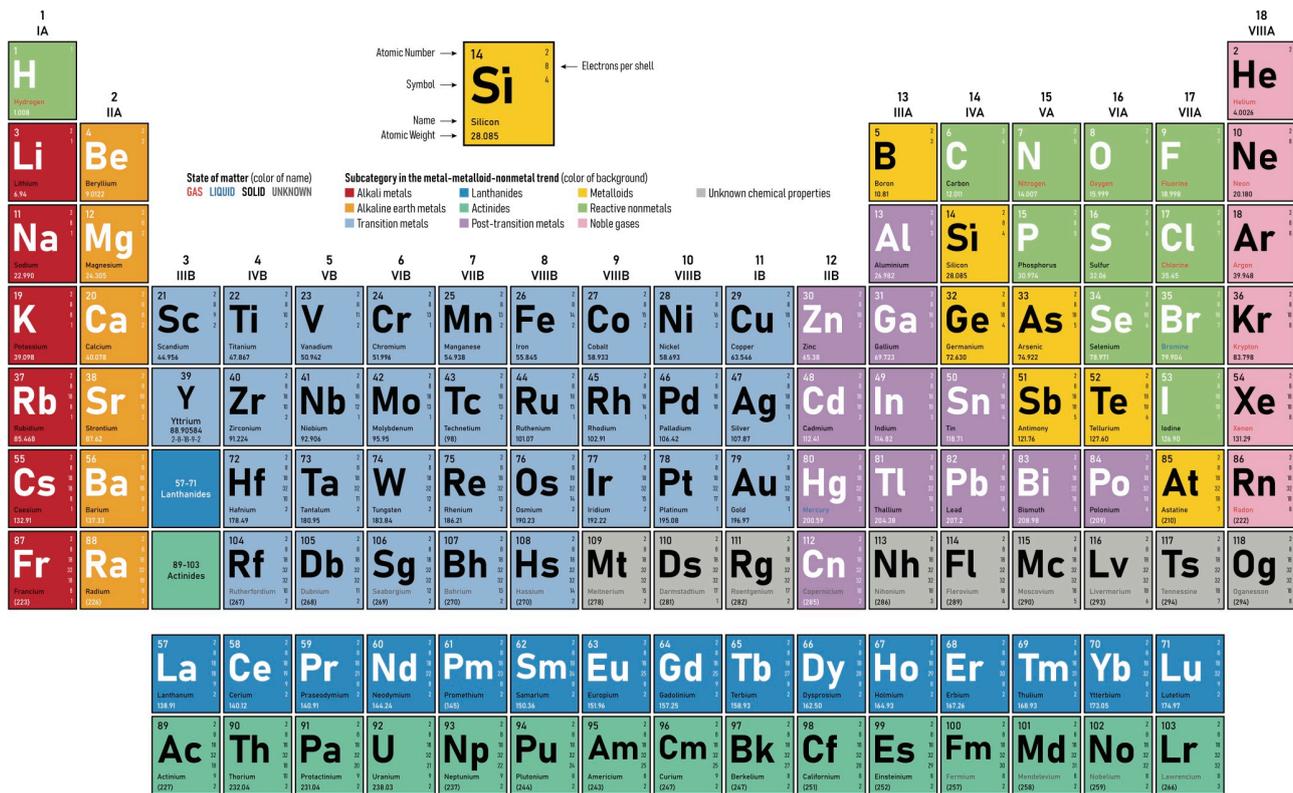


A quiz on the Periodic Table!

Happy 150th Birthday, Periodic Table!

Periodic Table of the Elements



What is the difference between mass and weight?

The force of gravity is slightly lower at an altitude, so you will weigh slightly less on top of a mountain than you will on the earth's surface.

So what is the periodic table, and why do we need it?

An **element** is the simplest form or building block of something, and cannot be broken down by chemical reactions into anything smaller.

There are 116 known elements. These are units that you will be familiar with - such as hydrogen, carbon, oxygen, gold, iron, and sulphur. These combine to give us substances such as water (H₂O) and carbon dioxide (CO₂). Some elements are natural, and some are man made.

What is the Periodic Table? The Periodic Table lists these elements in a table, and groups them according to atomic number and their properties.

What is an atom? It is the smallest unit of a chemical element that can exist by itself. It consists of protons, neutrons and electrons. The nucleus of the atom contains protons and neutrons, while the electrons are outside the nucleus.

What is atomic mass? It is the mass of one atom of an element.

Last definition! The **atomic number** is the number of protons in the nucleus of an atom.

Now that we have the definitions out of the way, let's talk about the **Periodic Table**. The United Nations has declared 2019 to be the year of the Periodic Table, as it was 150 years ago this year, that Russian scientist **Dmitri Mendeleev** arranged all the known elements into a table according to atomic mass, and also grouped those that have similar properties, together in columns. At that time, there were 63 known elements, and the concept of the atomic number was unknown.

It is also true that there were others before Mendeleev who had started to group elements together according to their **atomic mass** and **properties**. There are reports of a French gentleman chemist **Antoine-Laurent de Lavoisier** and his wife, **Marie-Anne**, having started to do this in the late 1700s before he was killed in the French Revolution. **Alexandre-Emile Béguyer de Chancourtois** is another Frenchman who is credited with working on a version of the Periodic Table, and publishing it, 5 years before Mendeleev did. Most good ideas start somewhere and are then worked on and finessed by others to bring them to the form we know them in now. There are a few other scientists who contributed to the current form of the Periodic Table as well.

How do we use the Periodic Table? The current 'modern' Periodic Table has elements that are grouped by atomic number, and according to similarities in their properties. Those with similar properties are arranged in columns. So chemists use this to infer what kinds of chemical reactions an element in a column might have, based on the reaction of the others - does it mix with water, does it conduct electricity, and other such properties. This can be a very useful cheat sheet to have when you are conducting experiments!

Check out The Periodic Table Song - it's a treat!

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