

Introduction

This is a literacy activity about the naming of elements in the Periodic Table. It can easily be adapted as a web search task. Two versions of the text are provided. One is text only, the other includes possible activities.

Running the activity

The text file can be used as reading activity to settle pupils at the start of a lesson, or as a finisher after a lesson on the Periodic Table.

Safety

Not applicable.

More ideas

- Use the word list for a websearch task, where pupils research the sources of element names.

Learning outcomes

- Names of elements and their origins
- Historical appreciation of science

Where the activity fits in

Work on the Periodic Table
QCA SoW Unit 8F Compounds & mixtures

Skills

Vocabulary, ICT

Acknowledgements

Thank you to Caroline McGrath for the original basis for this resource.

Not so elementary

Unless you have a good knowledge of Latin the meaning of the names of the elements are far from obvious and in some cases are extremely unusual. Many of the newer elements were named after famous scientists, usually nuclear physicists or the discoverers of the elements i.e. Curium, Einsteinium, Fermium, Hahnium (also now called Dubnium), Mendelevium and Nobelium are all obvious, but Gadolinium (named after a Swedish scientist) and Samarium (named after Colonel Samarski, a Russian mine inspector) are much less well known.

The colour of the element or its ore often gave rise to the name:

Bismuth	white mass	Caesium	sky blue
Chlorine	green/yellow	Chromium	coloured
Indium	indigo	Iodine	violet
Platinum	silvery	Zirconium	golden
Rhodium	rose	Iridium	rainbow
Rubidium	deep red	Thallium	green shoot

The planets and bodies of the solar system were also used:

Uranium, Mercury, Neptunium and Plutonium are all obvious. Cerium and Palladium were named after asteroids Ceres and Pallas. Selenium was named after the Moon, Helium the Sun, and Tellurium the Earth, but what about Saturn, Jupiter, Uranus and Mars? Well, Venus appears as Phosphorus, the bringer of light, but Saturn and Jupiter have never been commemorated – and who would name an element after a chocolate bar?

Discoverers of elements often chose to commemorate their country, although again the Latin names hide some of them:

Francium	France
Gallium	France
Germanium	Germany
Niobium	Not Colombia but America (was once known in the USA as Colombium)
Polonium	Poland (Mme Curie's home)
Ruthenium	Russia
Scandium	Scandinavia
Thulium	Scandinavia
Copper	Cyprus

Even some towns were honoured:

Hafnium	Copenhagen
Holmium	Stockholm
Berkelium	Berkeley, USA
Strontium	Strontian, Scotland

Rhenium is named after the Rhine and Magnesium after Magnesia in Greece.

Erbium, Terbium, Yttrium and Ytterbium are all named after the small town of Ytterby in Sweden.

Mythological characters provided the inspiration for Niobium and Tantalum - Tantalus and his daughter Niobe of course!

Promethium	Prometheus, the old fire stealer
Thorium	Thor
Titanium	Titania

Other elements were named after the difficulty in finding them:

Xenon	the stranger
Krypton	hidden
Dysprosium	hard to get

Others were named after physical attributes:

Barium	heavy
Osmium	smelly
Bromine	stinks
Manganese	magnetic
Beryllium	sweet (Beryllium was once known as glucinium, meaning sweet, although tasting beryllium is NOT recommended as it is extremely poisonous. Perhaps if the discoverer had not tasted the ore it could have been called Bloggsium.)

Some unfortunate elements were named as nuisances because they interfered with the smelting of copper and tin:

Cobalt	the goblin
Nickel	Old Nick's metal

One element was even named incorrectly:

Molybdenum	molybdos (thought to be lead)
------------	-------------------------------

And finally, the discovery of element 104 is disputed by two groups that were working independently. The proposed names are Rutherfordium and Kurchatovium (after the Russian physicist Kurchatovium).

Not so elementary

Unless you have a good knowledge of Latin the meaning of the names of the elements are far from obvious and in some cases are extremely unusual. Many of the newer elements were named after famous scientists, usually nuclear physicists or the discoverers of the elements i.e. Curium, Einsteinium, Fermium, Hahnium (also now called Dubnium), Mendeleevium and Nobelium are all obvious, but Gadolinium (named after a Swedish scientist) and Samarium (named after Colonel Samarski, a Russian mine inspector) are much less well known.

Activity One

All the elements that are listed in the paragraph above were named after a person. Find out as much as you can about one of the people.

The colour of the element or its ore often gave rise to the name:

Bismuth	white mass	Caesium	sky blue
Chlorine	green/yellow	Chromium	coloured
Indium	indigo	Iodine	violet
Platinum	silvery	Zirconium	golden
Rhodium	rose	Iridium	rainbow
Rubidium	deep red	Thallium	green shoot

The planets and bodies of the solar system were also used:

Uranium, Mercury, Neptunium and Plutonium are all obvious. Cerium and Palladium were named after asteroids Ceres and Pallas. Selenium was named after the Moon, Helium the Sun, and Tellurium the Earth, but what about Saturn, Jupiter, Uranus and Mars? Well, Venus appears as Phosphorus, the bringer of light, but Saturn and Jupiter have never been commemorated – and who would name an element after a chocolate bar?

Activity Two

Find out the explanation for the names of Selenium, Helium and Tellurium. These names do not look like Moon, Sun or Earth!

Discoverers of elements often chose to commemorate their country, although again the Latin names hide some of them:

Francium	France	Polonium	Poland (Mme Curie's home)
Gallium	France	Ruthenium	Russia
Germanium	Germany	Scandium	Scandinavia
Thulium	Scandinavia	Copper	Cyprus
Niobium	Not Colombia but America (was once known in the USA as Columbium)		

Even some towns were honoured:

Hafnium	Copenhagen
Holmium	Stockholm
Berkelium	Berkeley, USA
Strontium	Strontian, Scotland

Rhenium is named after the Rhine and Magnesium after Magnesia in Greece.

Erbium, Terbium, Yttrium and Ytterbium are all named after the small town of Ytterby in Sweden.

Activity Three

Mark these countries and towns on a map.

Mythological characters provided the inspiration for Niobium and Tantalum - Tantalus and his daughter Niobe of course!

Promethium	Prometheus, the old fire stealer
Thorium	Thor
Titanium	Titania

Activity Four

Find out about the myths involving these characters.

Other elements were named after the difficulty in finding them:

Xenon	the stranger
Krypton	hidden
Dysprosium	hard to get

Others were named after physical attributes:

Barium	heavy
Osmium	smelly
Bromine	stinks
Manganese	magnetic
Beryllium	sweet (Beryllium was once known as glucinium, meaning sweet, although tasting beryllium is NOT recommended as it is extremely poisonous. Perhaps if the discoverer had not tasted the ore it could have been called Bloggsium.)

Some unfortunate elements were named as nuisances because they interfered with the smelting of copper and tin:

Cobalt	the goblin
Nickel	Old Nick's metal

One element was even named incorrectly:

Molybdenum	molybdos (thought to be lead)
------------	-------------------------------

And finally, the discovery of element 104 is disputed by two groups that were working independently. The proposed names are Rutherfordium and Kurchatovium (after the Russian physicist Kurchatovium).