

## Matter - Periodic Table KEY LEARNING

The Periodic table shows all the elements arranged in rows (periods) and columns (groups).

### The First 20 Elements of the Periodic Table

	1	2	3	4	5	6	7	0
1	1 Hydrogen H							2 Helium He
2	3 Lithium Li	4 Beryllium Be	5 Boron B	6 Carbon C	7 Nitrogen N	8 Oxygen O	9 Fluorine F	10 Neon Ne
3	11 Sodium Na	12 Magnesium Mg	13 Aluminium Al	14 Silicon Si	15 Phosphorus P	16 Sulphur S	17 Chlorine Cl	18 Argon Ar
4	19 Potassium K	20 Calcium Ca						

Groups: **Columns** of the periodic table.

Periods: **Rows** of the periodic table.

Metals are generally found on the left side of the table, non-metals on the right.

Group 1 contains reactive metals called alkali metals.

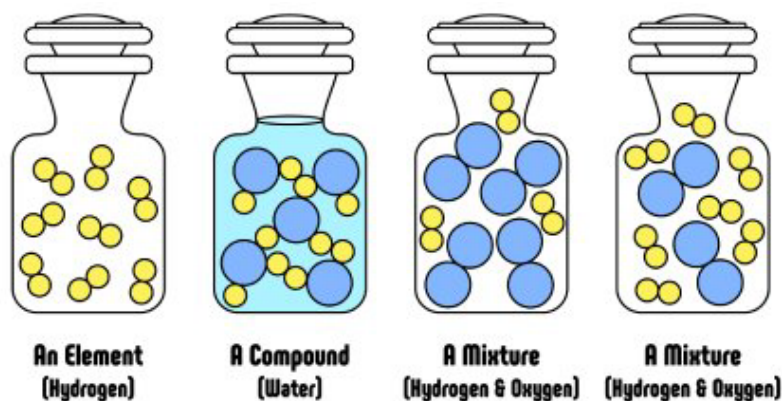
Group 7 contains non-metals called halogens.

Group 0 contains unreactive gases called noble gases.

## Matter - Elements KEY LEARNING

Elements are listed on the Periodic table. They have a symbol. Elements contain (lots of) one type of atom.

Most substances are not pure elements, but compounds or mixtures containing atoms of different elements. They have different properties to the elements they contain.



### Keywords

**Elements:** What all substances are made up of, and which contain only one type of atom.

**Atom:** The smallest particle of an element that can exist.

**Molecules:** Two to thousands of atoms joined together. Most non-metals exist either as small or giant molecules.

**Compound:** Pure substances made up of two or more elements strongly joined together.

### Simple Formula of Molecules

**H<sub>2</sub>** Two hydrogen atoms joined to each other. Hydrogen.

**H<sub>2</sub>O** Two hydrogen atoms joined to a single oxygen atom. Water.

**CO<sub>2</sub>** One carbon atom joined to two oxygen atoms. Carbon Dioxide

Key Learning Questions	Year 8 Matter
What table displays all the elements?	Periodic (table)
How many different types of atom are found in an element?	One
How can we write hydrogen in a simpler way?	H
How can we write oxygen in a simpler way?	O
What word beginning with an S describes - Mg, C, He, K, Li?	Symbols

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Key Learning Questions	Year 8 Matter
What table displays all the elements?	
How many different types of atom are found in an element?	
How can we write hydrogen in a simpler way?	
How can we write oxygen in a simpler way?	
What word beginning with an S describes - Mg, C, He, K, Li?	S

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	
Which word describes different elements and compounds not joined together.	
What is the symbol for magnesium?	
What is the symbol for sodium?	
Which element has the symbol Cl?	
How many groups (columns) does the periodic table have?	
Is a period of the Periodic Table horizontal or vertical?	
Name element number 8.	
Which group is magnesium in?	
Name element 20.	
What is the mass of an atom of the twentieth element?	
Which period is the twentieth element in?	
What would the mass of two hydrogen atoms be?	
What would the total mass of these atoms be - H, H and O?	
What do we call a long chain of repeating small molecules?	

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	
Which word describes different elements and compounds not joined together.	
What is the symbol for magnesium?	
What is the symbol for sodium?	
Which element has the symbol Cl?	
How many groups (columns) does the periodic table have?	
Is a period of the Periodic Table horizontal or vertical?	
Name element number 8.	
Which group is magnesium in?	
Name element 20.	
What is the mass of an atom of the twentieth element?	
Which period is the twentieth element in?	
What would the mass of two hydrogen atoms be?	
What would the total mass of these atoms be - H, H and O?	
What do we call a long chain of repeating small molecules?	

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	
Which word describes different elements and compounds not joined together.	
What is the symbol for magnesium?	
What is the symbol for sodium?	
Which element has the symbol Cl?	
How many groups (columns) does the periodic table have?	
Is a period of the Periodic Table horizontal or vertical?	
Name element number 8.	
Which group is magnesium in?	
Name element 20.	
What is the mass of an atom of the twentieth element?	
Which period is the twentieth element in?	
What would the mass of two hydrogen atoms be?	
What would the total mass of these atoms be - H, H and O?	
What do we call a long chain of repeating small molecules?	

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	Compound
Which word describes different elements and compounds not joined together.	Mixture
What is the symbol for magnesium?	Mg
What is the symbol for sodium?	Na
Which element has the symbol Cl?	Chlorine
How many groups (columns) does the periodic table have?	8
Is a period of the Periodic Table horizontal or vertical?	Horizontal
Name element number 8.	Oxygen
Which group is magnesium in?	2
Name element 20.	Calcium
What is the mass of an atom of the twentieth element?	40
Which period is the twentieth element in?	4
What would the mass of two hydrogen atoms be?	2
What would the total mass of these atoms be - H, H and O?	18
What do we call a long chain of repeating small molecules?	A polymer

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	Compound
Which word describes different elements and compounds not joined together.	Mixture
What is the symbol for magnesium?	Mg
What is the symbol for sodium?	Na
Which element has the symbol Cl?	Chlorine
How many groups (columns) does the periodic table have?	8
Is a period of the Periodic Table horizontal or vertical?	Horizontal
Name element number 8.	Oxygen
Which group is magnesium in?	2
Name element 20.	Calcium
What is the mass of an atom of the twentieth element?	40
Which period is the twentieth element in?	4
What would the mass of two hydrogen atoms be?	2
What would the total mass of these atoms be - H, H and O?	18
What do we call a long chain of repeating small molecules?	A polymer

Extension Questions	Year 8 Matter
Which word describes two or more different atoms joined together?	Compound
Which word describes different elements and compounds not joined together.	Mixture
What is the symbol for magnesium?	Mg
What is the symbol for sodium?	Na
Which element has the symbol Cl?	Chlorine
How many groups (columns) does the periodic table have?	8
Is a period of the Periodic Table horizontal or vertical?	Horizontal
Name element number 8.	Oxygen
Which group is magnesium in?	2
Name element 20.	Calcium
What is the mass of an atom of the twentieth element?	40
Which period is the twentieth element in?	4
What would the mass of two hydrogen atoms be?	2
What would the total mass of these atoms be - H, H and O?	18
What do we call a long chain of repeating small molecules?	A polymer