

January 2020 wordoku

			F						A
		C			S			I	C
	A	T			L	E		F	E
	R				I			T	F
			S	C	R				I
	L		T					R	L
S		I	L				F	E	R
	T		A			S			S
					F				T

Solve this wordoku in the same way as a sudoku with letters instead of numbers (each of the nine letters in each row, column and nine-square cell). Once solved, one of the overall diagonals can be rearranged into the name of one of 2019's Nobel prize winners.

January 2020 crossword

1		2		3		4		5		6				7
8								9				10		
11					12									
13				14				15				16		
17						18		19						
20		21									22			23
											24			
25								26						
27														

Entry form

There are four prize puzzles on this page: cryptic crossword; quick crossword; wordoku; and science scramble. For each puzzle, a winner will be selected from all the correct entries received and awarded a £25 UK book voucher, or alternative of equivalent value for non-UK residents.

You can enter any or all of the prize draws, but each entrant is only eligible to win one of the individual puzzle prizes each month.

Please enter your details below and either post or email this page with your completed entries to us by **20 January 2020**. The winners of this month's puzzles will be published in the February 2020 issue, along with the solutions.

Chemistry World puzzles, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK
Email: chemistryworld@rsc.org

Name

Address

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Participants are advised that any personal information supplied will be processed in connection with this competition and only in accordance with our privacy statement (www.chemistryworld.com/privacy).

January 2020 science scramble

Similar to a word ladder, each answer provides letters that must appear - including duplicates - in the answer immediately following it. The puzzle's final answer is a scientist or someone who contributed to science.

For example:

- 1 sail
- 2 snail
- 3 saline
- 4 minerals
- 5 Neil Armstrong

State of matter (3)

Herb (4)

French artist renowned for his depiction of dancing (5)

Top marks (1, 6)

English composer and chemist (3, 6, 5)

Cryptic

- Across**
- 1 Surprisingly sacked referring British biochemist (9, 6)
 - 8 Perhaps pets are duplicates (7)
 - 9 Metal yurt I'm reconstructing around end of August (7)
 - 11 Cast iron case (4)
 - 12 Fitter comes back into pier for make-up artist (10)
 - 13 Somehow cod aped crustacean (7)
 - 15 Particle making one turn around? (7)
 - 17 Form of US field compound (7)
 - 19 Mike itches around scientist (7)
 - 20 Even Davy cared about hot electron beam (7, 3)
 - 22 Fruit reportedly not improved by 12 Across? (4)
 - 25 On arrangement the French name first yellow hydrocarbon (7)
 - 26 Push in under it on order (7)
 - 27 Quintessence or just boron? (3, 5, 7)

- Down**
- 1 Prefer mission to include nuclear physicist (5)
 - 2 Experimental race I limp around (9)
 - 3 Cheese made to order (4)
 - 4 Letters about nurse I'd protected (7)
 - 5 OK about primarily young researchers proposing totally new gas (7)
 - 6 Utter a bit about feature (9)
 - 7 Ranted about oddly ignored Grimsby painter (9)
 - 10 French here for old British chemical company? (3)
 - 13 Drier descant playing odd clip (9)
 - 14 Olive prim around Italian chemist (5, 4)
 - 16 Again urge modification of meter (4, 5)
 - 18 Some forever esteemed summit (7)
 - 19 Killer throwing any dice (7)
 - 21 Attempt to score (3)
 - 23 Lifeless miner trapped inside (5)
 - 24 Left out style complaint (4)

Quick

- Across**
- 1 Discoverer of francium, who previously studied under Marie Curie (10, 5)
 - 8 Light-sensitive layers of the eye (7)
 - 9 Welsh _____, cheese on toast (7)
 - 11 Engrave glass, for example with hydrofluoric acid (4)
 - 12 Type of aircraft with the first being operational in 1936 (the Focke-Wulf Fw 61) (10)
 - 13 Brimstone (non-Iupac spelling) (7)
 - 15 Curved upper surfaces of liquids in tubes (7)
 - 17 Fifth letter of the Greek alphabet, representing the molar extinction coefficient of a chromophore (7)
 - 19 Unit of energy (7)
 - 20 Birthplace of J J Thomson, discoverer of the electron (10)
 - 22 See 1 Down (4)
 - 25 Athlete (7)
 - 26 German philosopher who established the school of phenomenology (7)
 - 27 See 1 Down (6, 9)

Down

- 1, 22 Across, 27 Across**
Chemist whose chief collaborator and spouse was guillotined during the French revolution (5-4, 6, 9)
- 2 Fine lines in the eyepiece of an optical instrument (9)
 - 3 Bone in the arm (4)
 - 4 *Capreolus capreolus* (3, 4)
 - 5 One of the four elements discovered at a village in Sweden (7)
 - 6 Staff (9)
 - 7 Mineral, also known as gadolinite, named after a village in Sweden (9)
 - 10 Flying mammal (3)
 - 13 Marine vessel such as Brunel's SS Great Britain (9)
 - 14 19th century German physicist and physician after whom an eigenvalue equation is named (9)
 - 16 National Park in Tanzania (9)
 - 18 Opening of the nose (7)
 - 19 Russian playwright and short story author (7)
 - 21 Spectrometric technique (abbreviation) first described by Isidor Rabi in 1938 (3)
 - 23 18th century Swiss polymath after whom two mathematical constants are named (5)
 - 24 Type of antidepressant that inhibits the reabsorption of serotonin by neurons (abbreviation) (4)

December 2019 solutions and winners

Cryptic elements crossword

O	U	T	La	W		F	In	I	S	H	Es		Cl	At	H	Ra	Te	H	Y	D	Ra	Te
C		O		I		I	O		Y				T					O		I		N
C	He	C	He	N		C	O	N	Ce	P	T		F	Ra	N	K		W	At	S	O	N
U		Ca		D		T		O					Ra	C				Dy		Ac		Es
P	O	Ta	T	O	Cr	I	S	P		T	I	T	Ra	T	I	O	N		In	C	He	S
Y		S		W		Ti		Ho		He		I		S		T		O	H		I	
				Au	D	I	O		Re	Ac	T	I	O	N		Ca	T	Na	P		Ar	Ne
S		Se		Re		U		Si		I		C		C		O		T				
N	Ar	C	O	S	I	S		S	U	C	C	I	N	I	Te		F	I	Re	D	Am	P
O		Re		S					Al		Na		N		O		C		As		Re	
W	Al	T	H	Er	N	Er	N	S	T		Al	T	Er	Na	Te	S		S	Al	Es	Re	P
F						N		V		D		Es		B		C						Os
La	C	T	O	Se		S	T	Er	O	I	D		B	Ar	B	Ar	Y	D	U	C	K	S
K		He		N		T	D	S		D								Es		S		Es
Es	S	O	N	I	Te		Sc	Ru	T	I	N	I	Se	D		I	N	Er	T	Ga	Se	S
		S		Li	O	P		N		Ag	Y		N		Ti		S		S		Es	
P	Es	O		T	Se	T	Se	Re	Fe	Re	N	Ce	S		C	Ra	F	Ts				
O		P		Y		T	H	C		O	K		O		I	H		O				
N	Nc	H	Os		C	O	Pr	O	Li	T	H	S		I	O	N	I	C	B	O	N	D
Te		I		O			T	S		T		Ne		Ti		At		U			D	
Fr	I	S	C	H		Si	Na	T	Ra		N	I	Co	T	I	Ne		I	O	D	I	Ne
Ac		T		I		Es				C		I		N		O		In			S	
T	U	S	S	O	C	K	Mo	T	H		Pu	S	H	C	Ar	T		N	O	I	Se	S

Quick crossword

H	E	L	E	N		V	A	N	D	E	R		A	F	L	A	T	O	X	I	N	S		
E		A		I		E		I		Y			U					T		N		H		
L	I	S	Z	T		R	A	C	H	E	L		A	L	U	M		T	E	S	L	A		
I		E		R		D		K		W		R		B		L		O		E		R		
U	K	R	A	I	N	I	A	N		I	C	E	B	E	R	G	S		S	C	U	M		
M		S		C		G		A		T	D		R		R		E		T		C	A		
						B	O	H	R		M	E	N	D	E	L		H	A	H	N	I	O	N
C		F		X		I		E		E		V		A		M		D		C				
H	E	R	M	I	T	S		S	Y	S	T	E	M	I	C		E	R	B	I	U	M		
E		E		D				S		S	L	K		K		I		D				O		
W	H	E	W	E	L	L	I	T	E		M	O	T	I	O	N		N	I	E	L	S		
A						E		H		N		P		D		O							A	
B	R	O	W	N		G	R	E	G	O	R		C	O	M	B	U	S	T	I	O	N		
L		R		O		S	O		R		G							H		R		D		
E	X	C	I	T	E		B	R	O	W	N	I	A	N		U	R	A	N	A	T	E		
		H		I		A		Y		E		G		A		O		I		N		N	R	
C	U	E		C	A	R	L	E	G	G	N	O	G		S	E	T	T						
A		S		E		E		L		N		I		T		H		T		Y		Y	E	
R	A	T	E		R	A	D	I	C	A	L	S		T	R	U	S	T	F	U	N	D		
A		R		E		K		N		Q		S		F		O		K				I		
F	R	A	N	Z		A	T	O	M		G	U	S	T	A	F		W	A	A	L	S		
E		T		R				L		I		O		E		N		W				O		
S	H	E	N	A	N	D	O	A	H		A	D	A	P	I	D		S	T	A	I	N		

December winners

Cryptic elements crossword
Rob Horsfield, Balerno, UK

Quick crossword
G W Roberts, West Glamorgan, UK