

# The Periodic Table of the Elements, in Pictures

| Periods | Alkali Metals Group 1   | Alkali Earth Metals Group 2   | Transition Metals                   |                                    |   |  |  |                                       |                                      |                                   |                                   |   | Boron Group 13                              | Carbon Group 14                             | Nitrogen Group 15            | Oxygen Group 16                         | Halogens Group 17                    | Noble Gases Group 18   |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
|---------|---|-------------------------------|-------------------------------------|------------------------------------|---|--|--|---------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|---|---|---|------------------------------|---|--------------------------------------|--|-------------------------------|-----------------------------|----------------------|--------------------|-----------------------------|------------------------------|--|---|----------------------|------------------------|--------------------------------|---------------------------|
| 1       | H Hydrogen<br>Sun and Stars   | He Helium<br>Balloons         |                                     |                                    |   |  |  |                                       |                                      |                                   |                                   |   | B Boron<br>Sports Equipment                 | C Carbon<br>Basis of Life's Molecules       | N Nitrogen<br>Protein        | O Oxygen<br>Air                         | F Fluorine<br>Toothpaste             | Ne Neon<br>Advertising Signs                                       |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 2       | Li Lithium<br>Batteries   | Be Beryllium<br>Emeralds      |                                     |                                    |   |  |  |                                       |                                      |                                   |                                   |   | Al Aluminum<br>Airplanes                    | Si Silicon<br>Stone, Sand, and Soil         | P Phosphorus<br>Bones        | S Sulfur<br>Eggs                        | Cl Chlorine<br>Swimming Pools        | Ar Argon<br>Light Bulbs  |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 3       | Na Sodium<br>Salt   | Mg Magnesium<br>Chlorophyll   |                                     |                                    |   |  |  |                                       |                                      |                                   |                                   |   | K Potassium<br>Fruits and Vegetables        | Ca Calcium<br>Shells and Bones              | Sc Scandium<br>Bicycles      | Ti Titanium<br>Aerospace                | V Vanadium<br>Springs                | Cr Chromium<br>Stainless Steel                                     | Mn Manganese<br>Earthmovers   | Fe Iron<br>Steel Structures | Co Cobalt<br>Magnets | Ni Nickel<br>Coins | Cu Copper<br>Electric Wires | Zn Zinc<br>Brass Instruments | Ga Gallium<br>Light-Emitting Diodes (LEDs) | Ge Germanium<br>Semiconductor Electronics | As Arsenic<br>Poison | Se Selenium<br>Copiers | Br Bromine<br>Photography Film | Kr Krypton<br>Flashlights |
| 4       | Rb Rubidium<br>Global Navigation  | Sr Strontium<br>Fireworks     | Y Yttrium<br>Lasers                 | Zr Zirconium<br>Chemical Pipelines | Nb Niobium<br>Mag Lev Trains                | Mo Molybdenum<br>Cutting Tools         | Tc Technetium<br>Radioactive Diagnosis | Ru Ruthenium<br>Electric Switches     | Rh Rhodium<br>Searchlight Reflectors | Pd Palladium<br>Pollution Control | Ag Silver<br>Jewelry              | Cd Cadmium<br>Paint                       | In Indium<br>Liquid Crystal Displays (LCDs) | Sn Tin<br>Plated Food Cans                  | Sb Antimony<br>Car Batteries | Te Tellurium<br>Thermoelectric Coolers  | I Iodine<br>Disinfectant             | Xe Xenon<br>High-Intensity Lamps                                   |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 5       | Cs Cesium<br>Atomic Clocks  | Ba Barium<br>X-Ray Diagnosis  | Rare Earth Metals                   |                                    | Hf Hafnium<br>Nuclear Submarines            | Ta Tantalum<br>Mobile Phones           | W Tungsten<br>Lamp Filaments           | Re Rhenium<br>Rocket Engines          | Os Osmium<br>Pen Points              | Ir Iridium<br>Spark Plugs         | Pt Platinum<br>Labware            | Au Gold<br>Jewelry                        | Hg Mercury<br>Thermometers                  | Tl Thallium<br>Low-Temperature Thermometers | Pb Lead<br>Weights           | Bi Bismuth<br>Fire Sprinklers           | Po Polonium<br>Anti-Static Brushes   | At Astatine<br>Radioactive Medicine                                | Rn Radon<br>Surgical Implants |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 6       | Fr Francium<br>Laser Atom Traps   | Ra Radium<br>Luminous Watches | Actinide Metals                     |                                    | Rf Rutherfordium                            | Db Dubnium                             | Sg Seaborgium                          | Bh Bohrium                            | Hs Hassium                           | Mt Meitnerium                     | Ds Darmstadtium                   | Rg Roentgenium                            | Cn Copernicium                              | Nh Nihonium                                 | Fl Flerovium                 | Mc Moscovium                            | Lv Livermorium                       | Ts Tennessine  | Og Oganesson                  |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 7       | Superheavy Elements<br>radioactive, never found in nature, no uses except atomic research |                               |                                     |                                    |   |  |  |                                       |                                      |                                   |                                   |   |   |   |                              |   |                                      |  |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 8       | Rare Earth Metals   |                               | La Lanthanum<br>Telescope Lenses    | Ce Cerium<br>Lighter Flints        | Pr Praseodymium<br>Torchworkers' Eyeglasses | Nd Neodymium<br>Electric Motor Magnets | Pm Promethium<br>Luminous Dials        | Sm Samarium<br>Electric Motor Magnets | Eu Europium<br>Color Televisions     | Gd Gadolinium<br>MRI Diagnosis    | Tb Terbium<br>Fluorescent Lamps   | Dy Dysprosium<br>Smart Material Actuators | Ho Holmium<br>Laser Surgery                 | Er Erbium<br>Optical Fiber Communications   | Tm Thulium<br>Laser Surgery  | Yb Ytterbium<br>Scientific Fiber Lasers | Lu Lutecium<br>Photodynamic Medicine | Actinide Metals  |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |
| 9       | Actinide Metals   |                               | Ac Actinium<br>Radioactive Medicine | Th Thorium<br>Gas Lamp Mantles     | Pa Protactinium<br>Radioactive Waste        | U Uranium<br>Nuclear Power             | Np Neptunium<br>Radioactive Waste      | Pu Plutonium<br>Nuclear Weapons       | Am Americium<br>Smoke Detectors      | Cm Curium<br>Mineral Analyzers    | Bk Berkelium<br>Radioactive Waste | Cf Californium<br>Mineral Analyzers       | Es Einsteinium                              | Fm Fermium                                  | Md Mendeleevium              | No Nobelium                             | Lr Lawrencium                        | radioactive, never found in nature, no uses except atomic research |                               |                             |                      |                    |                             |                              |  |   |                      |                        |                                |                           |

**Color Key**

The color of the symbol is the color of the element in its most common pure form.

- Solid (grey)
- Liquid (blue)
- Gas (yellow)

at room temperature

- Human Body (stick figure)
- Earth's Crust (globe)
- Magnetic (magnet)
- Noble Metals (crown)
- Radioactive (radiation symbol)
- Only Traces Found in Nature (lightning bolt)
- Never Found in Nature (X)

Examples: metallic solid (grey), red liquid (red), colorless gas (yellow)

