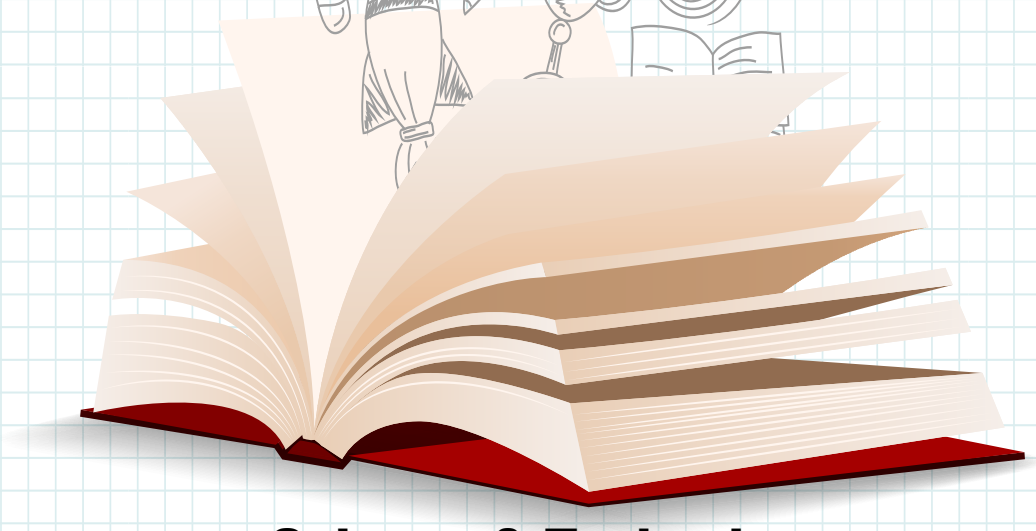
ADMISSIONS STARTED

9TH/10TH | 12TH COM/SCI | TYBCOM/BAF

Write your

Success story *with us*



Science & Technology

Study of Elements by Sai Sir

Standard- 10th

Students Academy

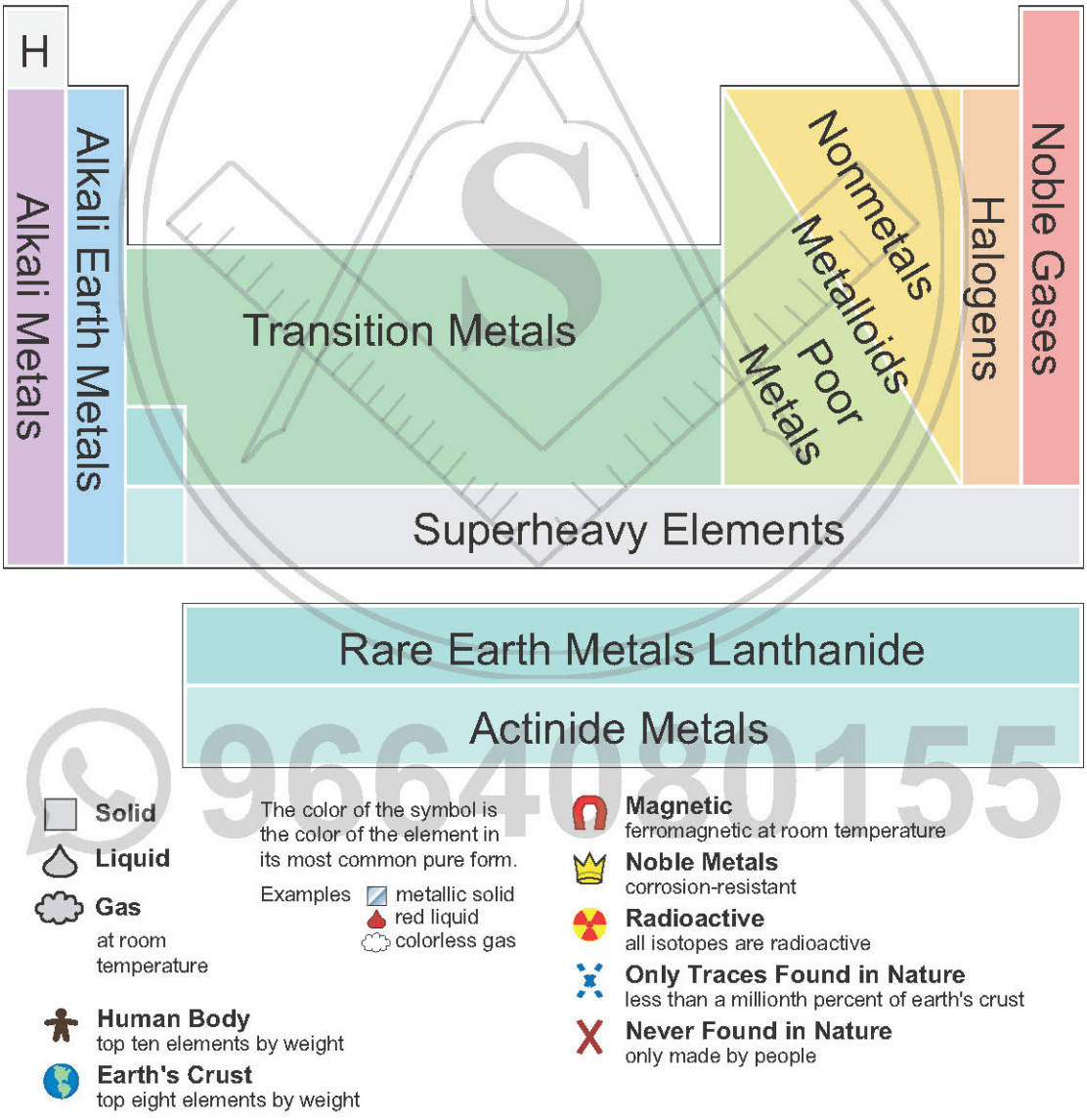
7718088017

Email : office.studentsacademy@gmail.com • Office Time : 9.00 am to 8.00 pm

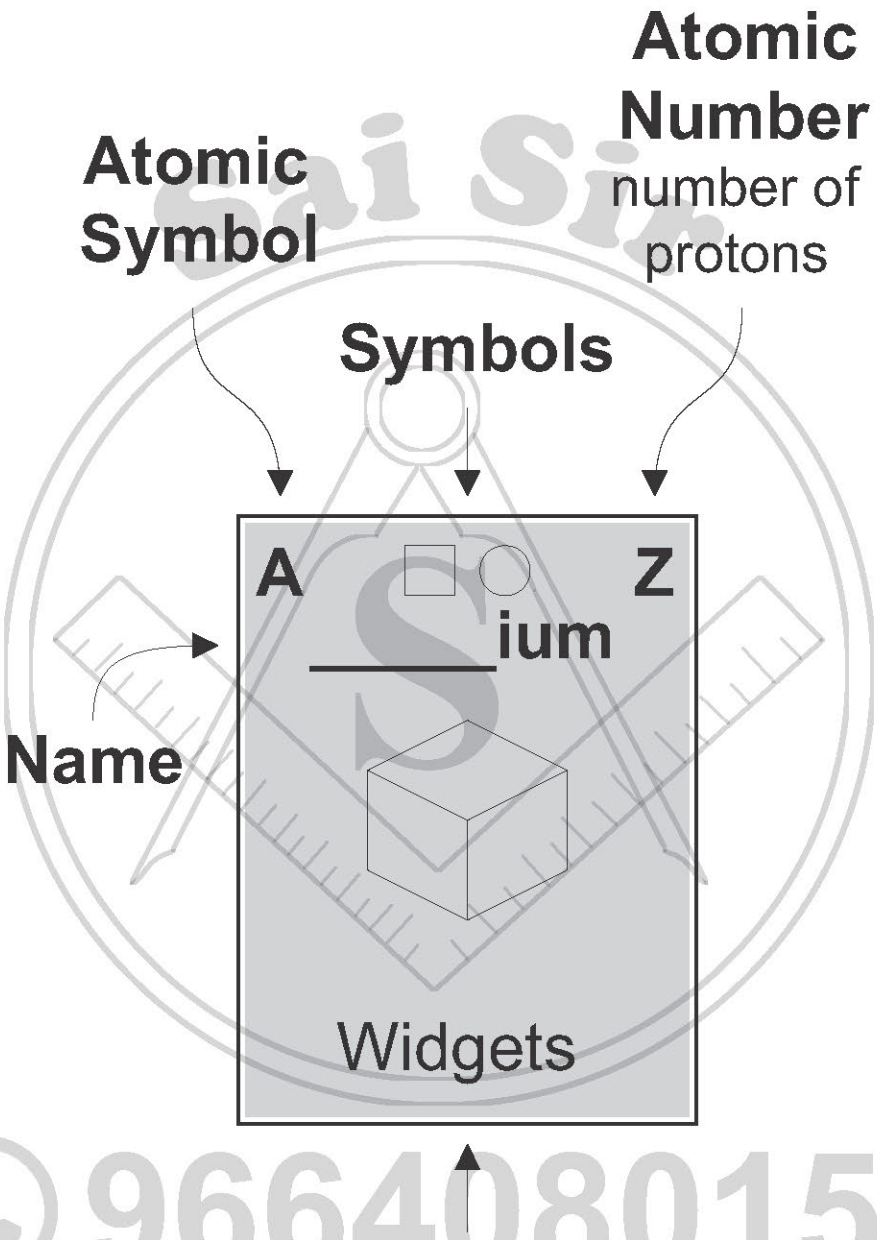
StudentsAcademy.CoachingClasses | StudentsAcademy_LearningHome

Sainath Sadulla

The Periodic Table of the Elements, in Pictures and Words



9664080155



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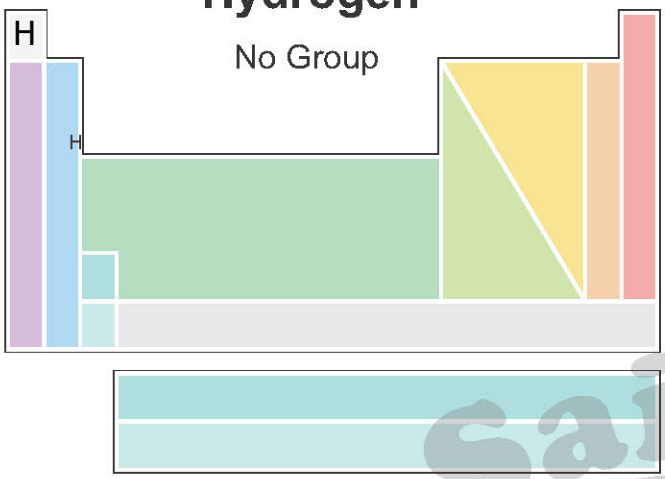
SSC- Science (Uses of Elements)

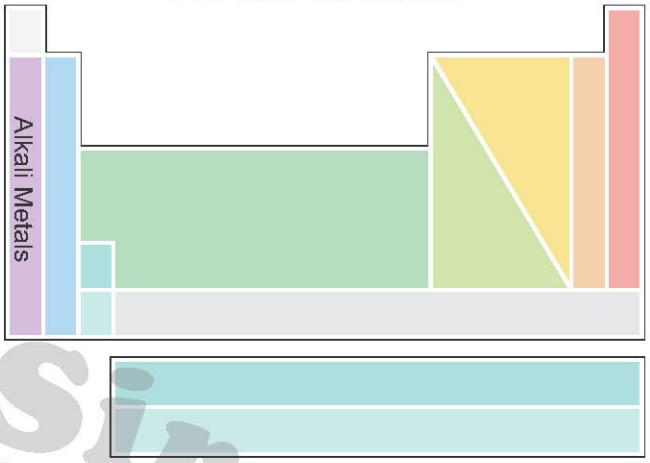
Prepared by Sainath Sadulla (M.Sc Physics - Electronics)

Hydrogen



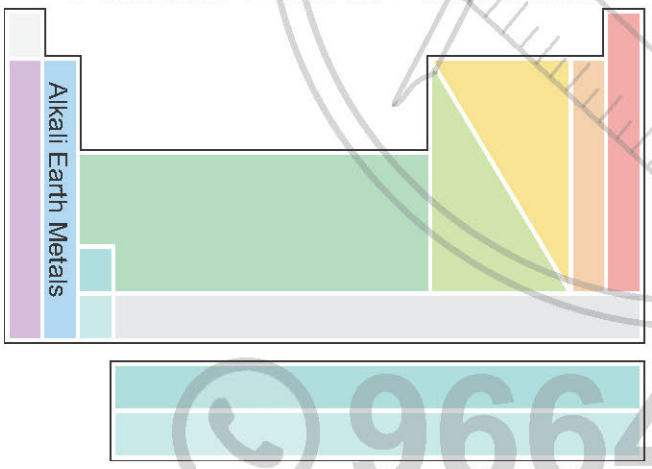
Hydrogen belongs to no definite group. It forms compounds by either donating an electron like an alkali metal or accepting an electron like a halogen.

Alkali Metals



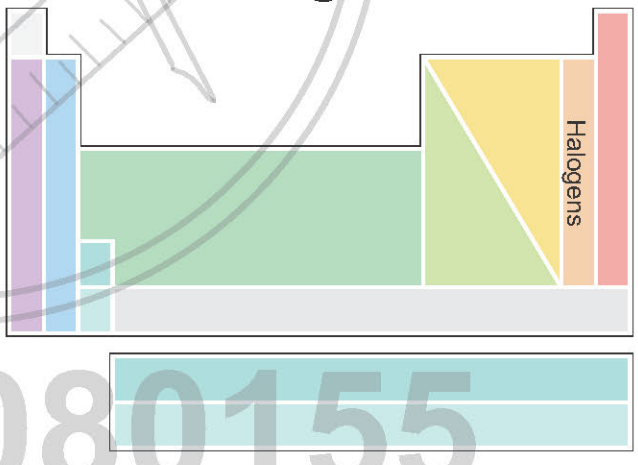
Alkali Metals are very reactive and readily form compounds but are not found free in nature. They form salts and alkali (acid-neutralizing) compounds such as baking soda. In pure form, they are very soft metals which catch fire on contact with water.

Alkali Earth Metals



Alkali Earth Metals are reactive and readily form compounds but are not found free in nature. Their oxides are called alkali earths. In pure form, they are soft and somewhat brittle metals.

Halogens



Halogens are reactive nonmetals and readily form compounds but are not found free in nature. They combine with alkali metals to form salts (halogen means salt-former).

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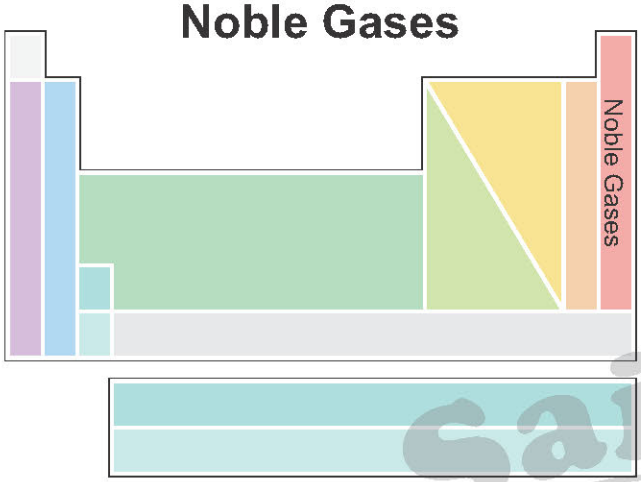
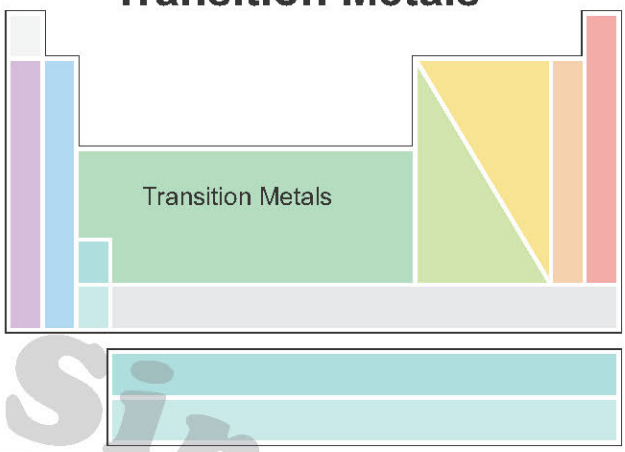
Noble Gases



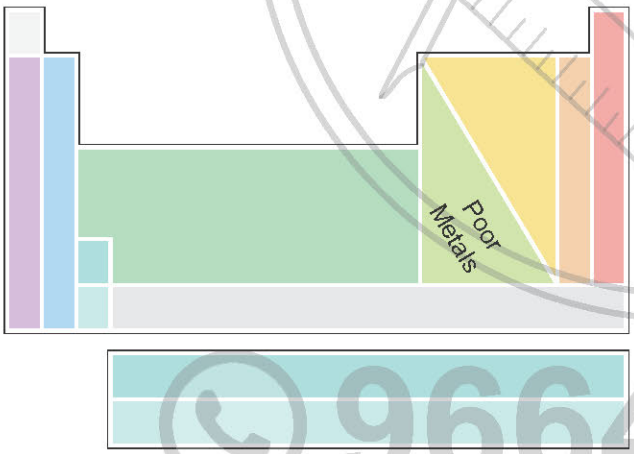
Noble Gases are inactive, or inert. Each atom has exactly the number of electrons it needs to have a full outer shell, so these atoms almost never bond with other atoms. That is why these are all gases.

Transition Metals



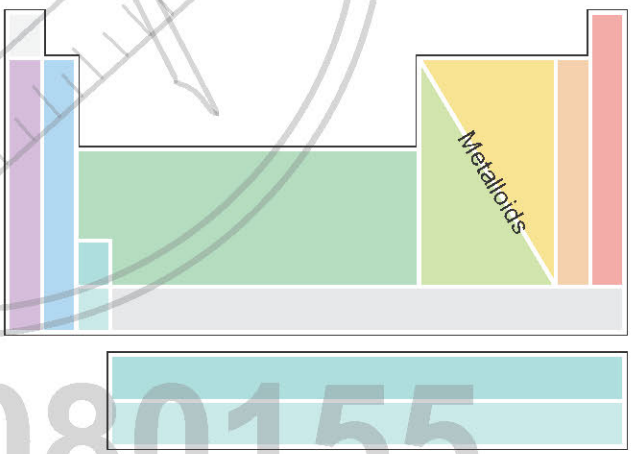
Transition Metals are typical metals: they are strong, shiny, malleable (they can be hammered into shape), flexible (in thin sheets or wires), and they conduct both heat and electricity.

Poor Metals



Poor Metals are usually soft and have low melting temperatures.

Metalloids



Metalloids are partly like metals and partly like nonmetals. For example, they are semiconductors, which means they conduct electricity in some conditions.
B, Si, Ge, As, Sb, and Te are metalloids.

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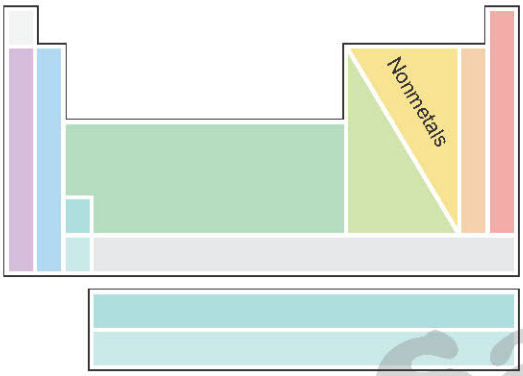
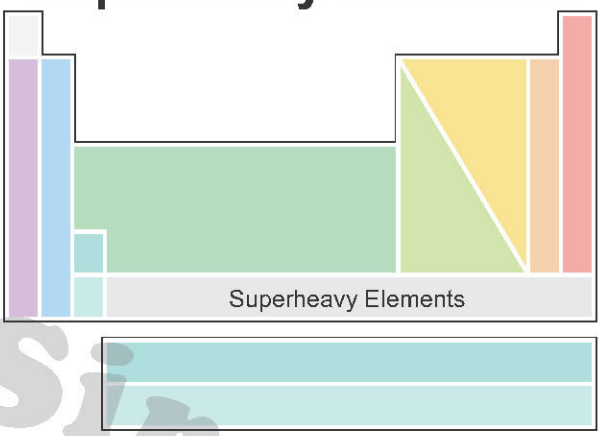
Nonmetals



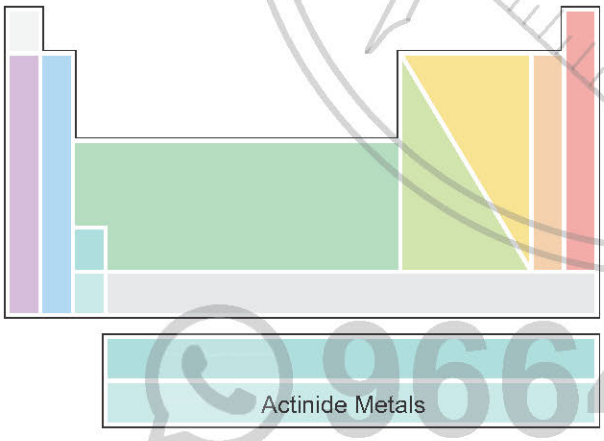
Nonmetals, in their solid state, are usually brittle (they break rather than bend) and they are insulators of both heat and electricity.

Superheavy Elements



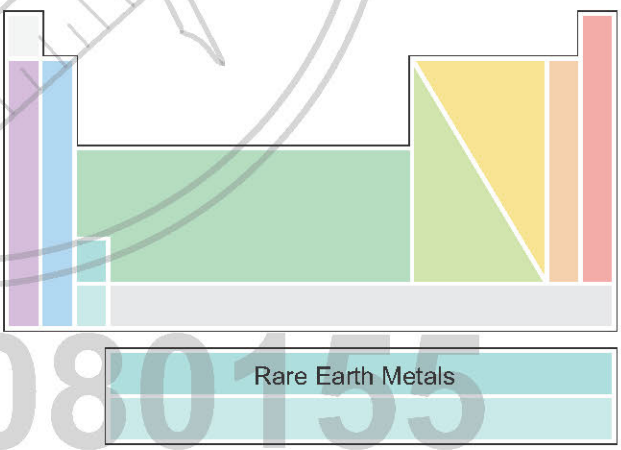
Superheavy Elements are all radioactive and short-lived. They are never found in nature and have no uses except atomic research.

Actinide Metals



Actinide Metals are all radioactive heavy metals. They are used mainly for their radioactive properties.

Rare Earth Metals Lanthanides



Rare Earth Metals are all soft metals. They are chemically similar to scandium and yttrium and are difficult to separate from each other.

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SSC- Science (Uses of Elements)

Prepared by Sainath Sadulla (M.Sc Physics - Electronics)

H 1
Hydrogen

Sun and Stars

He 2
Helium

Balloons

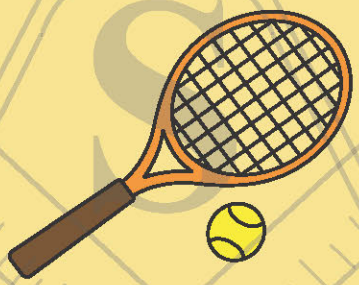
Li 3
Lithium

Batteries

Be 4
Beryllium

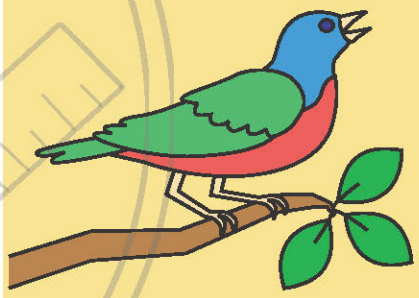
Emeralds

B 5
Boron



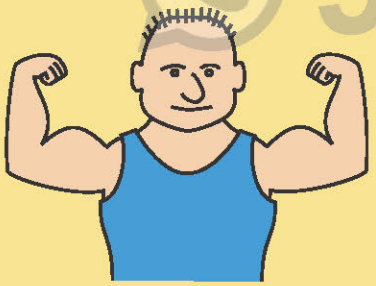
Sports Equipment

C 6
Carbon



Basis of Life's Molecules

N 7
Nitrogen

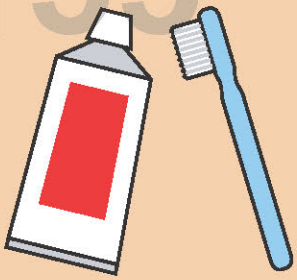


Protein

O 8
Oxygen

Air

F 9
Fluorine



Toothpaste

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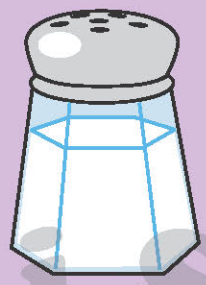
Ne 10
Neon

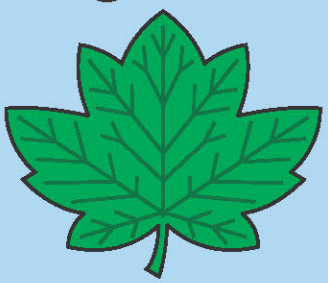
Advertising Signs

Na 11
Sodium



Salt

Mg 12
Magnesium



Chlorophyll

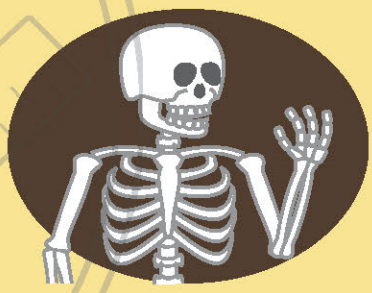
Al 13
Aluminum

Airplanes

Si 14
Silicon

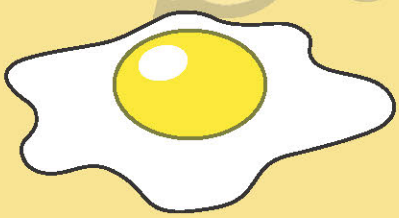
Stone, Sand, and Soil

P 15
Phosphorus



Bones

S 16
Sulfur

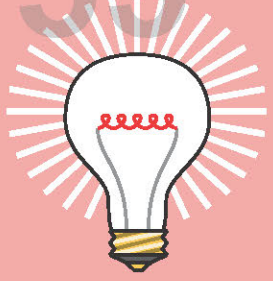


Eggs

Cl 17
Chlorine

Swimming Pools

Ar 18
Argon



Light Bulbs

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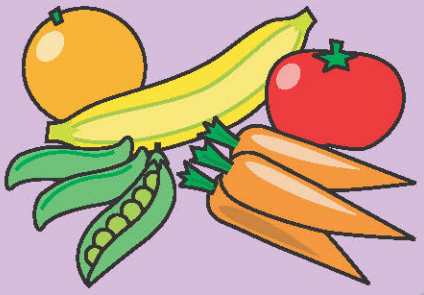
K 19
Potassium

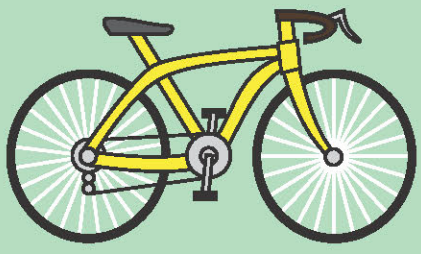


Fruits and Vegetables

Ca 20
Calcium

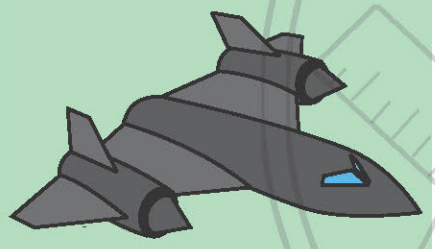
Shells and Bones

Sc 21
Scandium



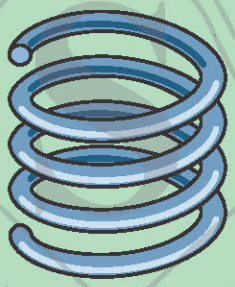
Bicycles

Ti 22
Titanium



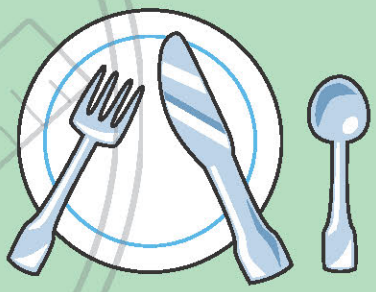
Aerospace

V 23
Vanadium



Springs

Cr 24
Chromium



Stainless Steel

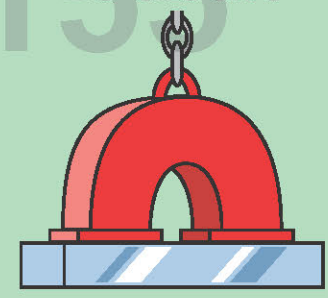
Mn 25
Manganese

Earthmovers

Fe 26
Iron

Steel Structures

Co 27
Cobalt



Magnets

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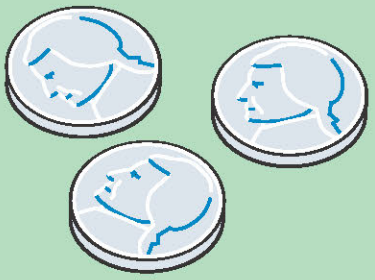
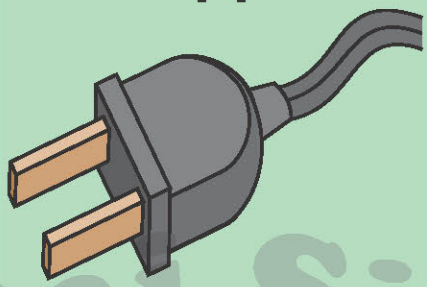
Ni 28
Nickel



Coins

Cu 29
Copper

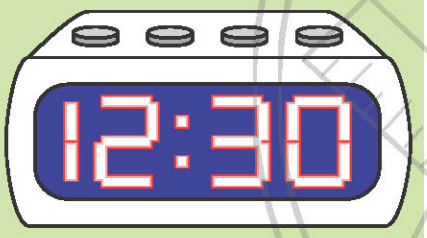


Electric Wires

Zn 30
Zinc

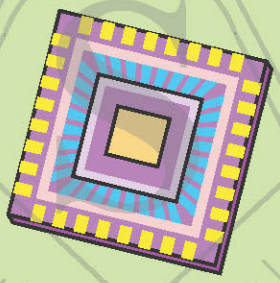
Brass Instruments

Ga 31
Gallium



Light-Emitting Diodes (LEDs)

Ge 32
Germanium



Semiconductor Electronics

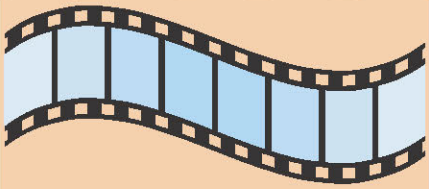
As 33
Arsenic

Poison

Se 34
Selenium

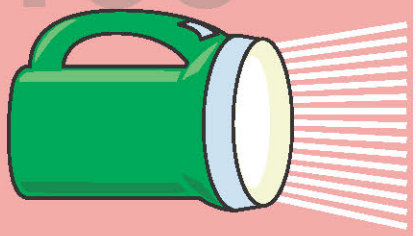
Copiers

Br 35
Bromine



Photography Film

Kr 36
Krypton



Flashlights

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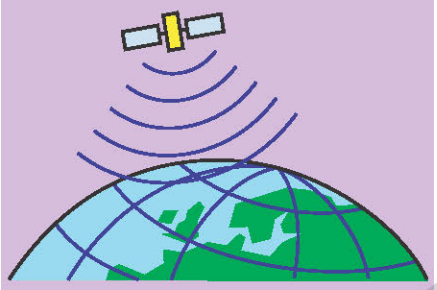
Rb 37 Rubidium

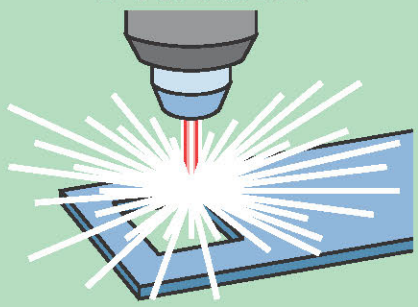


Global Navigation

Sr 38 Strontium

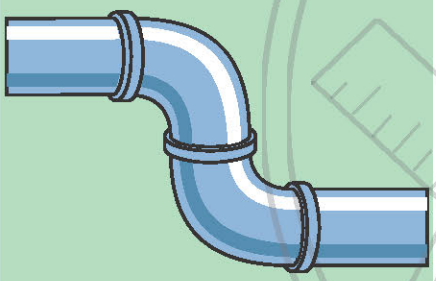
Fireworks

Y 39 Yttrium



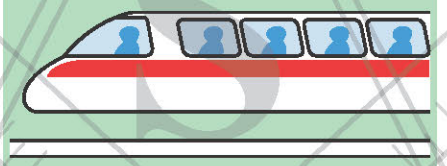
Lasers

Zr 40 Zirconium



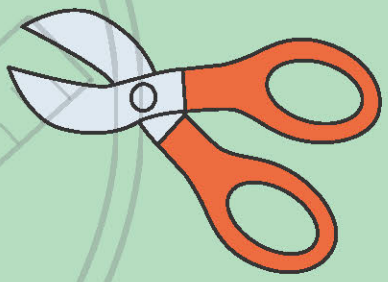
Chemical Pipelines

Nb 41 Niobium



Mag Lev Trains

Mo 42 Molybdenum

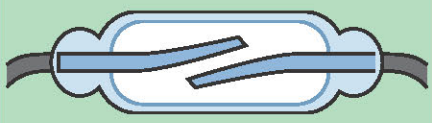


Cutting Tools

Tc 43 Technetium

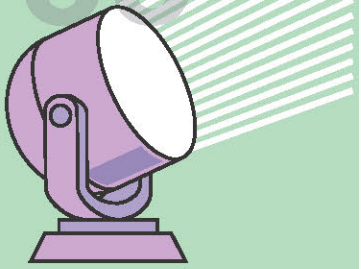
Radioactive Diagnosis

Ru 44 Ruthenium



Electric Switches

Rh 45 Rhodium



Searchlight Reflectors

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Pd 46
Palladium

Pollution Control

Ag 47
Silver

Jewelry

Cd 48
Cadmium

Paint

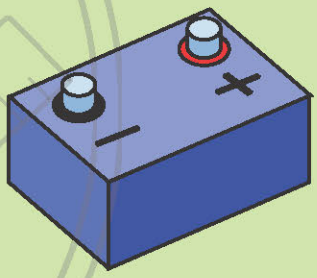
In 49
Indium

Liquid Crystal Displays (LCDs)

Sn 50
Tin

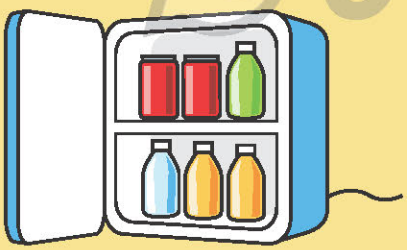
Plated Food Cans

Sb 51
Antimony



Car Batteries

Te 52
Tellurium



Thermoelectric Coolers

I 53
Iodine

Disinfectant

Xe 54
Xenon

High-Intensity Lamps

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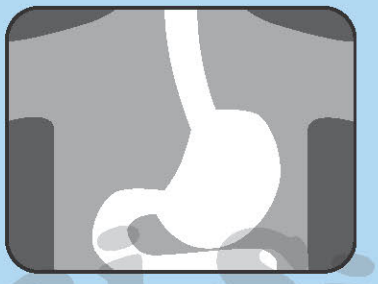
Cs 55 Cesium

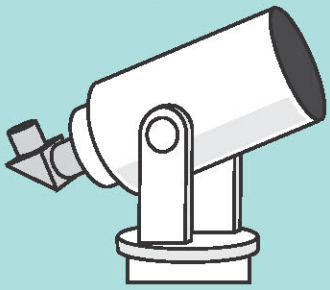
Atomic Clocks

Ba 56 Barium



X-Ray Diagnosis

La 57 Lanthanum



Telescope Lenses

Ce 58 Cerium

Lighter Flints

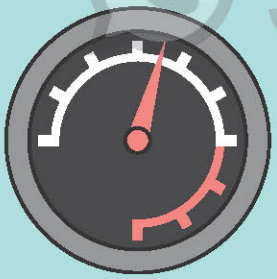
Pr 59 Praseodymium

Torchworkers' Eyeglasses

Nd 60 Neodymium

Electric Motor Magnets

Pm 61 Promethium

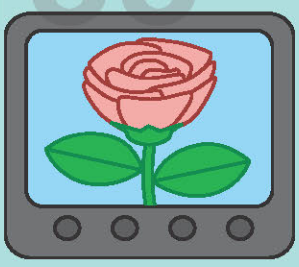


Luminous Dials

Sm 62 Samarium

Electric Motor Magnets

Eu 63 Europium



Color Televisions

SaiSir
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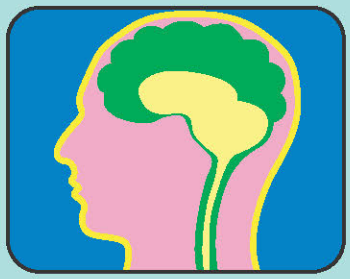
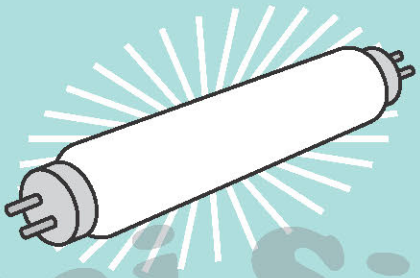
Gd 64 Gadolinium



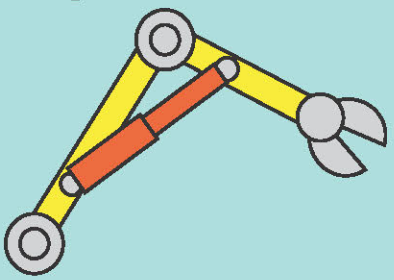
MRI Diagnosis

Tb 65 Terbium



Fluorescent Lamps

Dy 66 Dysprosium

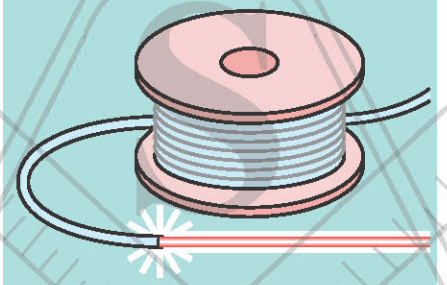


Smart Material Actuators

Ho 67 Holmium

Laser Surgery

Er 68 Erbium

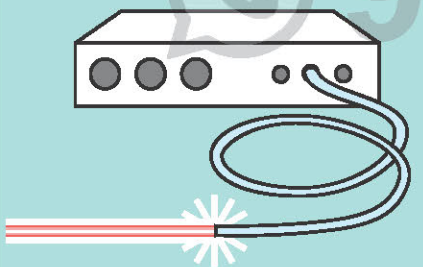


Optical Fiber Communications

Tm 69 Thulium

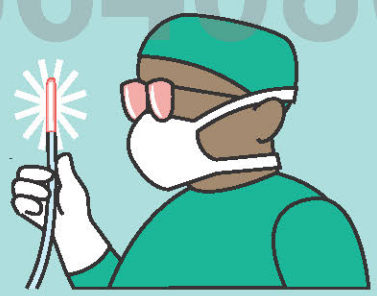
Laser Surgery

Yb 70 Ytterbium



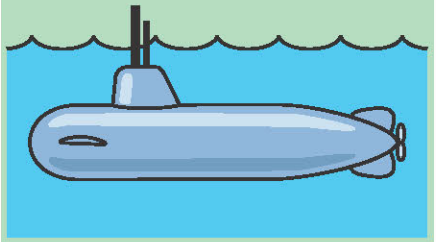
Scientific Fiber Lasers

Lu 71 Lutetium



Photodynamic Medicine

Hf 72 Hafnium



Nuclear Submarines

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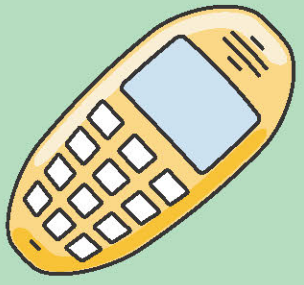
Ta 73
Tantalum

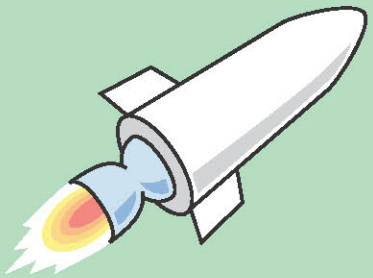


Mobile Phones

W 74
Tungsten

Lamp Filaments

Re 75
Rhenium



Rocket Engines

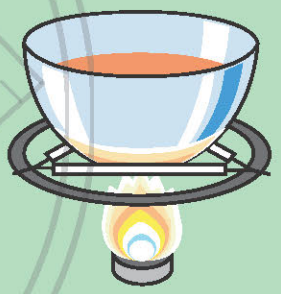
Os 76
Osmium

Pen Points

Ir 77
Iridium

Spark Plugs

Pt 78
Platinum

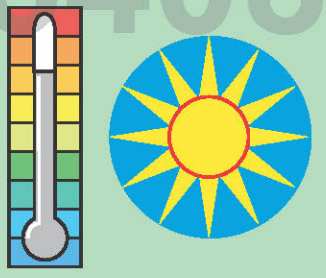


Labware

Au 79
Gold

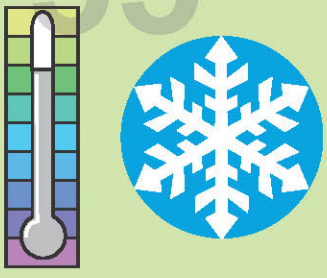
Jewelry

Hg 80
Mercury



Thermometers

Tl 81
Thallium



Low-Temperature Thermometers

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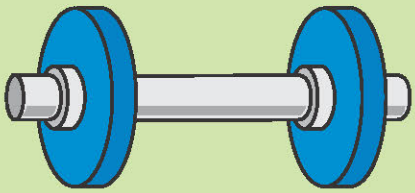
Pb 82
Lead



Weights

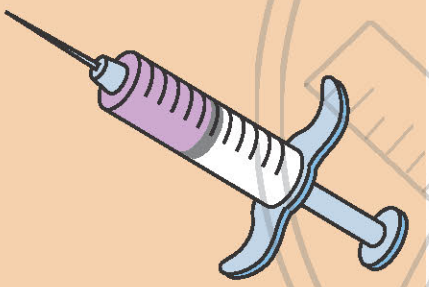
Bi 83
Bismuth

Fire Sprinklers

Po 84
Polonium

Anti-Static Brushes

At 85
Astatine

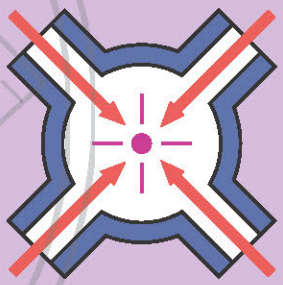


Radioactive Medicine

Rn 86
Radon

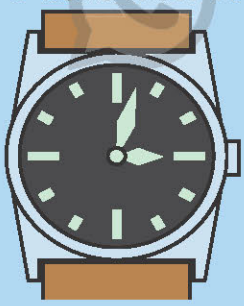
Surgical Implants

Fr 87
Francium



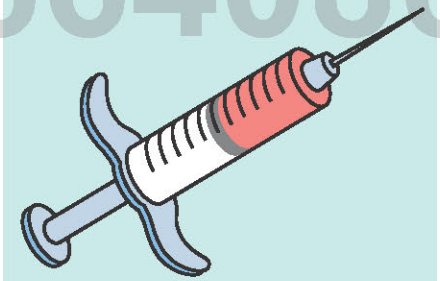
Laser Atom Traps

Ra 88
Radium



Luminous Watches

Ac 89
Actinium



Radioactive Medicine

Th 90
Thorium

Gas Lamp Mantles

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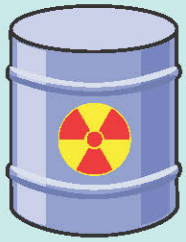
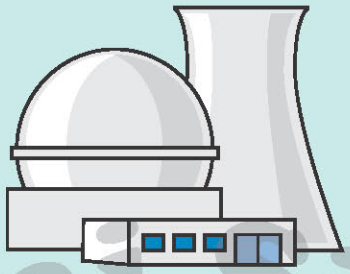
Pa 91 Protactinium



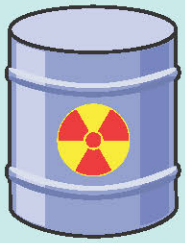
Radioactive Waste

U 92 Uranium



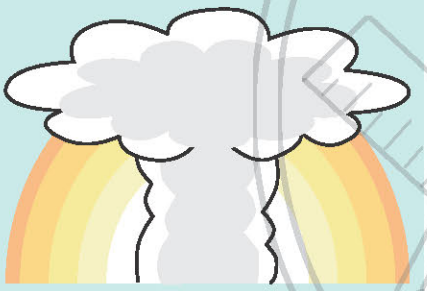
Nuclear Power

Np 93 Neptunium



Radioactive Waste

Pu 94 Plutonium

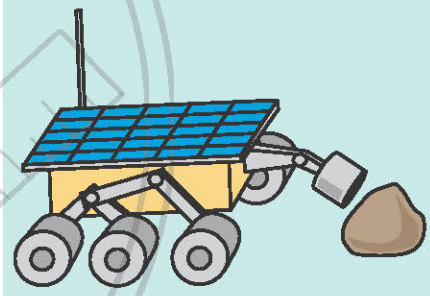


Nuclear Weapons

Am 95 Americium

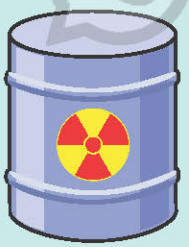
Smoke Detectors

Cm 96 Curium



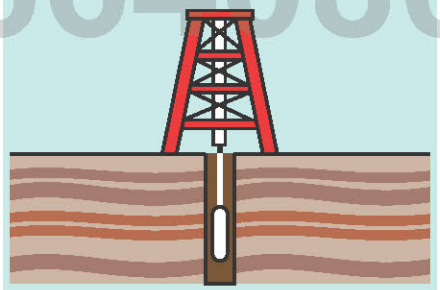
Mineral Analyzers

Bk 97 Berkelium



Radioactive Waste

Cf 98 Californium



Mineral Analyzers

Es 99 Einsteinium

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Fm 100
Fermium

Md 101
Mendelevium

No 102
Nobelium

Lr 103
Lawrencium

Rf 104
Rutherfordium

Db 105
Dubnium

Sg 106
Seaborgium

Bh 107
Bohrium

Hs 108
Hassium

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Mt X 109
Meitnerium

Ds X 110
Darmstadtium

Rg X 111
Roentgenium

Cn X 112
Copernicium

Nh X 113
Nihonium

Fl X 114
Flerovium

Mc X 115
Moscovium

Lv X 116
Livermorium

Ts X 117
Tennessine

Og X 118
Oganesson

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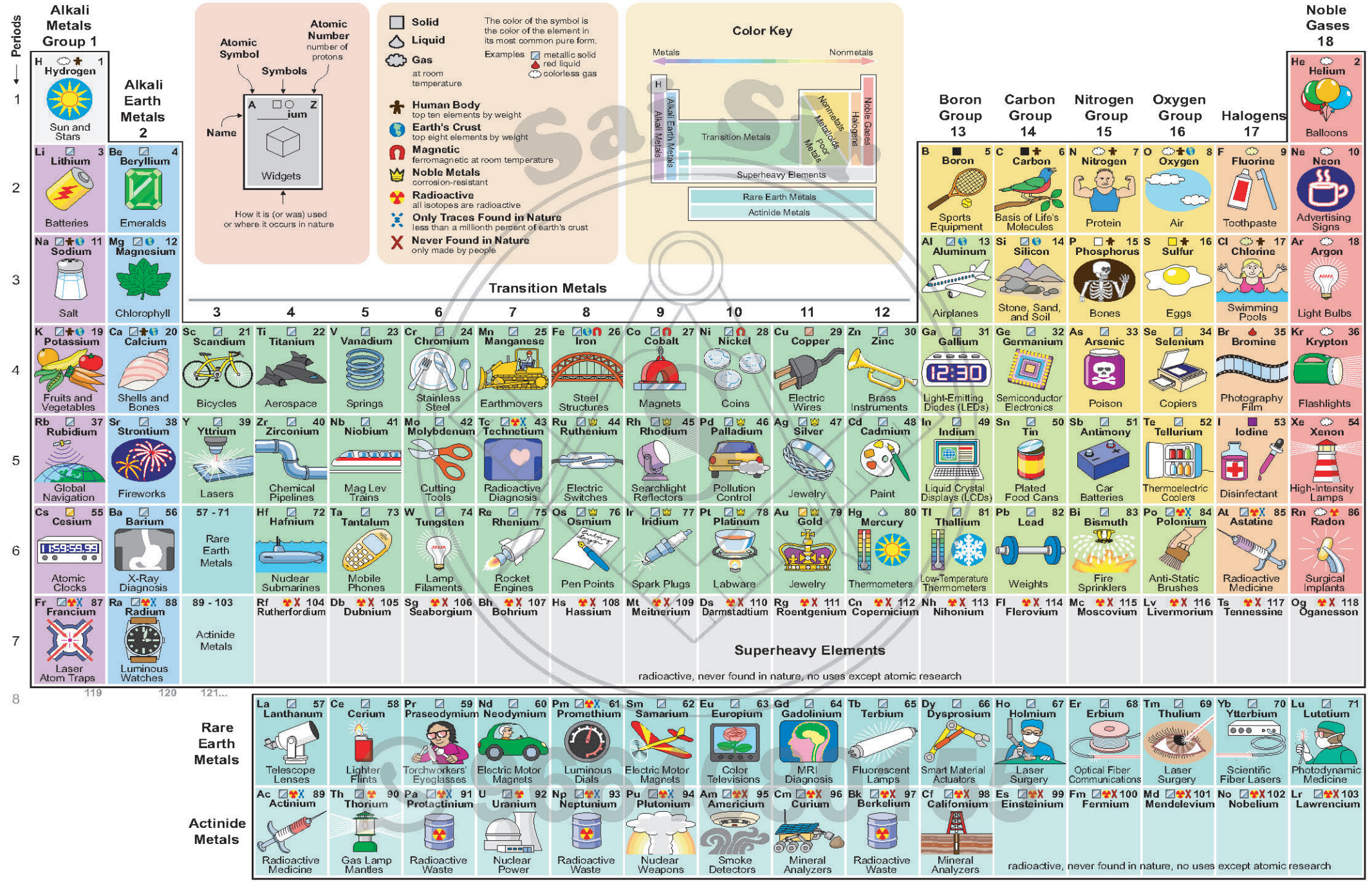
The Periodic Table of the Elements, in Pictures



Designed & Developed by: Sai Sir (Students Academy)