

Organizing All the Elements

Early scientists enjoyed 'discovering' new elements. But as more and more were discovered, how were they to be organized??

Mid 1800's - 60 elements were discovered. Should they be organized by....

Alphabetical order? **NO** → need to reorganize chart every time a new element was found. Plus...they chemicals have different names in different languages so they were be organized differently around the world. That's not good!

Colour? **NO** → colour is hard to describe and some are only slightly different. A lot of elements are silver-grey. There isn't a lot of variation.

Taste? → **NO!** That's dangerous and not that helpful really.


Conduct electricity? **Maybe**. It helps a bit. Metals tend to

→ Conduct electricity → be malleable → be shiny

But Dmitri Mendeleev (a Russian scientist) thought there **must** be a pattern!

He used atomic mass. So...lighter elements were first and heavier elements came later.

This means that Hydrogen (the lightest element) is #1 in the pattern.

Mendeleev also lined them up in vertical  columns with similar properties. He found some elements shared similar properties.

Today we basically use the organized chart Mendeleev created. Also, since metals are so common, the chart (periodic table its called) is often grouped into

- Metals
- Non-metals
- Metalloids (or semi-metals) - these act a bit like metals and a bit like non-metals.