Topic	Chemical formula	**Level**	Key Stage 3 (or any other course for students aged 11-16)
Outcomes	1. To calculate the number of atoms and elements from a chemical formula, including formulae with brackets 2. To understand how the chemical formula relates to a particle picture		
Information for teachers	This activity is to check that students understand what a chemical formula means. So often students get to age 16 and don't understand the language of chemistry which makes learning more rewarding concepts hard. Obviously, 2 Cl means two moles of chlorine atoms but as this stage, introducing the mole is not helpful and so I am happy if students describe 2 Cl as representing 2 moles of chlorine atoms.		

Working out what a chemical formula means

Substance	Particle picture of substance	Number of elements	Number of atoms	Description of substance
Cl		1	1	One atom of chlorine
Cl_2				
2 Cl				
H_2				
H_2O				
$H_2 + O_2$				
2 H + 2 O				
2 H + 2 O_2				
$C_6H_{12}O_6$				

N_3				
$Mg(NO_3)_2$				
$AlCl_3$				
$3\ Mg(NO_3)_2$				