

Atomic structure and the periodic table

The **periodic table** is a record of all the **elements**. The periodic table gives us lots of information about each element. It tells us:

- each element's symbol
- the number of **protons** in an element's atom. This is called its **atomic number**. The atomic numbers increase by one as you go along the periodic table.
- the **atomic mass** of an element. This tells us the mass of an element compared to carbon. It is approximately the total number of protons and **neutrons** added together.
- the number of **electrons** in an element's atom. The atomic number tells us this, too, because this number is always the same as the number of protons.
- some of the properties of different elements.

6	Atomic number
C	Symbol
Carbon	Name
12.01	Atomic mass

From looking at the information provided for carbon, we know that carbon:

- has the symbol C
- has an atomic number of 6. This means it has 6 protons and 6 electrons.
- has an atomic mass of 12. This means it has 6 neutrons

(Number of neutrons = atomic mass - number of protons).