

DMITRI

The Super Elements card game. Print-and-play edition for classrooms and homeschools.

This game is the most fun around a real table. Students playing face to face, counting "1, 2, 3, Dmitri!" together, is what makes it work.
At the end of class, every student takes cards home. These printed cards are meant to be used up: deal them all out so everyone leaves with some, winners or not, and print a fresh deck for the next class.

Every character's look has meaning. Her uniform's main color is her family on the periodic table, the trim is her color in molecular models, and her hair is the color her element gives off when it burns or glows. Meet all 118 and their stories at **table.superelements.com**.

YOU NEED

- The 50 cards in this file, printed and cut on the dashed lines. Card stock works best. The last sheet also has property-guide cards, so every player can keep one in hand.
- Two ordinary six-sided dice in two colors: a **light die** (highest value wins) and a **dark die** (lowest value wins).
- One copy of the Property Guide page for each player or group.
- 4 to 7 players. A group of 8 plays better as two tables of 4.

EACH ROUND

- Shuffle and deal 6 cards to each player. Stack the rest face down.
- The roller rolls both dice. Each number is a property: look it up on the Property Guide, or on the little die beside each value on the cards.
- The roller picks one die. Light die: the highest value of that property wins. Dark die: the lowest value wins.
- Everyone chooses one card and holds it face down. The roller counts "1, 2, 3, Dmitri!" and everyone flips.
- The best card recruits every card played. The winner puts them face up in their team pile, not back in their hand.
- Everyone draws one card, and the next player rolls.

SPECIAL RULES

- **Doubles:** if both dice show the same number, the roller chooses highest or lowest, and the round is played face up, starting with the roller.
- **Question marks can't win.** Some values are still unknown to science.
- **Ties make a bonus round:** nobody wins yet. The cards stay in the middle, and the next round's winner takes them all.
- **Sublimes:** arsenic and carbon go straight from solid to gas at normal pressure, so their boiling / condensation number is that temperature.
- When there aren't enough cards for every player to draw, stop drawing and keep playing until every hand is empty. Leftover cards are set aside and count for nobody. The biggest team wins.
- **Tie at the end:** the tied players each pick six cards from their own team and play them down until there's a winner.

TOURNAMENT: SOLID, LIQUID, GAS

Play three games. In each round the winning card goes back in the box, and the winner takes the rest. After each game the team piles go back into the deck, but the boxed cards stay out, so every game has fewer cards and the obvious winners are gone. Most cards over all three games wins.

SPEED TABLING

Teams or players each shuffle a deck, trade decks, and race to lay their cards out as a periodic table. The folding table on page 3 is the answer key. The last page has six card backs showing the folded table and three more property-guide cards.

A full 118-element edition is coming as an optional download.

Property Guide

Each number on a die is one of the six properties printed on every card.



Atomic mass
The weight in grams of the number of atoms of the element contained in 12.00 g of carbon-12.



Melting / freezing point
The temperature, in kelvin, at which the element changes between solid and liquid.



Discovery date
When the element was first known as a pure element. Ancient elements have estimated dates; negative years are BCE.



Electronegativity
How strongly an atom pulls on shared electrons when it forms a chemical bond.



Boiling / condensation point
The temperature, in kelvin, at which the element changes between liquid and gas.

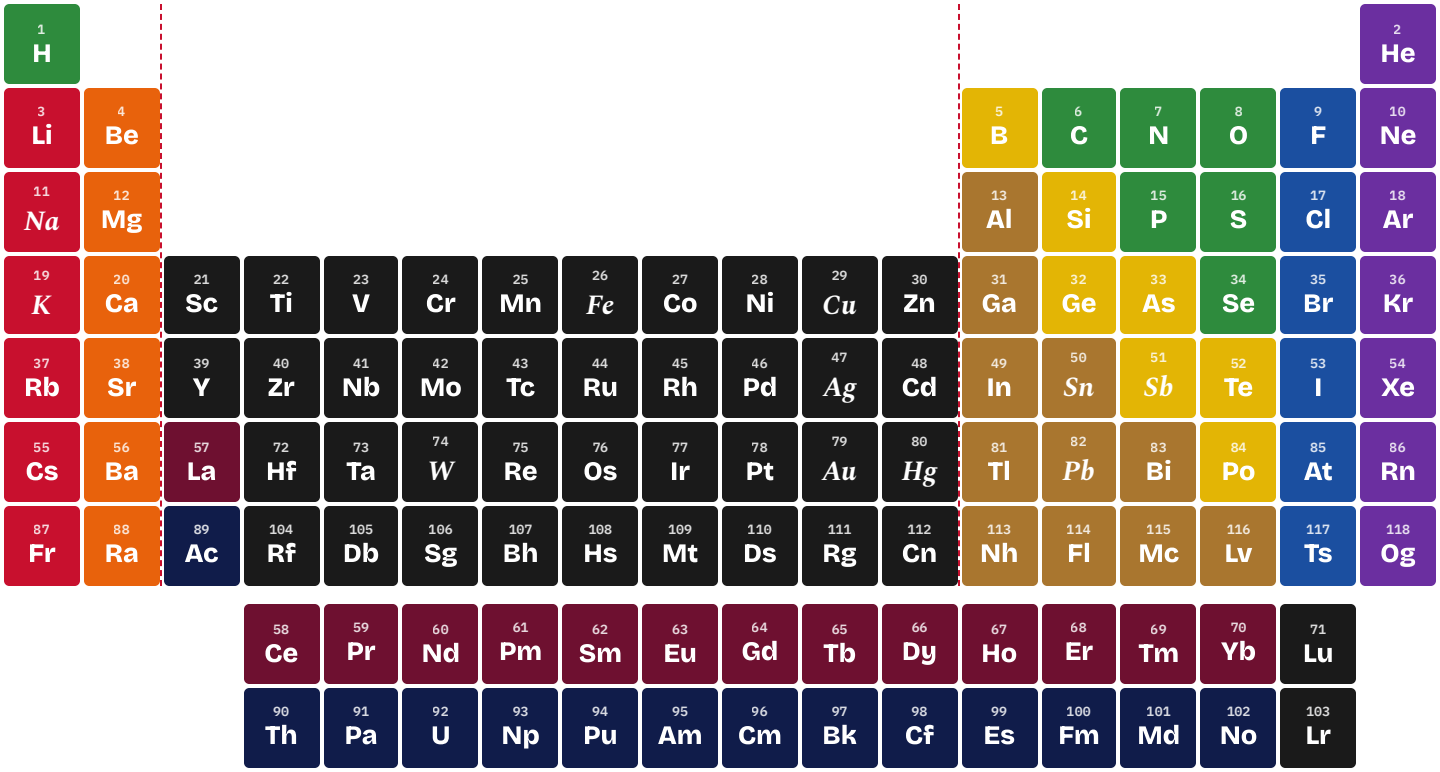


Share
How many compounds the element can form by teaming up with others.

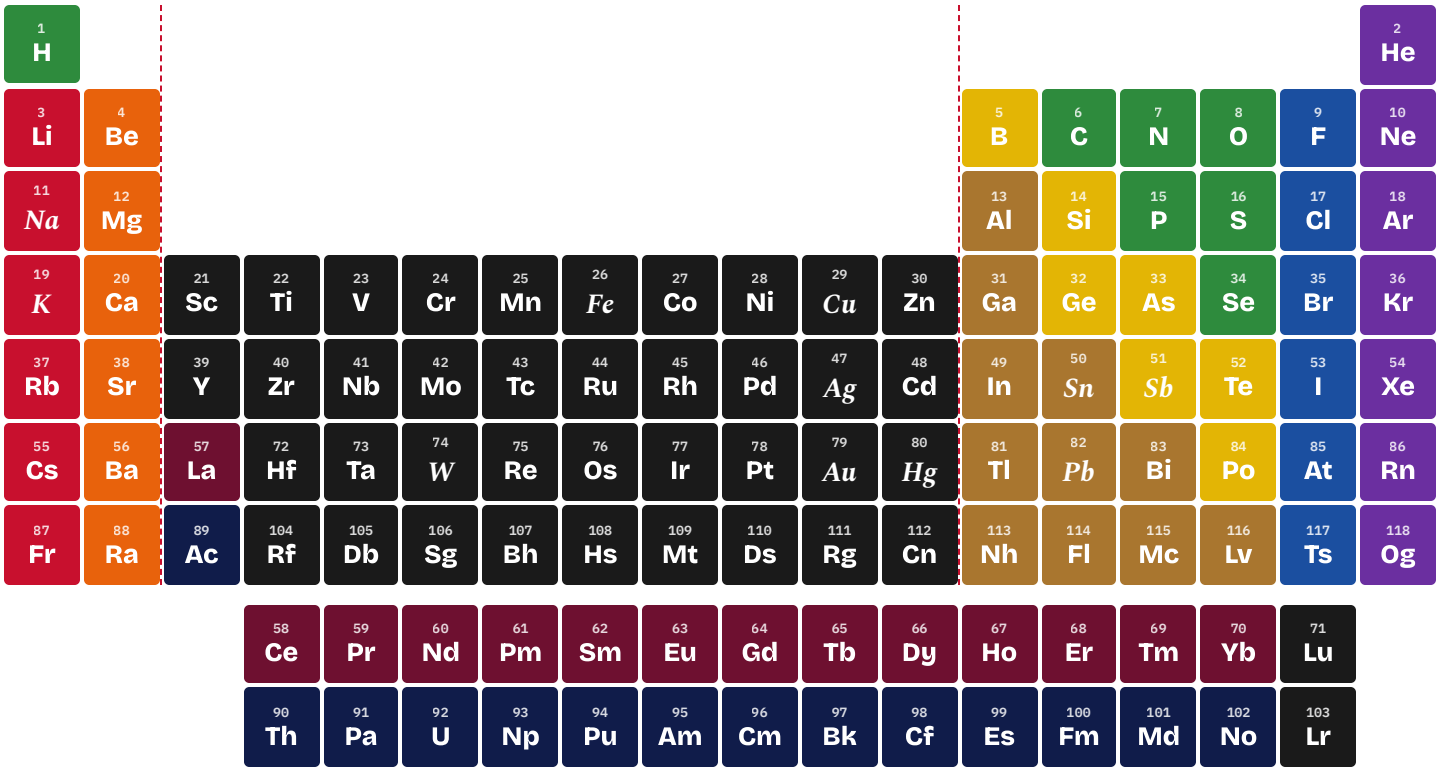
Light die
The highest value of its property wins the round.

Dark die
The lowest value of its property wins the round.

A **?** means the value is unknown, so that card can't win the round. Temperatures are in kelvin (K).



Folding table. Cut out, then fold on both dashed lines so the middle block (groups 3–12) tucks behind. Group 2 now meets group 13, the way the 50-card deck is laid out.



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1

H



A_r	1.008
	14.0 K
	1766
	2.20
	20.3 K
	40,796

Eytch
HYDROGEN

2

He



A_r	4.003
	?
	1895
	?
	4.2 K
	2

Eytchi
HELIUM

3

Li



A_r	6.940
	453.6 K
	1817
	0.98
	1,615 K
	169

Eleye
LITHIUM

4

Be



A_r	9.012
	1,560 K
	1798
	1.57
	2,741 K
	42

BeeEe
BERYLLIUM

5

B



A_r	10.81
	2,350 K
	1808
	2.04
	4,273 K
	1,065

Bee
BORON

6

C



A_r	12.01
	3,823 K
	10,000 BCE
	2.55
	4,098 K
	40,112

sublimes

Cee
CARBON

7

N



A_r	14.01
	63.1 K
	1772
	3.04
	77.4 K
	20,185

En
NITROGEN

8

O



A_r	16.00
	54.4 K
	1774
	3.44
	90.2 K
	32,620

Oh
OXYGEN

9

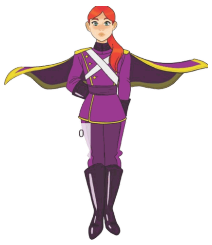
F



A_r	19.00
	53.5 K
	1886
	3.98
	85.0 K
	3,865

Eff
FLUORINE

10 **Ne**



A_r	20.18
	24.6 K
	1898
	?
	27.1 K
	2

Enee
NEON

11 ***Na***



A_r	22.99
	370.9 K
	1807
	0.93
	1,156 K
	803

Enay
SODIUM

12 **Mg**



A_r	24.30
	923.1 K
	1808
	1.31
	1,363 K
	303

Emjee
MAGNESIUM

13 **Al**



A_r	26.98
	933.5 K
	1825
	1.61
	2,792 K
	159

AyElle
ALUMINUM

14 **Si**



A_r	28.09
	1,687 K
	1824
	1.90
	3,538 K
	1,055

Esseye
SILICON

15 **P**



A_r	30.97
	317.3 K
	1669
	2.19
	553.6 K
	2,961

Pea
PHOSPHORUS

16 **S**



A_r	32.06
	388.4 K
	500 BCE
	2.58
	717.8 K
	5,831

Ess
SULFUR

17 **Cl**



A_r	35.45
	171.7 K
	1774
	3.16
	239.1 K
	6,109

Cielle
CHLORINE

18 **Ar**



A_r	39.95
	83.8 K
	1894
	?
	87.3 K
	2

Ahray
ARGON

19 **K**



A_r	39.10
	336.6 K
	1807
	0.82
	1,032 K
	348

Kay
POTASSIUM

20 **Ca**



A_r	40.08
	1,115 K
	1808
	1.00
	1,757 K
	143

Sieigh
CALCIUM

31 **Ga**



A_r	69.72
	302.9 K
	1875
	1.81
	2,502 K
	41

JeeAy
GALLIUM

32 **Ge**



A_r	72.63
	1,211 K
	1886
	2.01
	3,106 K
	73

JeeEe
GERMANIUM

33 **As**



A_r	74.92
	1,090 K
	1250
	2.18
	889.1 K
	140

sublimes

AyEss
ARSENIC

34 **Se**



A_r	78.97
	494.0 K
	1818
	2.55
	958.1 K
	234

Essee
SELENIUM

35 **Br**



A_r	79.90
	265.9 K
	1826
	2.96
	331.9 K
	2,811

BeeArr
BROMINE

36 **Kr**



A_r	83.80
	115.8 K
	1898
	3.00
	119.7 K
	4

KayArr
KRYPTON

37 **Rb**



A_r	85.47
	312.4 K
	1861
	0.82
	961.1 K
	25

Arbee
RUBIDIUM

38 **Sr**



A_r	87.62
	1,050 K
	1790
	0.95
	1,650 K
	50

Essarr
STRONTIUM

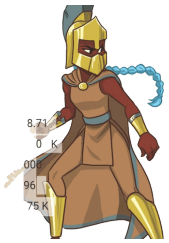
49 **In**



A_r	114.8
	429.7 K
	1863
	1.78
	2,300 K
	36

EyeEn
INDIUM

50 ***Sn***



A_r	118.7
	505.1 K
	3,000 BCE
	1.96
	2,859 K
	163

Essen
TIN

51 ***Sb***



A_r	121.8
	903.8 K
	3,000 BCE
	2.05
	1,860 K
	102

Essbee
ANTIMONY

52 **Te**



A_r	127.6
	722.7 K
	1782
	2.10
	1,261 K
	89

TeeEe
TELLURIUM

53 **I**



A_r	126.9
	386.9 K
	1811
	2.66
	457.6 K
	872

Eye
IODINE

54 **Xe**



A_r	131.3
	161.4 K
	1898
	2.60
	165.1 K
	17

Ecksee
XENON

55 **Cs**



A_r	132.9
	301.6 K
	1860
	0.79
	944.1 K
	45

CeeEss
CESIUM

56 **Ba**



A_r	137.3
	1,000 K
	1808
	0.89
	2,118 K
	140

BeeAy
BARIUM

81 **Tl**



A_r	204.4
	577.1 K
	1861
	1.80
	1,746 K
	49

TeeElle
THALLIUM

82 ***Pb***



A_r	207.2
	600.6 K
	4,000 BCE
	1.80
	2,022 K
	106

Peabee
LEAD

83 **Bi**



A_r	209.0
	544.6 K
	1400
	1.90
	1,837 K
	50

BeeEye
BISMUTH

84 **Po**



A_r	209.0
	527.1 K
	1898
	2.00
	1,235 K
	3

PeaOh
POLONIUM

85 **At**



A_r	210.0
	575.1 K
	1940
	2.20
	610.0 K
	1

Aytee
ASTATINE

86 **Rn**



A_r	222.0
	202.2 K
	1898
	?
	211.4 K
	1

Aren
RADON

87 **Fr**



A_r	223.0
	294.1 K
	1939
	0.70
	950.0 K
	1

Efarr
FRANCIUM

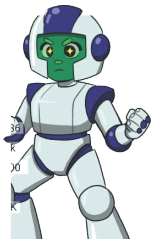
88 **Ra**



A_r	226.0
	969.1 K
	1898
	0.90
	2,010 K
	2

Aray
RADIUM

113 **Nh**



A_r	286.0
	?
	2015
	?
	?
	1

Enaitch
NIHONIUM

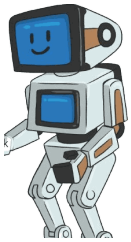
114 **Fl**



A_r	289.0
Melting	?
Discovery	1998
χ	?
Boiling	?
Share	1

Efelle
FLEROVIUM

115 **Mc**



A_r	288.0
Melting	?
Discovery	2003
χ	?
Boiling	?
Share	1

Emcee
MOSCOVIUM

116 **Lv**



A_r	293.0
Melting	?
Discovery	2000
χ	?
Boiling	?
Share	1

Elvee
LIVERMORIUM

117 **Ts**



A_r	294.0
Melting	?
Discovery	2010
χ	?
Boiling	?
Share	1

TeeEss
TENNESSINE

118 **Og**



A_r	294.0
Melting	?
Discovery	2002
χ	?
Boiling	?
Share	1

Ohjee
OGANESSON

DMITRI
PROPERTY GUIDE

- A_r **Atomic mass** — How heavy one atom is, compared with carbon-12.
- **Melting / freezing** — The temperature (K) where solid turns to liquid.
- **Discovery date** — The year the element was first found.
- χ **Electronegativity** — How hard an atom pulls on electrons it shares.
- **Boiling / condensation** — The temperature (K) where liquid turns to gas.
- **Share** — How many compounds it forms with other elements.

Light die **highest wins** | Dark die **lowest wins**

? can't win · ties make a bonus round

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SUPER elements DMITRI

H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar
K	Ca	Ga	Ge	As	Se	Br	Kr
Rb	Sr	In	Sn	Sb	Te	I	Xe
Cs	Ba	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Nh	Fl	Mc	Lv	Ts	Og

SUPER elements DMITRI

H He
Li Be B C N O F Ne
Na Mg Al Si P S Cl Ar
K Ca Ga Ge As Se Br Kr
Rb Sr In Sn Sb Te I Xe
Cs Ba Tl Pb Bi Po At Rn
Fr Ra Nh Fl Mc Lv Ts Og

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SUPER elements DMITRI

H He
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SUPER elements DMITRI

H He
Li Be B C N O F Ne
Na Mg Al Si P S Cl Ar
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