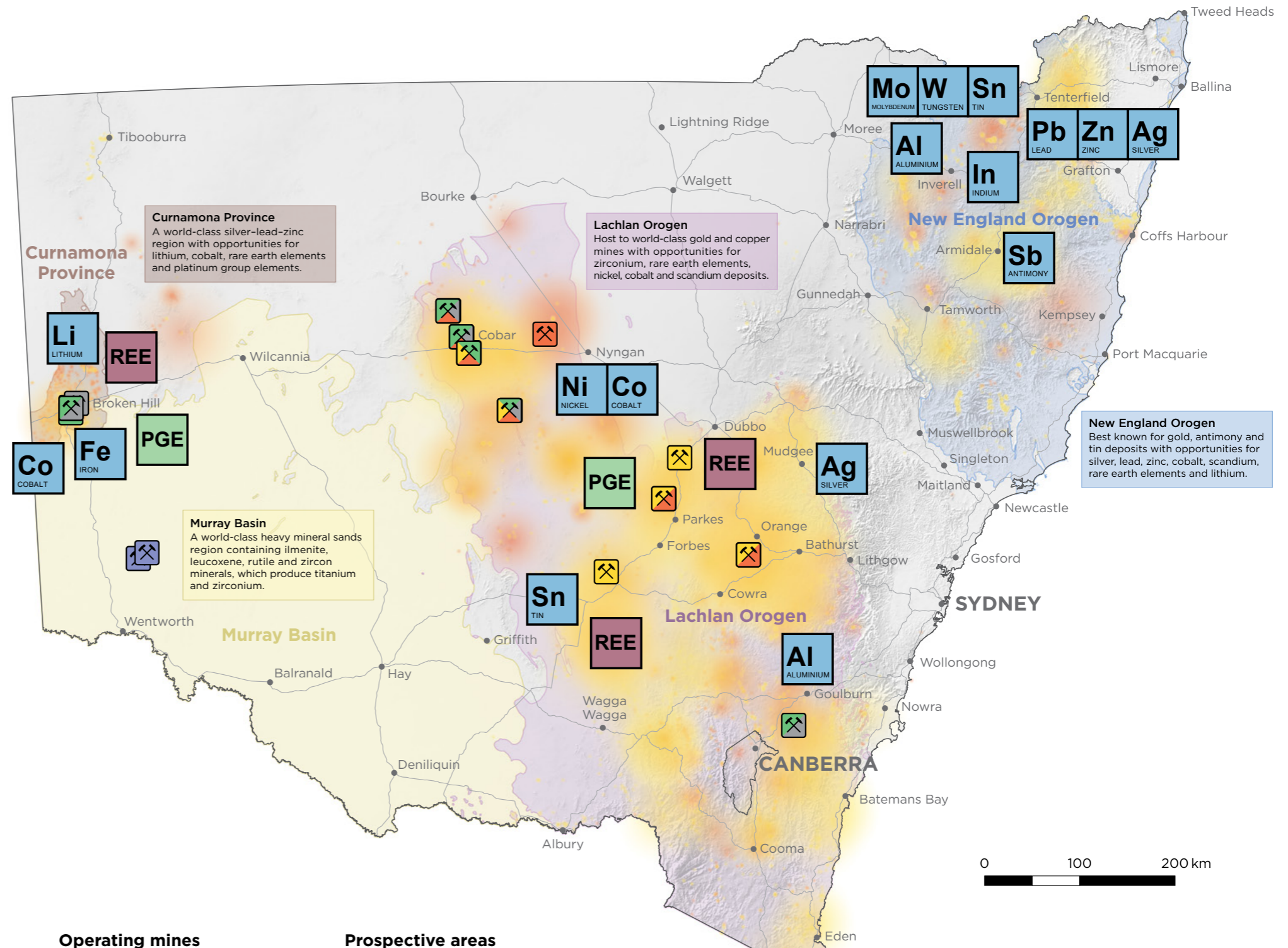
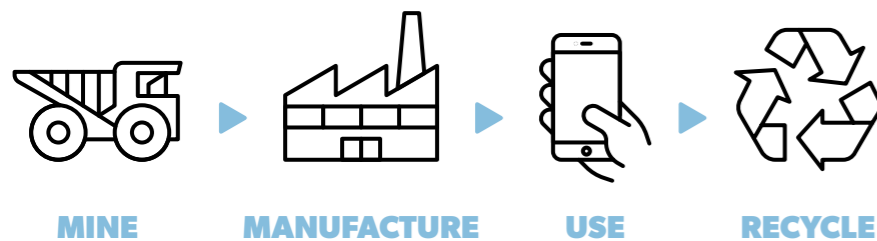


# The periodic table of mobile phones

Exploration and mining play a significant role in our daily lives. For example, the average mobile phone contains over 25 metals sourced from mineral deposits. The map shows where some of these metals are mined in NSW and where possible new sources may be found.

H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	*	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	**	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og
		* La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu															
		** Ac Th Pa U Np Pu Am Cm Bk Cf Es Fm Md No Lr															

See phone parts section to identify which specific **platinum group elements** and **rare earth elements** are used in mobile phones.



### Operating mines

- Copper
- Gold
- Lead & zinc
- Silver
- Titanium & zirconium (from heavy mineral sands)

### Prospective areas

- Copper
- Gold
- PGE** Platinum group elements  
May contain ruthenium, rhodium, palladium, osmium, iridium, and/or platinum
- REE** Rare earth elements  
May contain lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium and/or yttrium

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Produced by the Geological Survey of New South Wales.

[resourcesandgeoscience.nsw.gov.au](http://resourcesandgeoscience.nsw.gov.au)



# The periodic table of elements

1 <b>H</b> HYDROGEN																	2 <b>He</b> HELIUM
3 <b>Li</b> LITHIUM	4 <b>Be</b> BERYLLIUM											5 <b>B</b> BORON	6 <b>C</b> CARBON	7 <b>N</b> NITROGEN	8 <b>O</b> OXYGEN	9 <b>F</b> FLUORINE	10 <b>Ne</b> NEON
11 <b>Na</b> SODIUM	12 <b>Mg</b> MAGNESIUM											13 <b>Al</b> ALUMINIUM	14 <b>Si</b> SILICON	15 <b>P</b> PHOSPHORUS	16 <b>S</b> SULFUR	17 <b>Cl</b> CHLORINE	18 <b>Ar</b> ARGON
19 <b>K</b> POTASSIUM	20 <b>Ca</b> CALCIUM	21 <b>Sc</b> SCANDIUM	22 <b>Ti</b> TITANIUM	23 <b>V</b> VANADIUM	24 <b>Cr</b> CHROMIUM	25 <b>Mn</b> MANGANESE	26 <b>Fe</b> IRON	27 <b>Co</b> COBALT	28 <b>Ni</b> NICKEL	29 <b>Cu</b> COPPER	30 <b>Zn</b> ZINC	31 <b>Ga</b> GALLIUM	32 <b>Ge</b> GERMANIUM	33 <b>As</b> ARSENIC	34 <b>Se</b> SELENIUM	35 <b>Br</b> BROMINE	36 <b>Kr</b> KRYPTON
37 <b>Rb</b> RUBIDIUM	38 <b>Sr</b> STRONTIUM	39 <b>Y</b> YTTRIUM	40 <b>Zr</b> ZIRCONIUM	41 <b>Nb</b> NIOBIUM	42 <b>Mo</b> MOLYBDENUM	43 <b>Tc</b> TECHNETIUM	44 <b>Ru</b> RUTHENIUM	45 <b>Rh</b> RHODIUM	46 <b>Pd</b> PALLADIUM	47 <b>Ag</b> SILVER	48 <b>Cd</b> CADMIUM	49 <b>In</b> INDIUM	50 <b>Sn</b> TIN	51 <b>Sb</b> ANTIMONY	52 <b>Te</b> TELLURIUM	53 <b>I</b> IODINE	54 <b>Xe</b> XENON
55 <b>Cs</b> CAESIUM	56 <b>Ba</b> BARIUM	57-71 *	72 <b>Hf</b> HAFNIUM	73 <b>Ta</b> TANTALUM	74 <b>W</b> TUNGSTEN	75 <b>Re</b> RHENIUM	76 <b>Os</b> OSMIUM	77 <b>Ir</b> IRIDIUM	78 <b>Pt</b> PLATINUM	79 <b>Au</b> GOLD	80 <b>Hg</b> MERCURY	81 <b>Tl</b> THALLIUM	82 <b>Pb</b> LEAD	83 <b>Bi</b> BISMUTH	84 <b>Po</b> POLONIUM	85 <b>At</b> ASTATINE	86 <b>Rn</b> RADON
87 <b>Fr</b> FRANCIUM	88 <b>Ra</b> RADIUM	89-103 **	104 <b>Rf</b> RUTHERFORDIUM	105 <b>Db</b> DUBNIUM	106 <b>Sg</b> SEABORGIUM	107 <b>Bh</b> BOHRIUM	108 <b>Hs</b> HASSIUM	109 <b>Mt</b> MEITNERIUM	110 <b>Ds</b> DARMSTADIUM	111 <b>Rg</b> ROENTGENIUM	112 <b>Cn</b> COPERNICIUM	113 <b>Nh</b> NIHONIUM	114 <b>Fl</b> FLEROVIUM	115 <b>Mc</b> MOSCOVIUM	116 <b>Lv</b> LIVERMORIUM	117 <b>Ts</b> TENNESSINE	118 <b>Og</b> OGANESSON

* LANTHANIDES	57 <b>La</b> LANTHANUM	58 <b>Ce</b> CERIUM	59 <b>Pr</b> PRASEODYMIUM	60 <b>Nd</b> NEODYMIUM	61 <b>Pm</b> PROMETHIUM	62 <b>Sm</b> SAMARIUM	63 <b>Eu</b> EUROPIUM	64 <b>Gd</b> GADOLINIUM	65 <b>Tb</b> TERBIUM	66 <b>Dy</b> DYSPROSIUM	67 <b>Ho</b> HOLMIUM	68 <b>Er</b> ERBIUM	69 <b>Tm</b> THULIUM	70 <b>Yb</b> YTTERBIUM	71 <b>Lu</b> LUTETIUM
** ACTINIDES	89 <b>Ac</b> ACTINIUM	90 <b>Th</b> THORIUM	91 <b>Pa</b> PROTACTINIUM	92 <b>U</b> URANIUM	93 <b>Np</b> NEPTUNIUM	94 <b>Pu</b> PLUTONIUM	95 <b>Am</b> AMERICIUM	96 <b>Cm</b> CURIUM	97 <b>Bk</b> BERKELIUM	98 <b>Cf</b> CALIFORNIUM	99 <b>Es</b> EINSTEINIUM	100 <b>Fm</b> FERMIUM	101 <b>Md</b> MENDELEVIUM	102 <b>No</b> NOBELIUM	103 <b>Lr</b> LAWRENCIUM

ATOMIC NUMBER
<b>Symbol</b>
NAME

### Circuit board

13 <b>Al</b> ALUMINIUM	16 <b>S</b> SULFUR	29 <b>Cu</b> COPPER	30 <b>Zn</b> ZINC	31 <b>Ga</b> GALLIUM
38 <b>Sr</b> STRONTIUM	40 <b>Zr</b> ZIRCONIUM	41 <b>Nb</b> NIOBIUM	46 <b>Pd</b> PALLADIUM	47 <b>Ag</b> SILVER
50 <b>Sn</b> TIN	51 <b>Sb</b> ANTIMONY	56 <b>Ba</b> BARIUM	73 <b>Ta</b> TANTALUM	78 <b>Pt</b> PLATINUM
79 <b>Au</b> GOLD	80 <b>Hg</b> MERCURY	82 <b>Pb</b> LEAD		

### Battery

3 <b>Li</b> LITHIUM	6 <b>C</b> CARBON	25 <b>Mn</b> MANGANESE	27 <b>Co</b> COBALT	28 <b>Ni</b> NICKEL
48 <b>Cd</b> CADMIUM	65 <b>Tb</b> TERBIUM	66 <b>Dy</b> DYSPROSIUM	68 <b>Er</b> ERBIUM	69 <b>Tm</b> THULIUM
70 <b>Yb</b> YTTERBIUM	71 <b>Lu</b> LUTETIUM			

### LEDs

39 <b>Y</b> YTTRIUM	57 <b>La</b> LANTHANUM	59 <b>Pr</b> PRASEODYMIUM	63 <b>Eu</b> EUROPIUM	64 <b>Gd</b> GADOLINIUM
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### Electronic components

Capacitors, resistors, chips and microprocessors

5 <b>B</b> BORON	6 <b>C</b> CARBON	12 <b>Mg</b> MAGNESIUM	14 <b>Si</b> SILICON	15 <b>P</b> PHOSPHORUS
22 <b>Ti</b> TITANIUM	26 <b>Fe</b> IRON	28 <b>Ni</b> NICKEL	29 <b>Cu</b> COPPER	30 <b>Zn</b> ZINC
31 <b>Ga</b> GALLIUM	33 <b>As</b> ARSENIC	35 <b>Br</b> BROMINE	47 <b>Ag</b> SILVER	60 <b>Nd</b> NEODYMIUM
74 <b>W</b> TUNGSTEN	82 <b>Pb</b> LEAD			

### Touch screen/display

11 <b>Na</b> SODIUM	13 <b>Al</b> ALUMINIUM	14 <b>Si</b> SILICON	17 <b>Cl</b> CHLORINE	19 <b>K</b> POTASSIUM
39 <b>Y</b> YTTRIUM	49 <b>In</b> INDIUM	50 <b>Sn</b> TIN	57 <b>La</b> LANTHANUM	58 <b>Ce</b> CERIUM
59 <b>Pr</b> PRASEODYMIUM	63 <b>Eu</b> EUROPIUM	64 <b>Gd</b> GADOLINIUM	65 <b>Tb</b> TERBIUM	

### Case

1 <b>H</b> HYDROGEN	6 <b>C</b> CARBON	9 <b>F</b> FLUORINE	11 <b>Na</b> SODIUM	12 <b>Mg</b> MAGNESIUM
13 <b>Al</b> ALUMINIUM	17 <b>Cl</b> CHLORINE	22 <b>Ti</b> TITANIUM	24 <b>Cr</b> CHROMIUM	28 <b>Ni</b> NICKEL
35 <b>Br</b> BROMINE				

### Wires and connectors

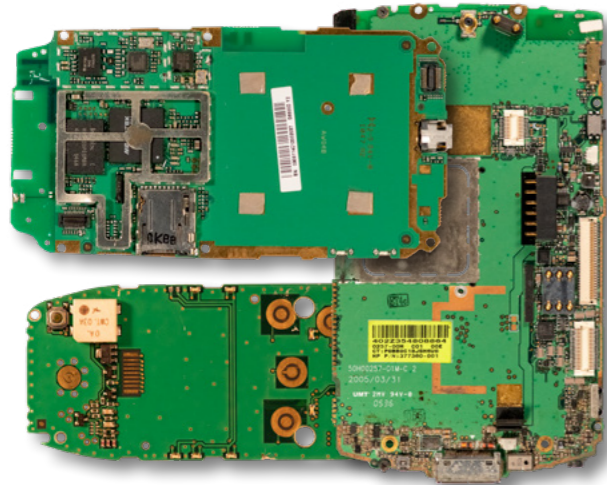
4 <b>Be</b> BERYLLIUM	29 <b>Cu</b> COPPER	42 <b>Mo</b> MOLYBDENUM	73 <b>Ta</b> TANTALUM	79 <b>Au</b> GOLD
83 <b>Bi</b> BISMUTH				

### Speaker and microphone

26 <b>Fe</b> IRON	57 <b>La</b> LANTHANUM	60 <b>Nd</b> NEODYMIUM	74 <b>W</b> TUNGSTEN
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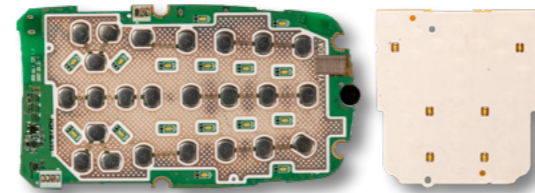
### Circuit board

13 <b>Al</b> ALUMINIUM	16 <b>S</b> SULFUR	29 <b>Cu</b> COPPER	30 <b>Zn</b> ZINC	31 <b>Ga</b> GALLIUM
38 <b>Sr</b> STRONTIUM	40 <b>Zr</b> ZIRCONIUM	41 <b>Nb</b> NIOBIUM	46 <b>Pd</b> PALLADIUM	47 <b>Ag</b> SILVER
50 <b>Sn</b> TIN	51 <b>Sb</b> ANTIMONY	56 <b>Ba</b> BARIUM	73 <b>Ta</b> TANTALUM	78 <b>Pt</b> PLATINUM
79 <b>Au</b> GOLD	80 <b>Hg</b> MERCURY	82 <b>Pb</b> LEAD		



### LEDs

39 <b>Y</b> YTTRIUM	57 <b>La</b> LANTHANUM	59 <b>Pr</b> PRASEODYMIUM	63 <b>Eu</b> EUROPIUM	64 <b>Gd</b> GADOLINIUM
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### Case

1 <b>H</b> HYDROGEN	6 <b>C</b> CARBON	9 <b>F</b> FLUORINE	11 <b>Na</b> SODIUM	12 <b>Mg</b> MAGNESIUM
13 <b>Al</b> ALUMINIUM	17 <b>Cl</b> CHLORINE	22 <b>Ti</b> TITANIUM	24 <b>Cr</b> CHROMIUM	28 <b>Ni</b> NICKEL
35 <b>Br</b> BROMINE				



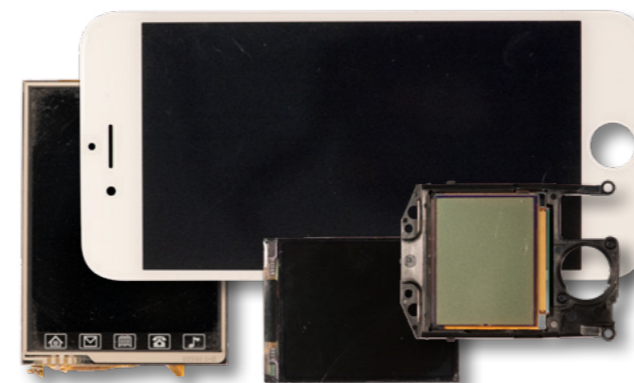
### Battery

3 <b>Li</b> LITHIUM	6 <b>C</b> CARBON	25 <b>Mn</b> MANGANESE	27 <b>Co</b> COBALT	28 <b>Ni</b> NICKEL
48 <b>Cd</b> CADMIUM	65 <b>Tb</b> TERBIUM	66 <b>Dy</b> DYSPROSIUM	68 <b>Er</b> ERBIUM	69 <b>Tm</b> THULIUM
70 <b>Yb</b> YTTERBIUM	71 <b>Lu</b> LUTETIUM			



### Touch screen/display

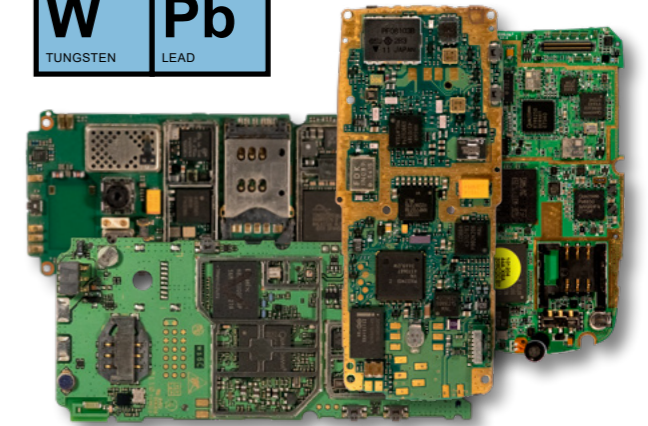
11 <b>Na</b> SODIUM	13 <b>Al</b> ALUMINIUM	14 <b>Si</b> SILICON	17 <b>Cl</b> CHLORINE	19 <b>K</b> POTASSIUM
39 <b>Y</b> YTTRIUM	49 <b>In</b> INDIUM	50 <b>Sn</b> TIN	57 <b>La</b> LANTHANUM	58 <b>Ce</b> CERIUM
59 <b>Pr</b> PRASEODYMIUM	63 <b>Eu</b> EUROPIUM	64 <b>Gd</b> GADOLINIUM	65 <b>Tb</b> TERBIUM	



### Electronic components

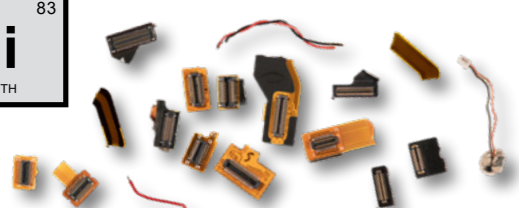
Capacitors, resistors, chips and microprocessors

5 <b>B</b> BORON	6 <b>C</b> CARBON	12 <b>Mg</b> MAGNESIUM	14 <b>Si</b> SILICON	15 <b>P</b> PHOSPHORUS
22 <b>Ti</b> TITANIUM	26 <b>Fe</b> IRON	28 <b>Ni</b> NICKEL	29 <b>Cu</b> COPPER	30 <b>Zn</b> ZINC
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### Wires and connectors

4 <b>Be</b> BERYLLIUM	29 <b>Cu</b> COPPER	42 <b>Mo</b> MOLYBDENUM	73 <b>Ta</b> TANTALUM	79 <b>Au</b> GOLD
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### Speaker and microphone

26 <b>Fe</b> IRON	57 <b>La</b> LANTHANUM	60 <b>Nd</b> NEODYMIUM	74 <b>W</b> TUNGSTEN
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