Symbols for Elements

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Each element can be represented by a symbol.

For many elements, the symbol is the start of the name, for example H = hydrogen or Li = lithium.

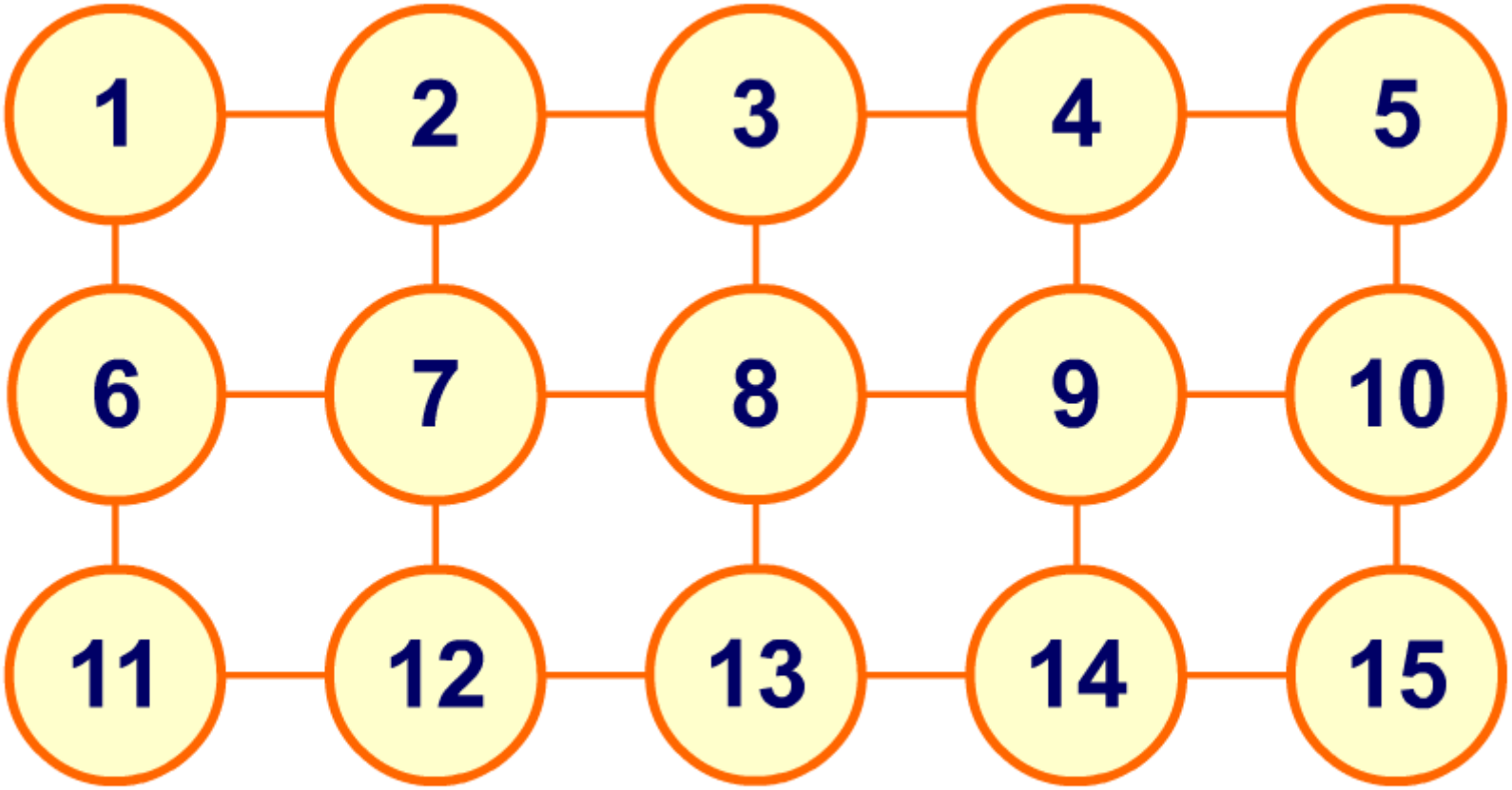
However, some of the symbols are not always as you might expect; for example, Pb = lead.

The first letter of an element's symbol is always a capital letter, e.g. **N** (not n) for **nitrogen**.

If there are two letters in the element's symbol, the second letter is always a small letter, e.g. **Co** (not CO) for **cobalt**.

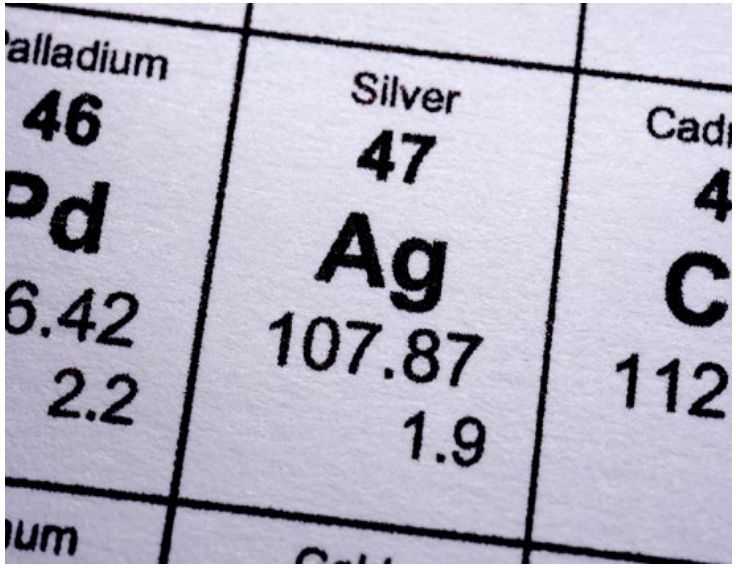
Chemical symbols game

What's that element?



Why are symbols important?

Why might scientists find it easier to use symbols for elements rather than names?



- Elements have different names in different languages, e.g. in Portuguese, nitrogen is called ‘azote,’ and iron is called ‘ferro.’
- Symbols are quicker to write than names, and can be easily used in chemical formulas, diagrams and equations.

The current system for naming elements and compounds was devised by the International Union of Pure and Applied Chemistry (IUPAC) so that scientists all around the world could communicate without confusion.

Match the element

Match the element to its symbol

cobalt	Li
copper	Au
carbon	Cu
silver	O
lithium	H
iron	Fe
gold	Co
sulfur	Ag
oxygen	C
hydrogen	S

?

solve

Spelling with symbols

Write down the symbols for each element listed and use these to spell out a word that matches the clue.

1. **Board game**: carbon, helium, two sulfurs — **CHeSS**

2. **Relative**: sulfur, oxygen, nitrogen — **SON**

3. **Fuel:** carbon, oxygen, aluminum — **COAl**

4. **Group of fish:** sulfur, hydrogen, oxygen, aluminum — **SHOAl**

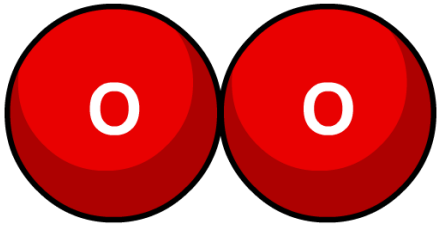
5. **For storage:** boron, iodine, nitrogen. — **BIN**

How many words can you spell using symbols?

Symbols for molecules of elements

The atoms of some elements join together in **molecules**. Combining the symbols of the atoms in a molecule gives you the **formula** for the molecule.

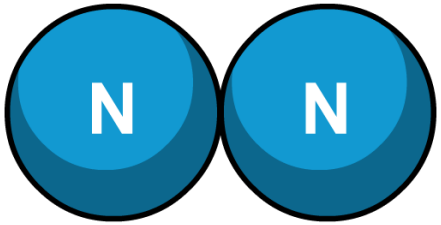
What is the formula for the molecules in each element?

oxygen = 

= O_2

hydrogen = 

= H_2

nitrogen = 

= N_2

This tells you that there are two atoms in each molecule.