you can extract mercury easily. Also, a very curious fact about mercury is the only element that is liquid at room temperature. In terms of production for mercury burning coal for power and heat is the major source of mercury. Coal contains mercury in big amounts because it has a lot of cinnabar. At the Neolithic time, this metal was used for the extraction of gold and silver. Mercury has alloys with copper, tin and zinc. A very curious fact is that gold and silver dissolve rapidly in mercury. Another thing is that this metal cannot be destroyed, but it can be recycled for other uses. The main use of mercury nowadays is for medical purposes. Mercury is also used to make thermometers, barometers, and dental amalgams. Also, one of why mercury is used is because it is a very good electrical conductor, for this reason also was used for electrical switches. Exposure to mercury, even in small amounts may cause serious health problems.

Lead is used for many things and it's an incredible metal, with special characteristics and traits. Lead is a naturally occurring element that is found in Earth's crust. Lead is not abundant but there are big deposits found in the United States in the Mississippi valley. Where people produced it and could make a lot of things with it. This metal is also found in several minerals, all are very insignificant but sulfide is the bigger source of lead. Lead is very malleable and is a very good conductor of electricity, the alchemists believe that was the oldest metal. It is also durable and resistant to corrosion. Lead can be found in all places of our environment, the air, the soil, and even inside our homes. The most common exposure to lead is caused when you make activities related with fossil fuels. Lead is used to make a lot of different things inside our homes. Lead may be in the environment from the past. For example lead can appear from industrial sources. As mercury, lead was used to collect silver and gold. Lead has been used in water pipes, paints, ceramics and plumbing material. In Rome, they used lead even for cooking utensils. The most common use of lead was for storage batteries. In human lives, the main source of lead in our bodies is caused by paints and drinking water with lead pipes. That lead was poisonous and was discovered in the time of Augustus Caesar. It was used in water pipes, cosmetics and cooking pots. This discovery helped everyone to protect themselves and to know why they were sick.

Lead and mercury are very harmful for humans. The people that are more affected with lead and mercury are the pregnant women and young people because it is inside their bodies when they are growing. Women who have their babies, lead can cause the baby to be born or too small or too early. Also all the baby's body and systems can be affected and damaged. It can even cause the loss of the baby. In children, other consequences that can be caused by lead are slowed growth and development, hearing and speech problems and also decrease of the ability to pay attention. A residue at very high levels of this metal can cause coma, convulsion and even death. Additionally, kids can damage their brains very badly by the exposure of these metals causing a reduction in their IQ. All people can be exposed to mercury by eating some type of fish. This metal makes a particular threat to the development of children inside their mom and early life. The problems that can cause mercury are damage to the kidney and nervous system. Neurological and behavioral disorders can be caused when you breathe mercury. This element has inorganic salts that may damage our skin severely. The symptoms of the damage of mercury in your body are tremors, incompatibility, memory loss, neuromuscular effects and headaches. The symptoms of the several damages caused by lead are developmental delay, learning difficulties, irritability, loss of appetite, weight loss, sluggishness and fatigue.

Lead and mercury were useful in some things for our lives. But in the long term these metals can threaten our lives. In the future you need to be very focused on what you have in your house. In conclusion you need to buy safe and innovative things for prevention of these materials and the best life for you and your family.

Liquid mercury

By: Jacobo Sánchez



By Canva



lead

By Wikimedia

The mysteries of gold

Throughout history, gold has stood out as one of the most valuable elements. Its appeal goes beyond beauty—it is admired for its rarity, durability, and malleability. These qualities explain why gold has held such importance for thousands of years.

Gold's value comes mainly from its scarcity, durability, and flexibility. Because it is rare, it becomes more desirable and its worth increases. Unlike many metals, gold is highly resistant: it does not rust, corrode, or lose its shine, even after centuries, which is why ancient artifacts still look almost untouched. While it may not be as hard as a diamond, gold's resistance to pressure makes it unique. Another remarkable quality is its malleability—it can be shaped into thin sheets, coins, or intricate jewelry without losing its properties. This allowed civilizations to use it for trade, currency, and decoration. Possessing large amounts of gold was not only a sign of wealth but also of power and influence. Altogether, its rarity, resilience, and adaptability explain why gold has remained significant across history.



In contrast, other elements are less valuable because they are either too fragile or too common. Many metals bend, scratch, or break easily, which makes them less suitable for objects meant to last generations. Their abundance in nature also makes them less exclusive, and therefore less appealing. For instance, aluminum, copper, and iron are essential for industry and construction, but they lack the prestige of gold precisely because they are everywhere. On top of that, most of these metals do not withstand the test of time: they rust, corrode, or fade.

The gold price is much higher than other elements and it reflects more status. Gold is so valuable that one ounce of gold can cost thousands of dollars. It costs more than silver, showing that some people prepare gold more than silver, and that's why there are many ornaments of gold. In contrast, other elements are less valuable because they are either too fragile or too common. Many metals bend, scratch, or break easily, which makes them less suitable for objects meant to last generations. Their abundance in nature also makes them less exclusive, and therefore less appealing. For instance, aluminum, copper, and iron are essential for industry and construction, but they lack the prestige of gold precisely because they are everywhere. On top of that, most of these metals do not withstand the test of time: they rust, corrode, or fade.

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by: Salomon Mishaan

FUN **Facts!**

Gold facts

- 1. Extreme malleability (one gram can be stretched up to 3 km), the presence of gold in the human body (up to 0.2 mg), and its abundance in the oceans (an estimated 20 million tons).**
- 2. Ancient civilizations were already working with gold more than 6,000 years ago. The Egyptians created sophisticated jewelry and ornaments around 4000 B.C., making this metal a central element in religious rituals and artistic expressions.**

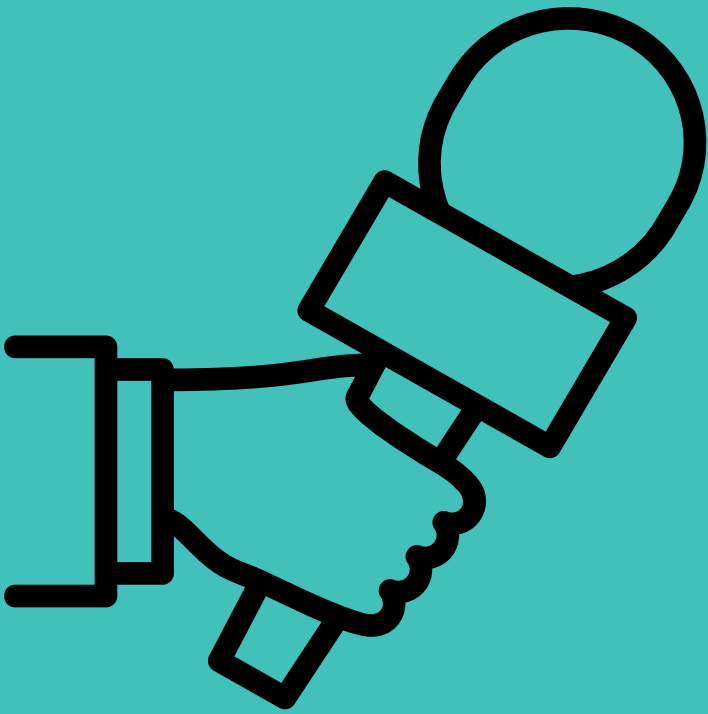
3. Graphite and Diamond Facts

- 4. Graphite has the unique characteristic of being a component of the oldest meteorites in the solar system.**
- 5. Red, blue, and green diamonds are the rarest colored ones, with red being the most coveted for its intensity.**

6. Mercury and Lead Facts

- 7. Mercury (Hg) is the only metal that is liquid at room temperature; it is so dense that it can corrode aluminum.**
- 8. Its ability to mimic calcium allows it to alter brain function by being transported through the blood-brain barrier.**

Science interviews



All images by Canva

Interview to Kingsley.

Nicolas: Hi Kingsley we have some questions for you.

Maria: Why are graphite and diamond so different if they're made of the same element?

Kingsley: Graphite and Diamond, are made of carbon. Carbon is a very special element on Earth, So Diamond and Graphite have a structure that is super special. It's called a crystalline structure, but the big difference is how the carbon atoms are organized within each substance, so diamond has a special crystalline structure that makes it become diamond. The same thing as Graphite, that is a big difference, just how those carbon atoms are organized within each of those substances.

Nicolas: Why is one more valuable than the other if they're made of the same material?

Kingsley: I think value is what we give to things, because one is a lot, like it has a special property of being of lustre, you know what lustre is? Like it shines. So because it shines, just like I told you, because of how the carbon atoms are organized within the substance, people like things that are shiny, I think that is why people give diamond more value than graphite.

Maria: That'll be all, thanks!

Kingsley: You're Welcome.

Interview to Lina Mora

Maria: Hi Lina we've got some questions for you.

Nicolas: Why do you think mercury and lead are so poisonous?

Lina: Mercury and lead are metals found in nature that have certain chemical properties making them extremely toxic. What are chemical properties? They are the ways in which these elements behave when interacting with other substances. When they combine with different substances, they form compounds that aren't poisonous and harmful. They are called heavy metals — mercury and lead are toxic and cause great damage to water sources and to people themselves. They can enter your bloodstream, reach your cells, and start causing harm inside your body. Lina Mora

Maria: Why do we use them knowing they are dangerous and poisonous?

Lina: I think we still use them very carefully because of its usefulness and the other physical properties it provides. Mercury is the only metal in nature that exists in a liquid state at room temperature. So, I think we continue to use it because of its applications, but always with great caution.

Nicolas: that'll be all the questions, thanks!

Lina: You're welcome.

Interview to Camilo Villamanizar

Nicolas: Hi Camilo, we've got some questions for you.

Maria: What makes gold expensive?

Camilo: I think what makes gold so expensive is, culturally, its shine, which has been valued since ancient times. In indigenous communities, it was associated with the brightness of the sun, so it has a deep cultural meaning. It's also because gold is scarce — it's a mineral that isn't very common.?

Nicolas: Why is gold so important?

Camilo: Nowadays, it's because gold has a very high economic value, precisely due to its scarcity. So, whoever has gold, possesses great economic power.

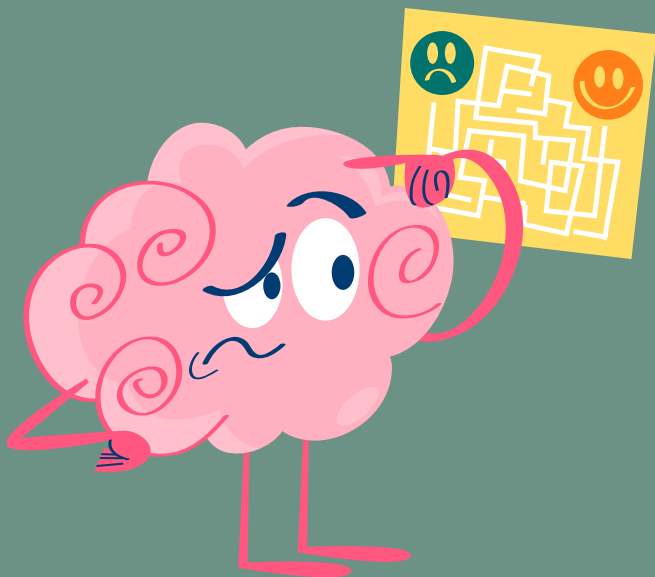
Maria: that'll be all the questions, thanks

Camilo: It was a pleasure.



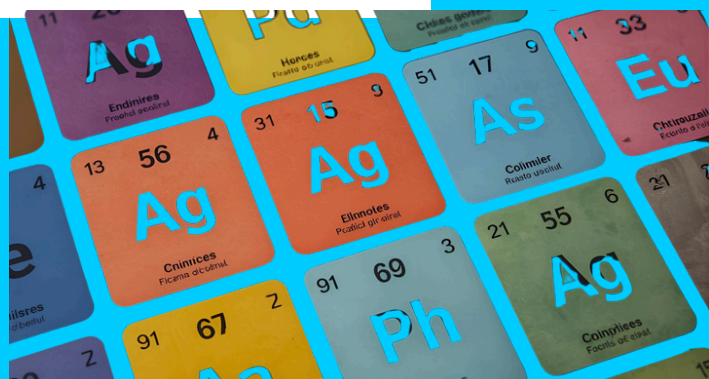
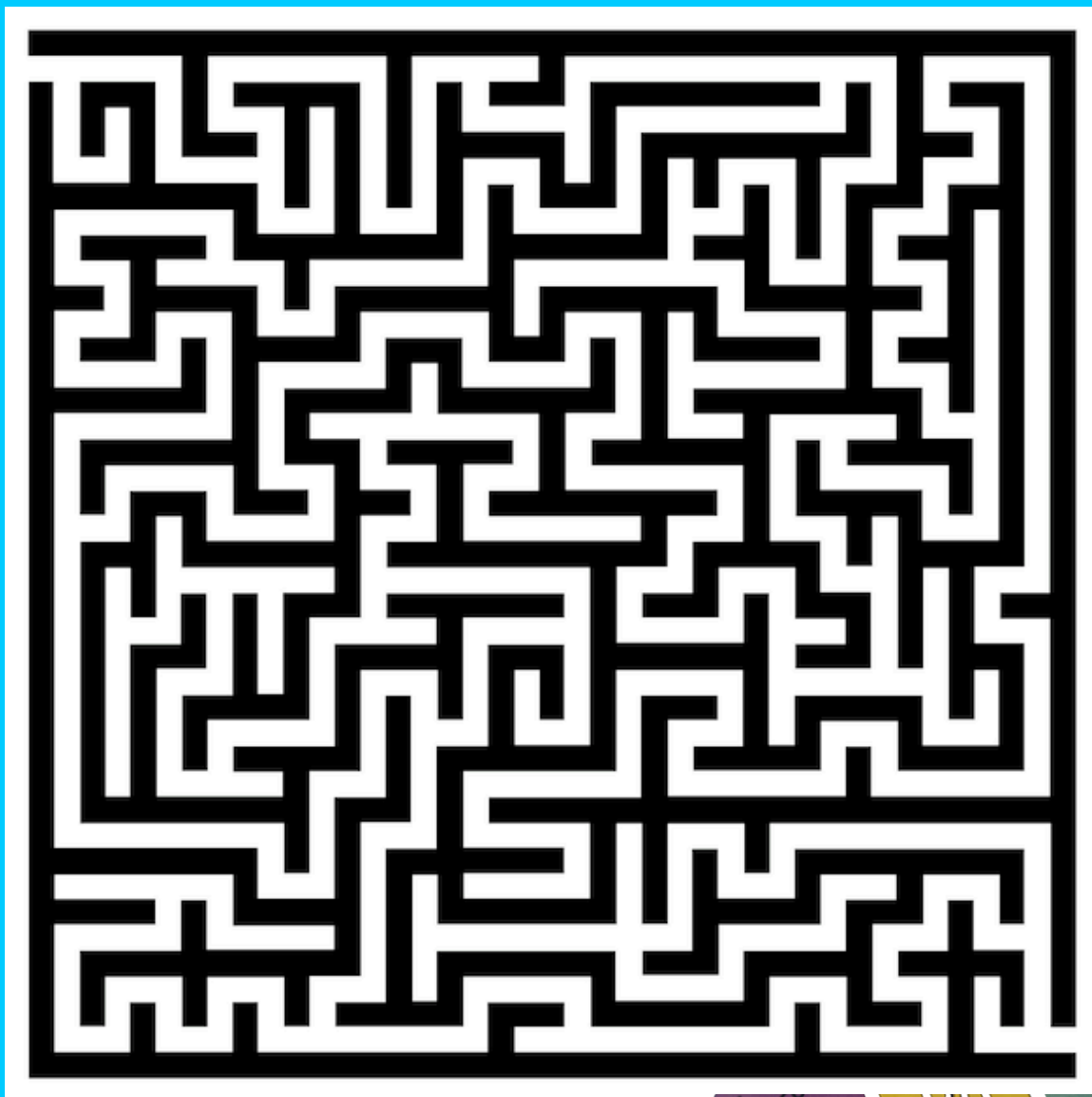
Photo from Canva

Atomic puzzles



All images taken from Canva

Can you help Mendeleev found his cards?



Images taken from canvas IA, Freepik and Meet Russia online

Can you find me?

I'm a particle with a negative charge- you can find me orbiting a nucleus of a atom . I am:

I am a bond were electrons are shared.
Who I am:

The smallest unit of matter that still retains properties of an element.

Who I am:



My formula is H₂O
and life depends
on me, who I am:

You find me at atomic
number 79, I am shiny
and I'm very valuable
who I am:

Riddles

I was a Russian scientist born in Siberia.

I organized the elements by their atomic weights and properties.

My table revealed patterns in nature and even predicted new elements that were later discovered.

Who am I?

- A. Antoine Lavoisier
- B. Dmitri Mendeleev
- C. Niels Bohr
- D. John Dalton



I was a French nobleman turned chemist.

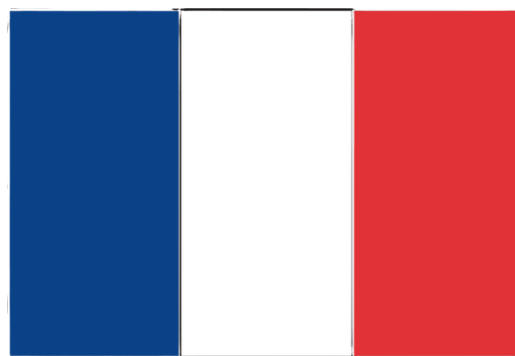
I proved that in chemical reactions, matter is not lost or created.

I helped explain combustion and modernized chemical naming.

I was executed during the French Revolution.

Who am I?

- A. Dmitri Mendeleev
- B. Isaac Newton
- C. Marie Curie
- D. Antoine Lavoisier



I was born in Eaglesfield, England, into a Quaker family.

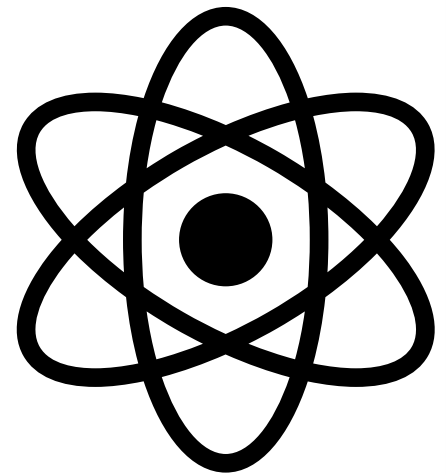
I kept weather records for over fifty years, making more than 200,000 observations.

I proposed that all matter is made of tiny indivisible particles, each element having its own kind of atom with a specific weight.

I also was among the first to study color blindness (a condition I personally had).

Who am I?

- A. John Dalton
- B. Joseph Priestley
- C. Henry Cavendish
- D. Michael Faraday



I am a colorless, odorless gas that no animal can live without.

I make up about 21% of the air you breathe.

I'm highly reactive and combine with most elements, for example, I help things burn and rust.

Which element am I?



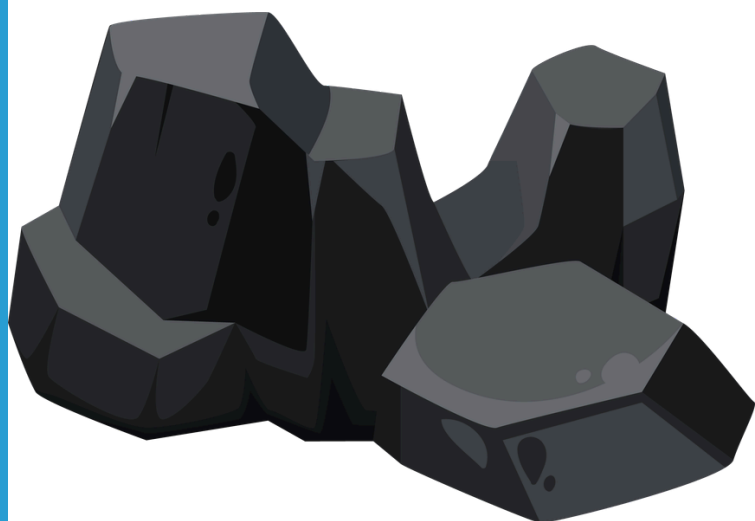
I am the element with atomic number 6.

I can be hard like a diamond or soft like pencil lead.

I make more combinations than any other element.

I am found in every living thing, plants, animals, and people.

Which element am I?



I am a shiny yellow metal that does not rust.

My symbol is Au and I have atomic number 79.

I am very soft and can be beaten into thin sheets.

People have used me for jewelry, coins, and decoration for thousands of years.

Which element am I?



Word search

Word List: ATOM, MOLECULE, ELEMENT, COMPOUND, REACTION, ELECTRON, PROTON, NEUTRON, ION, ACID, BASE, SALT, PERIODIC, TABLE, MASS, BOND, ENERGY, LAB, GAS, SOLID, CATALYST, EQUILIBRIUM, TITRATION, PRECIPITATE, DENSITY, VISCOSITY, ALKALINE, OXIDATION, REDUCTION, SOLUTION, DILUTION, BEAKER, BURETTE, PIPETTE, THERMOMETER, MICROSCOPE, FLASK, DISTILLATION, CHROMATOGRAPHY, ATOMICNUMBER, VALENCE

P R O T O N T A B L E S A L T D
E Q U I L I B R I U M B O N D I
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S O L U T I O N E L E M E N T B

**thank you for
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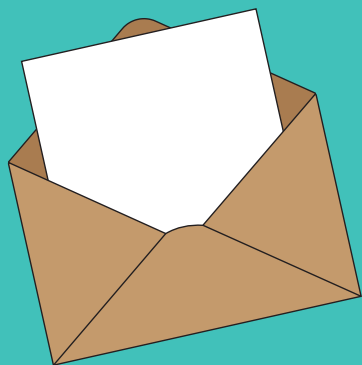
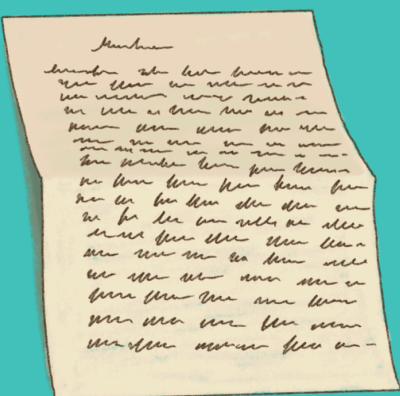
the elements publish on 2009 pg 181 editorial black dog author Theodore gray

MAGASCIENCE

In this magazine you will solve difficult mysteries, like the reason gold is valuable and why does diamond and graphite are so similar



You would also know how some elements feel being in our lives without you even knowing it by some letters



And some poems from famous chemists, their discoveries and experiments



This will magazine will teach you, but in a fun and interesting way with this ways of writing