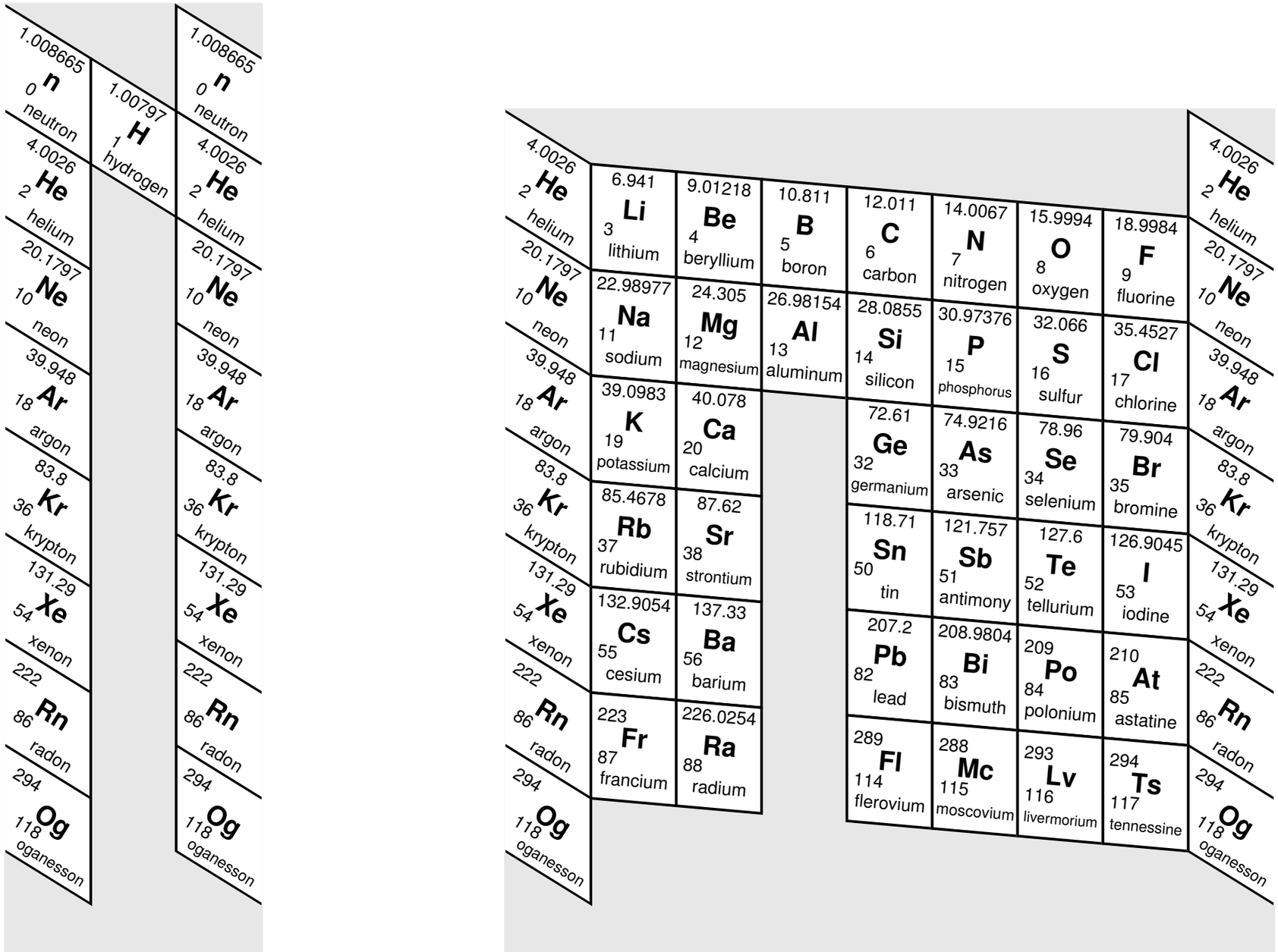
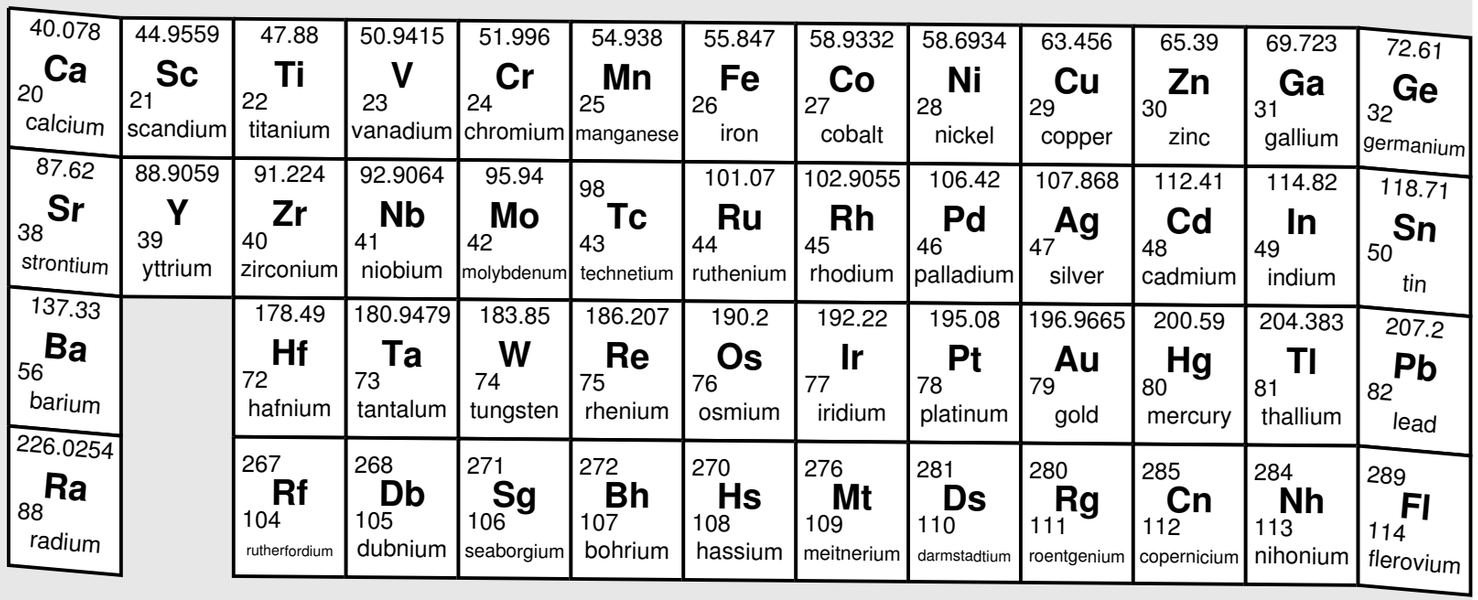
Building the Three-Dimensional Model

To fully appreciate the 3D periodic table, you can build an actual three-dimensional model.

Use double-sided tape to join the back (unprinted) side of part “A” to the front (printed) side of part “B”.

- Cut out the four pieces.
- Do not cut away the gray background from the gaps between elements, or from the bottom of any of the pieces. These background areas hold the model together and allow it to stand up straight.
- In contrast, you should cut away the gray background from the top of each piece, above the elements.
- The best strategy is to tape the rare earth piece onto the transition metal piece while the latter is still flat. Similarly, tape the transition metal piece (carrying the rare earths) onto the main group piece while the latter is still flat. Then roll the main group into a cylinder.
- When closing the main group piece into a cylinder, it helps to have an object that you can slip inside the model and push against.
- Closing the hydrogen group piece into a cylinder is even trickier, because it is so small. A pen, pencil, or paintbrush-handle might work.


1.008665 n 0 neutron
1.00797 H 1 hydrogen
4.0026 He 2 helium
20.1797 Ne 10 neon
39.948 Ar 18 argon
83.8 Kr 36 krypton
131.29 Xe 54 xenon
222 Rn 86 radon
294 Og 118 oganesson
6.941 Li 3 lithium
9.01218 Be 4 beryllium
10.811 B 5 boron
12.011 C 6 carbon
14.0067 N 7 nitrogen
15.9994 O 8 oxygen
18.9984 F 9 fluorine
22.98977 Na 11 sodium
24.305 Mg 12 magnesium
26.98154 Al 13 aluminum
28.0855 Si 14 silicon
30.97376 P 15 phosphorus
32.066 S 16 sulfur
35.4527 Cl 17 chlorine
39.0983 K 19 potassium
40.078 Ca 20 calcium
72.61 Ge 32 germanium
74.9216 As 33 arsenic
78.96 Se 34 selenium
79.904 Br 35 bromine
85.4678 Rb 37 rubidium
87.62 Sr 38 strontium
118.71 Sn 50 tin
121.757 Sb 51 antimony
127.6 Te 52 tellurium
126.9045 I 53 iodine
132.9054 Cs 55 cesium
137.33 Ba 56 barium
207.2 Pb 82 lead
208.9804 Bi 83 bismuth
209 Po 84 polonium
210 At 85 astatine
223 Fr 87 francium
226.0254 Ra 88 radium
289 Fl 114 flerovium
288 Mc 115 moscovium
293 Lv 116 livermorium
294 Ts 117 tennessine


40.078
Ca
20
calcium
44.9559
Sc
21
scandium
47.88
Ti
22
titanium
50.9415
V
23
vanadium
51.996
Cr
24
chromium
54.938
Mn
25
manganese
55.847
Fe
26
iron
58.9332
Co
27
cobalt
58.6934
Ni
28
nickel
63.456
Cu
29
copper
65.39
Zn
30
zinc
69.723
Ga
31
gallium
72.61
Ge
32
germanium
87.62
Sr
38
strontium
88.9059
Y
39
yttrium
91.224
Zr
40
zirconium
92.9064
Nb
41
niobium
95.94
Mo
42
molybdenum
98
Tc
43
technetium
101.07
Ru
44
ruthenium
102.9055
Rh
45
rhodium
106.42
Pd
46
palladium
107.868
Ag
47
silver
112.41
Cd
48
cadmium
114.82
In
49
indium
118.71
Sn
50
tin
137.33
Ba
56
barium
178.49
Hf
72
hafnium
180.9479
Ta
73
tantalum
183.85
W
74
tungsten
186.207
Re
75
rhenium
190.2
Os
76
osmium
192.22
Ir
77
iridium
195.08
Pt
78
platinum
196.9665
Au
79
gold
200.59
Hg
80
mercury
204.383
Tl
81
thallium
207.2
Pb
82
lead
226.0254
Ra
88
radium
267
Rf
104
rutherfordium
268
Db
105
dubnium
271
Sg
106
seaborgium
272
Bh
107
bohrium
270
Hs
108
hassium
276
Mt
109
meitnerium
281
Ds
110
darmstadtium
280
Rg
111
roentgenium
285
Cn
112
copernicium
284
Nh
113
nihonium
289
Fl
114
flerovium

137.33 **Ba** 56 barium	138.9055 **La** 57 lanthanum	140.12 **Ce** 58 cerium	140.9077 **Pr** 59 praseodymium	144.24 **Nd** 60 neodymium	145 **Pm** 61 promethium	150.36 **Sm** 62 samarium	151.965 **Eu** 63 europium	157.25 **Gd** 64 gadolinium	158.9253 **Tb** 65 terbium	162.5 **Dy** 66 dysprosium	164.9303 **Ho** 67 holmium	167.26 **Er** 68 erbium	168.9342 **Tm** 69 thulium	173.04 **Yb** 70 ytterbium	174.967 **Lu** 71 lutetium	178.49 **Hf** 72 hafnium
226.0254 **Ra** 88 radium	227 **Ac** 89 actinium	232.0381 **Th** 90 thorium	231.0359 **Pa** 91 protactinium	238.029 **U** 92 uranium	237.0482 **Np** 93 neptunium	244 **Pu** 94 plutonium	243 **Am** 95 americium	247 **Cm** 96 curium	247 **Bk** 97 berkelium	251 **Cf** 98 californium	252 **Es** 99 einsteinium	257 **Fm** 100 fermium	258 **Md** 101 mendelevium	259 **No** 102 nobelium	260 **Lr** 103 lawrencium	267 **Rf** 104 rutherfordium