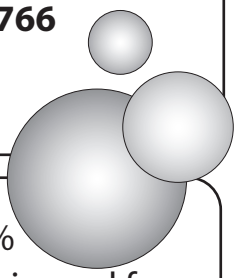
H

HYDROGEN

Class: **non-metal**

Date: **1766**



Hydrogen makes up 90% of the Universe's mass. It is used for metal refining and rocket fuel. Colourless.

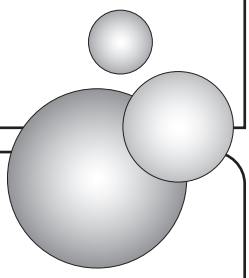
Melting point:	**-259.14 (°C)**
Boiling point:	**-252.87 (°C)**
Density:	**0.00009 (g/cm³@273K)**
Mass number:	**1**
Atomic number:	**1**
Number of neutrons:	**0**

He

HELIUM

Class: **noble**

Date: **1868**



Helium is used for filling balloons and in the air mixture breathed by deep sea divers. Colourless.

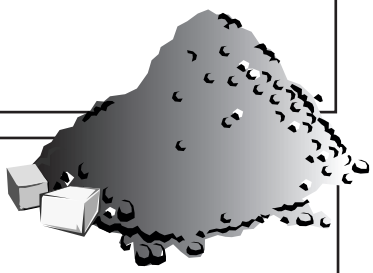
Melting point:	**-272.0 (°C)**
Boiling point:	**-268.6 (°C)**
Density:	**0.000179 (g/cm³@273K)**
Mass number:	**4**
Atomic number:	**2**
Number of neutrons:	**2**

Li

LITHIUM

Class: **alkali metal**

Date: **1817**



Lithium compounds are used in batteries, ceramics and lubricants. Silver colour.

Melting point:	**180.54 (°C)**
Boiling point:	**1347.0 (°C)**
Density:	**0.53 (g/cm³@293K)**
Mass number:	**7**
Atomic number:	**3**
Number of neutrons:	**4**

C

CARBON

Class: **non-metal**

Date: **unknown**

Carbon is the basic element of life. Graphite (black) is used for steel making, filters and pencils. Diamond (colourless) is used for jewellery and cutting tools.

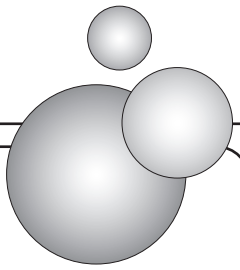
Melting point:	**3500.0 (°C)**
Boiling point:	**4827.0 (°C)**
Density (diamond):	**3.51 (g/cm³@293K)**
Mass number:	**12**
Atomic number:	**6**
Number of neutrons:	**6**

N

NITROGEN

Class: **non-metal**

Date: **1772**



Nitrogen forms most of our atmosphere (78%). Colourless.

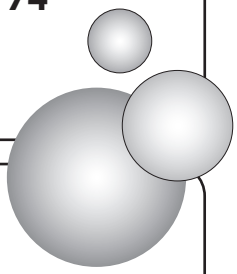
Melting point:	**-209.9 (°C)**
Boiling point:	**-195.8 (°C)**
Density:	**0.00125 (g/cm³@273K)**
Mass number:	**14**
Atomic number:	**7**
Number of neutrons:	**7**

O

OXYGEN

Class: **non-metal**

Date: **1774**



Oxygen makes up 21% of our atmosphere. Oxygen is needed for life - it is used to release energy from food in the process of respiration. Colourless.

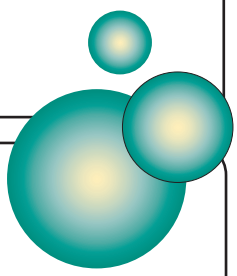
Melting point:	**-218.4 (°C)**
Boiling point:	**-183.0 (°C)**
Density:	**0.00143 (g/cm³@273K)**
Mass number:	**16**
Atomic number:	**8**
Number of neutrons:	**8**

F

FLUORINE

Class: **halogen**

Date: **1886**



Fluorine compounds are used to make coolants, for example in fridges. Pale green colour.

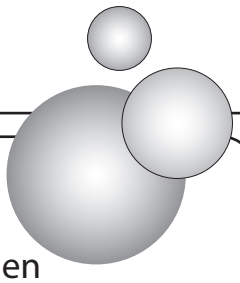
Melting point:	**-219.62 (°C)**
Boiling point:	**-188.14 (°C)**
Density:	**0.0017 (g/cm³@273K)**
Mass number:	**19**
Atomic number:	**9**
Number of neutrons:	**10**

Ne

NEON

Class: **noble**

Date: **1898**



Neon is used for lighting because it gives out red light when an electric current is passed through it. Colourless.

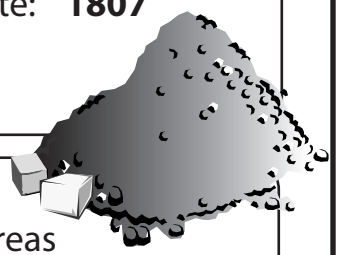
Melting point:	**-248.6 (°C)**
Boiling point:	**-246.1 (°C)**
Density:	**0.0009 (g/cm³@273K)**
Mass number:	**20**
Atomic number:	**10**
Number of neutrons:	**10**

Na

SODIUM

Class: **alkali metal**

Date: **1807**



Sodium compounds have many uses in areas like medicine and agriculture. Sodium chloride is common table salt. Silver colour.

Melting point:	**97.8 (°C)**
Boiling point:	**883.0 (°C)**
Density:	**0.971 (g/cm³@293K)**
Mass number:	**23**
Atomic number:	**11**
Number of neutrons:	**12**

Mg

MAGNESIUM

Class: **alk. earth**

Date: **1755**

Magnesium compounds are used in missiles, fireworks and aircraft production. Grey/silver.

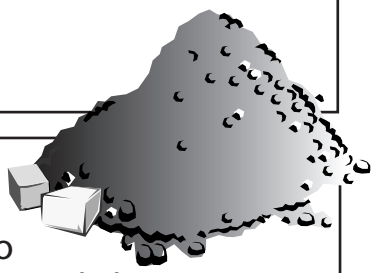
Melting point:	**650.0 (°C)**
Boiling point:	**1090.0 (°C)**
Density:	**1.738 (g/cm³@293K)**
Mass number:	**24**
Atomic number:	**12**
Number of neutrons:	**12**

Al

ALUMINIUM

Class: **metal**

Date: **1825**



Aluminium has many industrial uses. It is used to make drinks cans, and aluminium alloys are used in airplane manufacture. Silver colour.

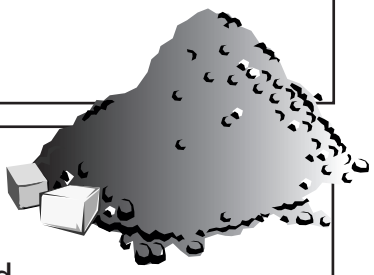
Melting point:	**660.37 (°C)**
Boiling point:	**2467.0 (°C)**
Density:	**2.702 (g/cm³@293K)**
Mass number:	**27**
Atomic number:	**13**
Number of neutrons:	**14**

Si

SILICON

Class: **metalloid**

Date: **1823**



Silicon is used in glass manufacture and in semi-conductors. Grey colour.

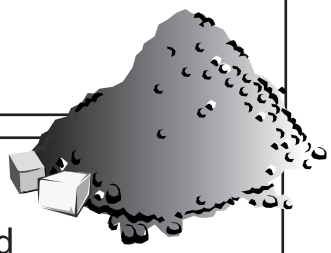
Melting point:	**1410.0 (°C)**
Boiling point:	**2355.0 (°C)**
Density:	**2.329 (g/cm³@293K)**
Mass number:	**28**
Atomic number:	**14**
Number of neutrons:	**14**

P

PHOSPHORUS

Class: **non-metal**

Date: **1669**



Phosphorus compounds are used in fertilisers and detergents. White colour.

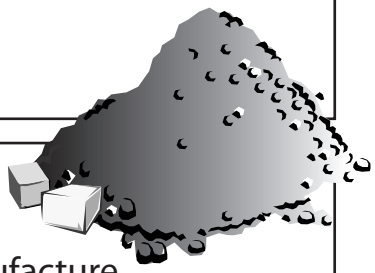
Melting point:	**44.1 (°C)**
Boiling point:	**280.0 (°C)**
Density:	**1.82 (g/cm³@293K)**
Mass number:	**31**
Atomic number:	**15**
Number of neutrons:	**16**

S

SULPHUR

Class: **non-metal**

Date: **unknown**



Sulphur compounds are used in the manufacture of matches, gun powder and medicines. Yellow colour.

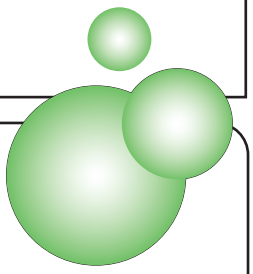
Melting point:	**112.8 (°C)**
Boiling point:	**444.6 (°C)**
Density:	**2.07 (g/cm³@293K)**
Mass number:	**32**
Atomic number:	**16**
Number of neutrons:	**16**

Cl

CHLORINE

Class: **halogen**

Date: **1774**



Chlorine compounds are used in water purification and the manufacture of bleaches. Green colour.

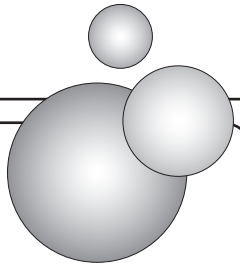
Melting point:	**-100.98 (°C)**
Boiling point:	**-34.6 (°C)**
Density:	**0.00321 (g/cm³@273K)**
Mass number:	**35**
Atomic number:	**17**
Number of neutrons:	**18**

Ar

ARGON

Class: **noble**

Date: **1894**



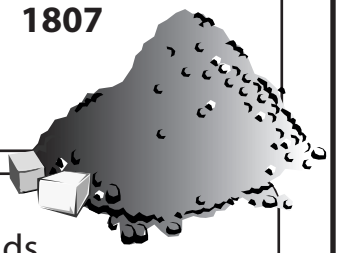
Argon is used for lighting because it gives out purple light when an electric current is passed through it. Colourless.

Melting point:	**-189.3 (°C)**
Boiling point:	**-186.0 (°C)**
Density:	**0.00178 (g/cm³@273K)**
Mass number:	**40**
Atomic number:	**18**
Number of neutrons:	**22**

K — POTASSIUM

Class: **alkali metal**

Date: **1807**



Potassium compounds are used in the manufacture of glass and soap. Silver colour.

Melting point:	**63.65 (°C)**
Boiling point:	**774.0 (°C)**
Density:	**0.862 (g/cm³@293K)**
Mass number:	**39**
Atomic number:	**19**
Number of neutrons:	**20**

Ca — CALCIUM

Class: **alk. earth**

Date: **1808**

Calcium compounds are needed in living organisms to make bones, teeth and shells. Silver/white colour.

Melting point:	**839.0 (°C)**
Boiling point:	**1484.0 (°C)**
Density:	**1.55 (g/cm³@293K)**
Mass number:	**40**
Atomic number:	**20**
Number of neutrons:	**20**

Fe — IRON

Class: **transition metal**

Date: **unknown**

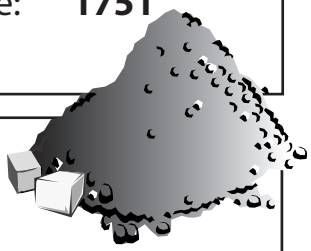
Iron is used in the manufacture of steel, and in red blood cells it is part of haemoglobin, a molecule that carries oxygen around the body. Silver/grey colour.

Melting point:	**1535.0 (°C)**
Boiling point:	**2750.0 (°C)**
Density:	**7.86 (g/cm³@293K)**
Mass number:	**56**
Atomic number:	**26**
Number of neutrons:	**30**

Ni — NICKEL

Class: **transition metal**

Date: **1751**



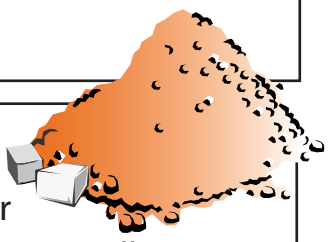
Nickel is used for electroplating metal alloys and in nickel-cadmium batteries. White colour.

Melting point:	**1453.0 (°C)**
Boiling point:	**2732.0 (°C)**
Density:	**8.902 (g/cm³@293K)**
Mass number:	**59**
Atomic number:	**28**
Number of neutrons:	**31**

Cu — COPPER

Class: **transition metal**

Date: **unknown**



Copper is an electrical conductor and is used for wiring, jewellery, coins and pipes. Red/orange colour.

Melting point:	**1083.0 (°C)**
Boiling point:	**2567.0 (°C)**
Density:	**8.96 (g/cm³@293K)**
Mass number:	**64**
Atomic number:	**29**
Number of neutrons:	**35**

Zn — ZINC

Class: **transition metal**

Date: **Unknown**

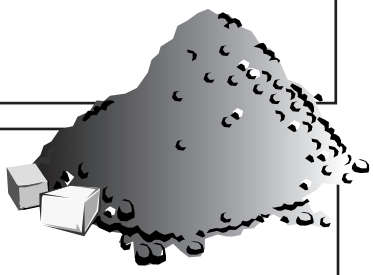
Zinc is used to coat metals for rust protection, and brass, bronze and nickel are zinc alloys. Blue/silver colour.

Melting point:	**419.58 (°C)**
Boiling point:	**907.0 (°C)**
Density:	**7.133 (g/cm³@293K)**
Mass number:	**65**
Atomic number:	**30**
Number of neutrons:	**35**

As — ARSENIC

Class: **metalloid**

Date: **1250**



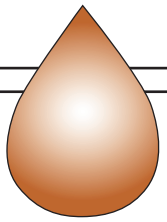
Arsenic is used in poisons and as an electrical conductor in semi-conductors. Grey colour.

Melting point:	**817.0 (°C)**
Boiling point:	**613.0 (°C)**
Density:	**5.72 (g/cm³@293K)**
Mass number:	**75**
Atomic number:	**33**
Number of neutrons:	**42**

Br — BROMINE

Class: **halogen**

Date: **1826**



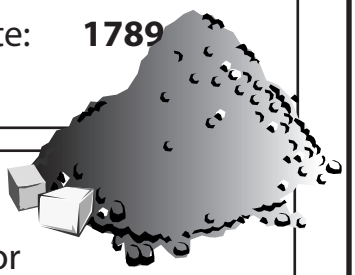
Bromine compounds are used in the manufacture of flame proofing materials, photography, dyes and medicines. Red colour.

Melting point:	**-7.2 (°C)**
Boiling point:	**58.78 (°C)**
Density:	**3.119 (g/cm³@293K)**
Mass number:	**80**
Atomic number:	**35**
Number of neutrons:	**45**

Zr — ZIRCONIUM

Class: **transition metal**

Date: **1789**



Zirconium is used to make cladding for nuclear fuel reactors and containers for corrosive substances. Grey colour.

Melting point:	**1852.0 (°C)**
Boiling point:	**4377.0 (°C)**
Density:	**6.49 (g/cm³@293K)**
Mass number:	**91**
Atomic number:	**40**
Number of neutrons:	**51**

Ag — SILVER

Class: **metal**

Date: **unknown**

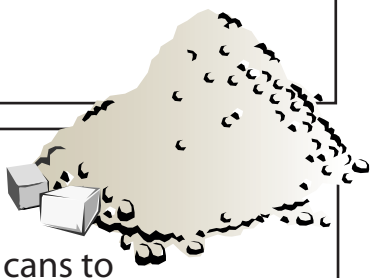
Silver is used for jewellery, and silver compounds are used in photography. Silver colour.

Melting point:	**961.93 (°C)**
Boiling point:	**2212.0 (°C)**
Density:	**10.5 (g/cm³@293K)**
Mass number:	**108**
Atomic number:	**47**
Number of neutrons:	**61**

Sn — TIN

Class: **metal**

Date: **unknown**



Tin is used as a coating for steel cans to prevent corrosion. White colour.

Melting point:	**231.9 (°C)**
Boiling point:	**2270.0 (°C)**
Density:	**7.31 (g/cm³@293K)**
Mass number:	**119**
Atomic number:	**50**
Number of neutrons:	**69**

I — IODINE

Class: **halogen**

Date: **1811**

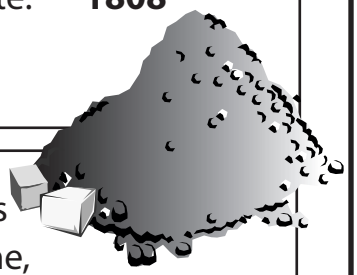
Iodine compounds are required in the body, and are also used in photography and as disinfectants. Dark purple colour.

Melting point:	**113.5 (°C)**
Boiling point:	**184.0 (°C)**
Density:	**4.93 (g/cm³@293K)**
Mass number:	**127**
Atomic number:	**53**
Number of neutrons:	**74**

Ba — BARIUM

Class: **alk. earth**

Date: **1808**



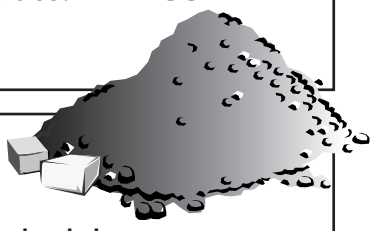
Barium compounds are used in medicine, paint and rubber manufacture. Silver colour.

Melting point:	**725.0 (°C)**
Boiling point:	**1637.0 (°C)**
Density:	**3.51 (g/cm³@293K)**
Mass number:	**137**
Atomic number:	**56**
Number of neutrons:	**81**

Pt — PLATINUM

Class: **transition metal**

Date: **1735**



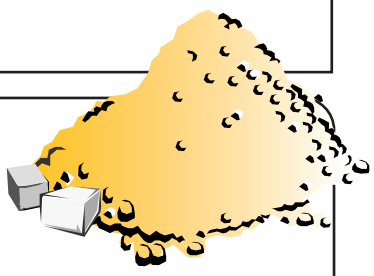
Platinum is used for jewellery, as a catalyst and to make laboratory equipment (electrodes, wires and containers). Silver colour.

Melting point:	**1772.0 (°C)**
Boiling point:	**3827.0 (°C)**
Density:	**21.45 (g/cm³@293K)**
Mass number:	**195**
Atomic number:	**78**
Number of neutrons:	**117**

Au — GOLD

Class: **transition metal**

Date: **unknown**



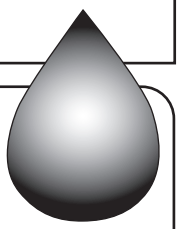
Gold is used for jewellery, coins and electronics. Gold colour.

Melting point:	**1064.43 (°C)**
Boiling point:	**2807.0 (°C)**
Density:	**19.32 (g/cm³@293K)**
Mass number:	**197**
Atomic number:	**79**
Number of neutrons:	**118**

Hg — MERCURY

Class: **transition metal**

Date: **unknown**



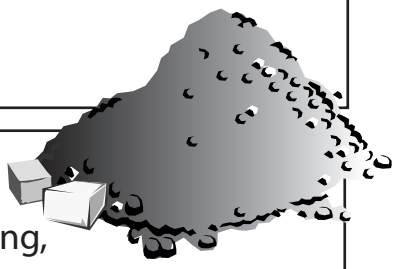
Mercury is used in thermometers, barometers, fluorescent lamps, switches and batteries. Silver colour.

Melting point:	**-38.87 (°C)**
Boiling point:	**356.58 (°C)**
Density:	**13.456 (g/cm³@293K)**
Mass number:	**201**
Atomic number:	**80**
Number of neutrons:	**121**

Pb — LEAD

Class: **metal**

Date: **unknown**



Lead is used for radiation shielding, solder and batteries. Grey colour.

Melting point:	**327.5 (°C)**
Boiling point:	**1740.0 (°C)**
Density:	**11.34 (g/cm³@293K)**
Mass number:	**207**
Atomic number:	**82**
Number of neutrons:	**125**

Pu — PLUTONIUM

Class: **rare earth**

Date: **1940**

Plutonium is used as a fuel source for nuclear reactors and nuclear bombs. Silver/white colour.

Melting point:	**639.5 (°C)**
Boiling point:	**3235.0 (°C)**
Density:	**19.84 (g/cm³@293K)**
Mass number:	**244**
Atomic number:	**94**
Number of neutrons:	**150**

Play Top Science and learn more about elements!

CATEGORIES

Class: This tells you to which group the element belongs.

Date: This tells you when the element was discovered. 'Unknown' means the element was discovered by ancient cultures, and an accurate date is not known.

Melting Point: The temperature at which the element changes from solid to liquid state.

Boiling Point: The temperature at which the element changes from liquid to gas state.

Density: The number of grams of the element in every cm^3.

Atomic Number: Number of protons in an atom of the element.

Number of Neutrons: Number of neutrons in an atom of the element.

Mass Number: Number of protons + number of neutrons in an atom of the element.