# Mendeleev's Periodic Table (1869)

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|---|---|---|---|---|---|
| | | | Ti=50 | Zr=90 | ?=180 |
| | | | V=51 | Nb=94 | Ta=182 |
| | | | Cr=52 | Mo=96 | W=186 |
| | | | Mn=55 | Rh=104,4 | Pt=197,4 |
| | | | Fe=56 | Ru=104,4 | Ir=198 |
| | | | Ni=Co=59 | Pd=106,6 | Os=199 |
| H=1 | | | Cu=63,4 | Ag=108 | Hg=200 |
| | Be=9,4 | Mg=24 | Zn=65,2 | Cd=112 | |
| | B=11 | Al=27,4 | ?=68 | Ur=116 | Au=197? |
| | C=12 | Si=28 | ?=70 | Sn=118 | |
| | N=14 | P=31 | As=75 | Sb=122 | Bi=210? |
| | O=16 | S=32 | Se=79,4 | Te=128? | |
| | F=19 | Cl=35,5 | Br=80 | J=127 | |
| Li=7 | Na=23 | K=39 | Rb=85,4 | Cs=133 | Tl=204 |
| | | Ca=40 | Sr=87,6 | Ba=137 | Pb=207 |
| | | ?=45 | Ce=92 | | |
| | | ?Er=56 | La=94 | | |
| | | ?Yt=60 | Di=95 | | |
| | | ?In=75,6 | Th=118? | | |

Mendeleev's first published table, from the 1869 abstract in the *Zeitschrift für Chemie*, with his atomic weights and symbols as printed (a comma is the decimal point). Elements run in increasing atomic weight along each row, so each row holds chemical analogues. A dashed tile with a question mark is an entry Mendeleev left open or doubted. J is iodine, Ur is uranium, and Di is didymium, later shown to be a mixture of praseodymium and neodymium.

# Mendeleev Periodic Table PDF (1869 Original): notes

## About this sheet

Mendeleev's first published table, redrawn as printed in the 1869 abstract: his atomic weights and symbols, the German decimal commas, and a dashed outline around the entries marked with a question mark. J is iodine, Ur is uranium, and Di is didymium.

## Best for

History of science lessons, and comparing the first arrangement of the elements with the modern table.

## Printing

Sized for A4 portrait: print at 100% (actual size). Black and white, so it photocopies cleanly.

## What the data shows

Mendeleev ordered the elements by atomic weight, not atomic number, and left question-marked gaps where he expected an element to turn up.

The modern table orders the elements by atomic number and holds 118, so setting the two side by side shows how much has been found since 1869.

## How the table is organised

Atomic number counts the protons in an atom's nucleus and fixes each element's place in the table. Moving down a group adds a new electron shell, so atomic radius grows and metallic character increases.

More periodic table PDFs are free to download at https://periodictable.page/periodic-table-pdf/.