

**Alchemy**  
**KS2**  
**Monday - Science**

Alchemy is an ancient science that came before chemistry. The aim of alchemy was to try and change certain materials and substances into other materials. Many alchemists particularly tried to turn other metals into gold. Of course, today we know that this is not possible as this is one of the elements on the periodic table. The periodic table is a diagram which shows all the metals, chemicals and elements that exist naturally in the world. We show the elements on a periodic table by using their abbreviations - these are called their chemical symbol. Today you will be using these chemical symbols to become familiar with them.

**Using the periodic table on the other side, can you find the elements to spell your name?**

**Not all words can be spelt using the elements of the periodic table so how close can you get to your name? Write it down using the symbols and the element names.**

**Can you answer these word puzzles using the element names given and translating them to their symbols. You will need to find them on the periodic table first.**

- 1. A form of maths** (Aluminium, Germanium, Boron, Radium)
- 2. Something tasty!** (Carbon, Hydrogen, Oxygen, Cobalt, Lanthanum, Tellureum)
- 3. Pirates don't like these** (Lanthanum, Neodymium, Lutetium, Boron, Boron, Erbium, Sulphur)
- 4. Pirates have to do this!** (Sodium, Vanadium, Iodine, Gallium, Titanium, Oxygen, Nitrogen)

**Have a go at translating this:**

Molybdenum, Uranium, Nitrogen, Titanium, Einsteinium, Rubidium, Sulphur, Hydrogen, Oxygen, Fluorine, Fluorine, Oxygen, Nitrogen, Americium, Iodine, Sulphur, Silicon, Oxygen, Nitrogen: Fluorine, Iodine, Neodymium, Thorium, Oxygen, Selenium, Holmium, Sulphur, Tantalum, Germanium, Sulphur

Here is the periodic table.

# PERIODIC TABLE OF ELEMENTS

1 <b>H</b> Hydrogen <small>Nonmetal</small>																	2 <b>He</b> Helium <small>Noble Gas</small>						
3 <b>Li</b> Lithium <small>Alkali Metal</small>	4 <b>Be</b> Beryllium <small>Alkaline Earth Metal</small>																	5 <b>B</b> Boron <small>Metalloid</small>	6 <b>C</b> Carbon <small>Nonmetal</small>	7 <b>N</b> Nitrogen <small>Nonmetal</small>	8 <b>O</b> Oxygen <small>Nonmetal</small>	9 <b>F</b> Fluorine <small>Halogen</small>	10 <b>Ne</b> Neon <small>Noble Gas</small>
11 <b>Na</b> Sodium <small>Alkali Metal</small>	12 <b>Mg</b> Magnesium <small>Alkaline Earth Metal</small>																	13 <b>Al</b> Aluminum <small>Post-Transition Metal</small>	14 <b>Si</b> Silicon <small>Metalloid</small>	15 <b>P</b> Phosphorus <small>Nonmetal</small>	16 <b>S</b> Sulfur <small>Nonmetal</small>	17 <b>Cl</b> Chlorine <small>Halogen</small>	18 <b>Ar</b> Argon <small>Noble Gas</small>
19 <b>K</b> Potassium <small>Alkali Metal</small>	20 <b>Ca</b> Calcium <small>Alkaline Earth Metal</small>	21 <b>Sc</b> Scandium <small>Transition Metal</small>	22 <b>Ti</b> Titanium <small>Transition Metal</small>	23 <b>V</b> Vanadium <small>Transition Metal</small>	24 <b>Cr</b> Chromium <small>Transition Metal</small>	25 <b>Mn</b> Manganese <small>Transition Metal</small>	26 <b>Fe</b> Iron <small>Transition Metal</small>	27 <b>Co</b> Cobalt <small>Transition Metal</small>	28 <b>Ni</b> Nickel <small>Transition Metal</small>	29 <b>Cu</b> Copper <small>Transition Metal</small>	30 <b>Zn</b> Zinc <small>Transition Metal</small>	31 <b>Ga</b> Gallium <small>Post-Transition Metal</small>	32 <b>Ge</b> Germanium <small>Metalloid</small>	33 <b>As</b> Arsenic <small>Metalloid</small>	34 <b>Se</b> Selenium <small>Nonmetal</small>	35 <b>Br</b> Bromine <small>Halogen</small>	36 <b>Kr</b> Krypton <small>Noble Gas</small>						
37 <b>Rb</b> Rubidium <small>Alkali Metal</small>	38 <b>Sr</b> Strontium <small>Alkaline Earth Metal</small>	39 <b>Y</b> Yttrium <small>Transition Metal</small>	40 <b>Zr</b> Zirconium <small>Transition Metal</small>	41 <b>Nb</b> Niobium <small>Transition Metal</small>	42 <b>Mo</b> Molybdenum <small>Transition Metal</small>	43 <b>Tc</b> Technetium <small>Transition Metal</small>	44 <b>Ru</b> Ruthenium <small>Transition Metal</small>	45 <b>Rh</b> Rhodium <small>Transition Metal</small>	46 <b>Pd</b> Palladium <small>Transition Metal</small>	47 <b>Ag</b> Silver <small>Transition Metal</small>	48 <b>Cd</b> Cadmium <small>Transition Metal</small>	49 <b>In</b> Indium <small>Post-Transition Metal</small>	50 <b>Sn</b> Tin <small>Post-Transition Metal</small>	51 <b>Sb</b> Antimony <small>Metalloid</small>	52 <b>Te</b> Tellurium <small>Metalloid</small>	53 <b>I</b> Iodine <small>Halogen</small>	54 <b>Xe</b> Xenon <small>Noble Gas</small>						
55 <b>Cs</b> Cesium <small>Alkali Metal</small>	56 <b>Ba</b> Barium <small>Alkaline Earth Metal</small>	*	72 <b>Hf</b> Hafnium <small>Transition Metal</small>	73 <b>Ta</b> Tantalum <small>Transition Metal</small>	74 <b>W</b> Tungsten <small>Transition Metal</small>	75 <b>Re</b> Rhenium <small>Transition Metal</small>	76 <b>Os</b> Osmium <small>Transition Metal</small>	77 <b>Ir</b> Iridium <small>Transition Metal</small>	78 <b>Pt</b> Platinum <small>Transition Metal</small>	79 <b>Au</b> Gold <small>Transition Metal</small>	80 <b>Hg</b> Mercury <small>Transition Metal</small>	81 <b>Tl</b> Thallium <small>Post-Transition Metal</small>	82 <b>Pb</b> Lead <small>Post-Transition Metal</small>	83 <b>Bi</b> Bismuth <small>Post-Transition Metal</small>	84 <b>Po</b> Polonium <small>Metalloid</small>	85 <b>At</b> Astatine <small>Halogen</small>	86 <b>Rn</b> Radon <small>Noble Gas</small>						
87 <b>Fr</b> Francium <small>Alkali Metal</small>	88 <b>Ra</b> Radium <small>Alkaline Earth Metal</small>	**	104 <b>Rf</b> Rutherfordium <small>Transition Metal</small>	105 <b>Db</b> Dubnium <small>Transition Metal</small>	106 <b>Sg</b> Seaborgium <small>Transition Metal</small>	107 <b>Bh</b> Bohrium <small>Transition Metal</small>	108 <b>Hs</b> Hassium <small>Transition Metal</small>	109 <b>Mt</b> Meitnerium <small>Transition Metal</small>	110 <b>Ds</b> Darmstadtium <small>Transition Metal</small>	111 <b>Rg</b> Roentgenium <small>Transition Metal</small>	112 <b>Cn</b> Copernicium <small>Transition Metal</small>	113 <b>Nh</b> Nihonium <small>Post-Transition Metal</small>	114 <b>Fl</b> Flerovium <small>Post-Transition Metal</small>	115 <b>Mc</b> Moscovium <small>Post-Transition Metal</small>	116 <b>Lv</b> Livermorium <small>Post-Transition Metal</small>	117 <b>Ts</b> Tennessine <small>Halogen</small>	118 <b>Og</b> Oganesson <small>Noble Gas</small>						
		*	57 <b>La</b> Lanthanum <small>Lanthanide</small>	58 <b>Ce</b> Cerium <small>Lanthanide</small>	59 <b>Pr</b> Praseodymium <small>Lanthanide</small>	60 <b>Nd</b> Neodymium <small>Lanthanide</small>	61 <b>Pm</b> Promethium <small>Lanthanide</small>	62 <b>Sm</b> Samarium <small>Lanthanide</small>	63 <b>Eu</b> Europium <small>Lanthanide</small>	64 <b>Gd</b> Gadolinium <small>Lanthanide</small>	65 <b>Tb</b> Terbium <small>Lanthanide</small>	66 <b>Dy</b> Dysprosium <small>Lanthanide</small>	67 <b>Ho</b> Holmium <small>Lanthanide</small>	68 <b>Er</b> Erbium <small>Lanthanide</small>	69 <b>Tm</b> Thulium <small>Lanthanide</small>	70 <b>Yb</b> Ytterbium <small>Lanthanide</small>	71 <b>Lu</b> Lutetium <small>Lanthanide</small>						
		**	89 <b>Ac</b> Actinium <small>Actinide</small>	90 <b>Th</b> Thorium <small>Actinide</small>	91 <b>Pa</b> Protactinium <small>Actinide</small>	92 <b>U</b> Uranium <small>Actinide</small>	93 <b>Np</b> Neptunium <small>Actinide</small>	94 <b>Pu</b> Plutonium <small>Actinide</small>	95 <b>Am</b> Americium <small>Actinide</small>	96 <b>Cm</b> Curium <small>Actinide</small>	97 <b>Bk</b> Berkelium <small>Actinide</small>	98 <b>Cf</b> Californium <small>Actinide</small>	99 <b>Es</b> Einsteinium <small>Actinide</small>	100 <b>Fm</b> Fermium <small>Actinide</small>	101 <b>Md</b> Mendelevium <small>Actinide</small>	102 <b>No</b> Nobelium <small>Actinide</small>	103 <b>Lr</b> Lawrencium <small>Actinide</small>						