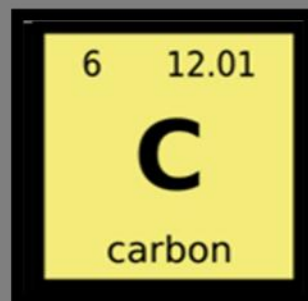


Free Reading Sample

The Magical
Elements
Element 6

Carbon, Presented By Cole, From The
Magical Elements of the Periodic
Table Book Series

Cole



Carbon

By Sybrina Durant with Illustrations by Pranavva et al.

Cole Presents Carbon

This Element 6 book features the periodic table element, Carbon. It is presented by Cole, a member of the Elemental Dragon Clan. Each dragon has a magical tail tipped with an element that gives them unique powers. Their powers are based on the properties of their element.

Cole 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.



Cole introduces the very magical element, Carbon in this book.

The Elemental Dragon Clan and their other techno-magical friends are the perfect group to introduce you to metals and other elements in the Periodic Table. Hopefully, this Magical Element of the 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 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 and MagicalPTElements.com. Follow [sybrinapublishing](https://www.instagram.com/sybrinapublishing) on Instagram, [Magical Elements of the Periodic Table](https://www.facebook.com/MagicalElementsofthePeriodicTable) on Facebook, [@sybrinad](https://www.pinterest.com/sybrinad) on Pinterest, [Sybrina_SPT](https://twitter.com/Sybrina_SPT) on Twitter; and [Sybrina Durant](https://www.linkedin.com/in/SybrinaDurant) on LinkedIn.

Carbon is a Non-Metal

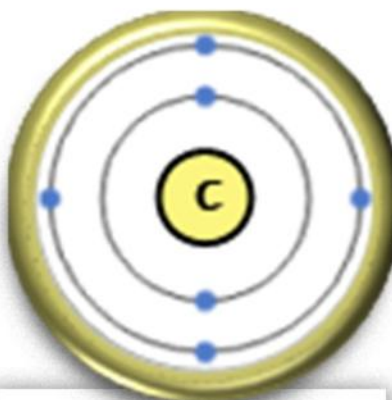
- The element carbon was first proposed and officially classified as a chemical element in 1789 by the French chemist Antoine Lavoisier in Paris. While he is credited with recognizing it as an element, various allotropes of carbon (such as soot, charcoal, and graphite) had been used by prehistoric civilizations like the Egyptians and Sumerians since roughly 3750 BCE. Lavoisier wanted to name the element after its pure charcoal form. The word is derived from the French word charbone, which stems from the Latin word carbo, meaning "coal" or "charcoal"
- Carbon is a solid at room temperature and is famously known for having forms that are incredibly soft and hard.
- Carbon can be an excellent conductor, an average conductor, or a total insulator. Its ability to conduct heat and electricity is entirely dependent on its atomic structure (allotrope).
- Carbon usually has no net magnetic force because its six electrons are paired up, with opposite spins and opposite angular momentum that cancel each other out. Since all of its electrons are paired, common forms of carbon like diamond and graphite are diamagnetic. This means they are not magnetic and are only very weakly pushed away by outside magnetic fields.
- Carbon is neither ductile or malleable but it is famously used as an additive in steel to increase hardness.
- Carbon is classified as a non-metal because it lacks the physical and chemical properties of metals, such as malleability, ductility, and high electrical conductivity.

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

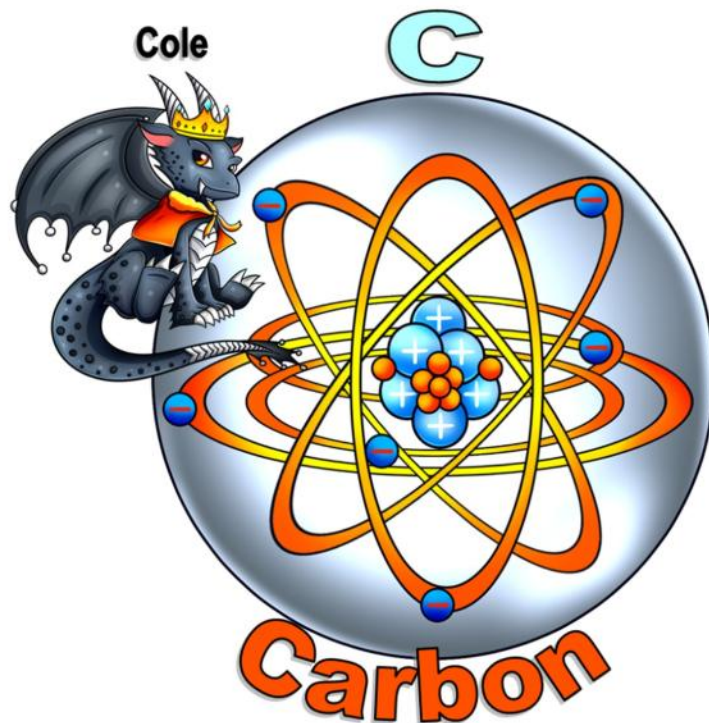


Carbon Element



Atomic Structure

Non-Metals—These elements reside in columns 15–17, and can be gases, liquids, or solids. They don't conduct heat or electricity. The solids are brittle, and they have no metallic luster. They readily accept electrons from metals to form salts. These include nitrogen, oxygen, fluorine, chlorine, bromine, and iodine.



Carbon has been part of human life for a very long time. It is one of the most common elements on Earth, and people have used it in many different ways since the earliest days of civilization. Long ago, people did not understand carbon as a chemical element, but they did know how useful carbon-rich materials could be. Things like wood, charcoal, coal, and soot helped people survive, make tools, communicate, and later power machines. Over time, the ways people used carbon changed a great deal. Some old uses became less important because new technology came along, while other uses became even more important in modern life.

One of the first ways people used carbon was through fire. Early humans discovered that wood and other plant materials could burn and give off heat and light. This was a huge step forward for survival. Fire helped people stay warm in cold weather, cook food, and keep wild animals away at night. It also helped small groups of people gather together and live in safer places. Charcoal, which is made by heating wood in a low-oxygen environment, burned hotter and longer than normal wood. This made it especially useful for cooking and later for metalworking. Even though early people did not know the science behind it, they were already making good use of carbon in daily life.

Carbon also played an important role in the first forms of metal production. Around 3000 BCE, ancient societies began working with metals like copper, bronze, and later iron. To get metal out of ore, they needed very high heat, and carbon-rich materials like charcoal were perfect for this. Charcoal helped provide strong heat and also helped remove oxygen from metal ores during the smelting process. This made it possible to produce stronger and more useful metals. That changed human life in major ways. Better metal tools made farming easier, weapons became stronger, and building and transport also improved. In a way, carbon helped open the door to more advanced societies.

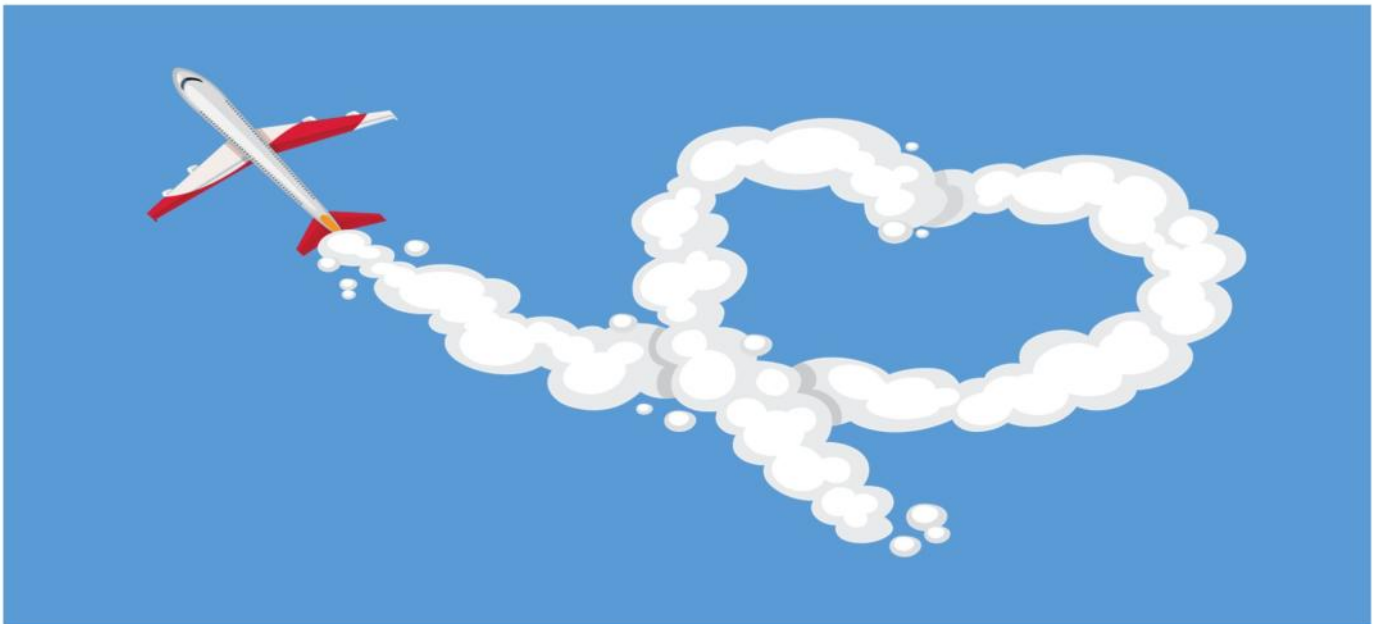
Another early use of carbon was in writing. People in ancient times needed a way to record information, tell stories, and keep track of events. One of the easiest ways to do this was with carbon-based inks. Materials such as soot, burnt wood, and charcoal were mixed with water or glue to make black ink. Egyptians and other ancient peoples used this ink on papyrus, stone, and walls. Carbon ink was valuable because it was dark, clear, and long-lasting. Many old writings have survived for hundreds or even thousands of years because carbon-based ink was so durable. This helped preserve knowledge, history, religion, and trade records for future generations.

Uses For Carbon

Coal is an important energy source in making cement, which is used to build bridges and buildings. In the cement process, coal gives the heat needed to turn raw materials into strong cement. This heat helps make the cement hard and durable so it can be used in big construction projects. Even though other energy sources can also be used, coal has long been a common choice because it is effective and can provide a steady supply of heat.



Carbon fiber is a very strong and light material. It is used to make airplanes and rockets because it helps them stay light while still being tough. A lighter aircraft or rocket can use less fuel and move more easily. Carbon fiber also does not rust like some metals. This makes it a good choice for parts that need to be safe, strong, and long-lasting.



The Source of Carbon



The largest deposits of Carbon are found in the deep ocean, atmosphere, and sediments. It naturally occurs as coal, diamond, and graphite. Diamonds formed in the earth's mantle rise to the surface in

Carbon is one of the most important elements on Earth. It is part of all living things and also plays a big role in many industries. People often think of carbon as something simple, but its story in nature is actually quite interesting. Carbon can be found in pure form in only a few places, and most of the time it is mixed with other elements in compounds and minerals. Because of this, getting carbon for commercial use takes mining, processing, and a lot of energy.

In nature, pure carbon is not very common. One of the best-known natural forms of pure carbon is the diamond. Diamonds are made deep inside the Earth, where heat and pressure are extremely high. Under these conditions, carbon atoms are pressed together in a very tight and strong structure. This is what makes diamonds so hard and valuable. Another natural form of pure carbon is graphite, which is much softer and is used in things like pencils, batteries, and industrial products. Graphite is also formed by natural processes over long periods of time, often deep in the Earth.

Most carbon on Earth is not found as pure carbon at all. It is usually found in compounds such as carbon dioxide in the air, or in living things like plants, animals, and soil. It is also found in minerals such as limestone, dolomite, and other carbon-based rocks. These materials are important because they can be used as sources for carbon in industry. In many cases, companies are not mining carbon in the simple sense of digging up pure carbon. Instead, they are mining carbon-rich materials, especially graphite, and then separating out the carbon from other parts.

Cole Presents Carbon



6	12.01
carbon	

Did You Know?

Carbon has 4 natural allotropes. They are coal, graphite, diamonds and graphene. Graphene is the thinnest, lightest, strongest, most stretchy material ever created. Allotropes are naturally formed through nature. The only other elements that form allotropes are tin, sulfur, phosphorus, and oxygen.




- Carbon has four natural forms, called allotropes. These are coal, graphite, diamond, and graphene. Graphene is the thinnest, lightest, strongest, and most stretchy material ever made. Allotropes are forms that happen naturally in nature. Only a few other elements also have allotropes, including tin, sulfur, phosphorus, and oxygen.
- C₆₀ Buckminsterfullerenes or Buckyballs were discovered in 1985. They have a cage-like fused-ring structure made of twenty hexagons and twelve pentagons, and resembles a soccer ball. They are considered the universe's weirdest molecule. They could one day replace silicon – the element on which computers and other electronic devices depend.
- Carbon can make more different compounds than any other element. Because of this, people sometimes call it the "King of the Elements." It is very important in chemistry and in living things too. Many materials around us are made from carbon.
- The largest gem-quality diamond ever found is the Cullinan Diamond. It was found in South Africa in 1905 and weighed 3,106 carats, or about 1.33 pounds. At first, people did not realize how special it was. A manager even thought it was just a piece of glass and threw it out a window. Later, it was found to be an amazing diamond with huge value.
- The hardness of a graphite pencil is determined by adjusting the amount of clay rather than the graphite itself. Graphite is the dark, silvery material that actually leaves marks on the paper, while clay is the stiff binder. More clay, less graphite means these pencils are light, sharp, and resistant to smudging. More graphite, less clay makes these cores incredibly smooth (often described by artists as feeling like "butter"). They leave heavy deposits of graphite on the paper, resulting in deep, dark blacks.

Cole

The Dragon With The Carbon Tipped Tail

Symbol: C Atomic Number: 6 Atomic Mass: 12.01

Carbon resides in Group 14 Period 2 on the Periodic Table.



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

Magic, 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.

1 H Hydrogen
Tattle Manufacturing

2 Li Lillian
Batteries

3 Na Norn
Salt

4 K Potassium
Pearl

5 Rb Ruby
Night Vision Goggles

6 Cs Cesium
Atomic Clock


7 Fr Francium
Cancer Treatment

6 12.01

C

carbon

Cole



Charcoal

13 B Boron
Pencil

14 C Cole
Charcoal

15 N Nitro
Fire

16 O Oozy
Air

17 F Fluorine
Toothpaste

18 He Helium
Balloons

the magical and real, world properties of all the features in our every day lives.

It's Techno-Magical

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

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

Quick Lime = CaO
Used for Concrete

EXAMPLE OF AN ALLOY

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

EXAMPLE OF AN ALLOY

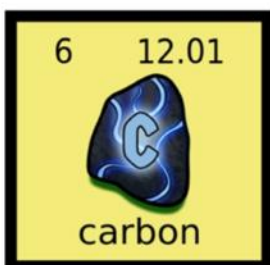
White Gold = Includes 58.5% gold, 22% copper, 8% zinc, 1% nickel, 4.5% silver and possibly other elements.

Sybrina.com

Meet Cole, The Elemental Dragon with a
Magical Tail Tipped with Carbon

No Metal

Cole



No Magic

Cole the Elemental Dragon was known and loved for being calm, curious, and wise. He was also famous for his skill with carbon magic, a power that let him shape carbon into useful things like shields, bridges, and strong crystal forms. On a cool morning, he flew high above the land as the blue dawn slowly woke the world below. Mist covered the hills and trees like a soft blanket, and the leaves were turning red and gold with the season.

Flying beside him was his close friend, Lira. She was a small but lively sprite, part dragonfly and part magical wisp. Her wings hummed softly in the air, almost like tiny wind chimes. She had bright green eyes, a love of spicy seeds, and a cheerful way of moving that made her seem like a spark dancing in the wind. Around her neck she wore a pendant made from a shard of graphite. When carbon magic was near, the pendant glowed with a faint dark light.

Cole and Lira were very different, but they worked well together. Cole was careful and thoughtful. Lira was quick and brave. Together, they had traveled far from their home of shining crystal towers. They were following a rumor about a strange city made of ash and echoes, where memories had been turned into stone through carbon magic. People said the city's great machine, called the Memory Forge, was failing because it no longer had enough carbon cores to keep it running. If it stopped, the city's stories and history would begin to fade away.

Cole's body gave off a soft glow as he flew. The orange ruff around his neck and the crown on his head lit up gently, showing that he was ready to help. The tip of his tail, which he used like a wand, shimmered with black glass at the end. When he focused his power, it could shine with blue light and hum with energy. He raised the tip of his tail to the air, and the space around him seemed to tremble as carbon moved and shifted in hidden ways.

"The Forge is in the Desolate Basin," Lira said, pointing ahead with one delicate wing. "If it fails, the city's stories will be lost under the dust."

Cole turned and glided toward the basin. His blue-gray scales caught the early sunlight, and his broad wings held him steady. They were lined with pale spines and could carry him smoothly through the mist. He flew with quiet control, saving his strength and watching the land below.

Carbon magic was special because it could make many different forms. A thin carbon lattice could become a bridge. A diamond shape could become a strong hinge or a lock. Cole often used this magic to build things that were both beautiful and useful. He closed his eyes for a moment and let his tail twirl in a slow circle, feeling the flow of energy around him.

Soon they reached the basin. Wind rushed through the canyon walls, making a loud roar. Black basalt rocks rose up like sharp teeth. In the middle of the valley flowed a quiet river of ash, gray and still. At the center stood the Memory Forge, a huge building made of obsidian and white marble. Its gears were carved from graphite, and its heart gave off a deep, uneven sound, like a tired heartbeat.

But the Forge was fading. Its light, which had once guided the whole city, now flickered weakly like a lamp running out of oil.

The first danger came quickly. A dark shadow crawled over the outside of the Forge. It was a swarm of soot sprites—tiny black creatures that fed on heat and energy. They flew in circles, biting at the machine and pulling strength from it little by little.

Cole lowered his head and stood ready. His calmness did not leave him, but his focus sharpened. Lira landed on a nearby rock and waited near his shoulder, her pendant glowing more brightly.

Enjoy This Coloring Page Featuring
Cole The Elemental Dragon with the Carbon Tipped Tail



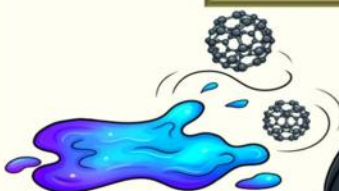
Magical Elements of The Periodic Table

Create Your Own Magical Dragon Elemental

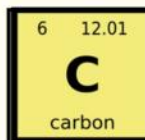
Cole

The Dragon With The Carbon Tipped Tail

Symbol: C Atomic Number: 6 Atomic Mass: 12.01



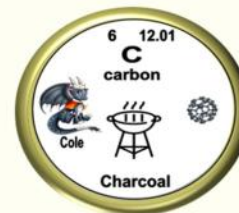
Magical Clan Crest Symbol



Carbon is a Non-Metal



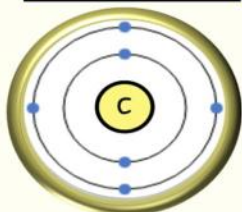
Occurs as Coal and Diamonds



Carbon Periodic Symbol

Cole's Magical Abilities

- With the touch of Cole's carbon tipped tail, he can purify air and water.



Atomic Structure



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.**