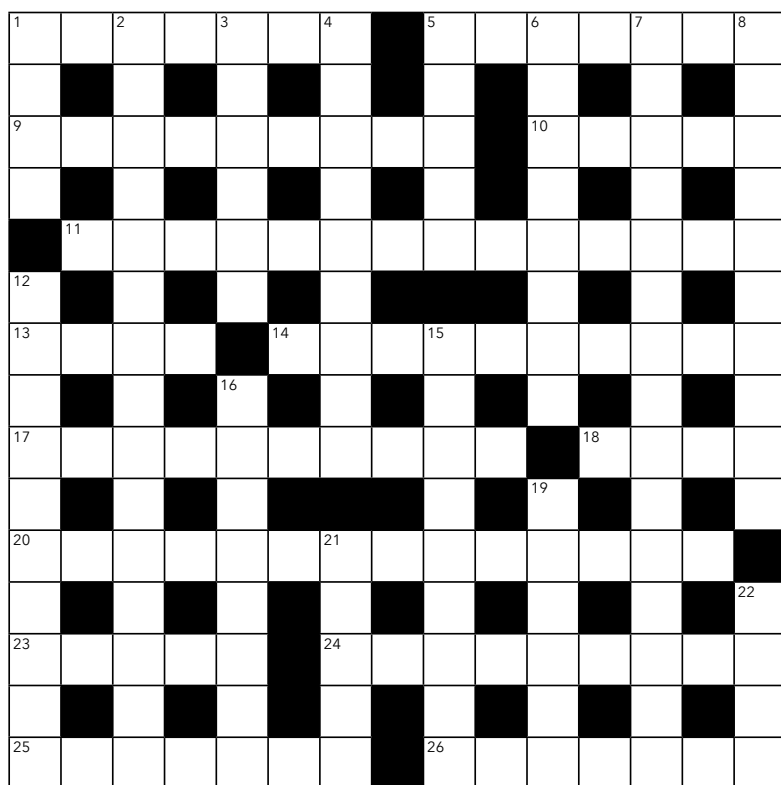
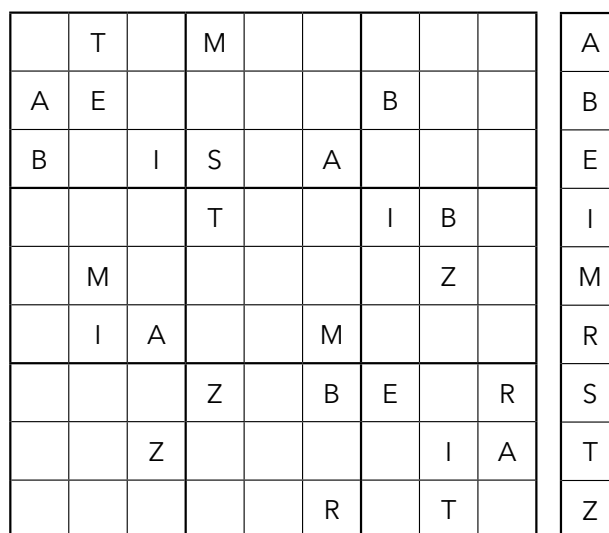


July 2023 crossword



July 2023 wordoku



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 to give a drug used to treat high blood cholesterol levels.

Cryptic

Across

- 1 Particular forms of radon with extreme heaviness? (7)
- 5 Mike left set to create special effects (7)
- 9 Maybe limit fees for ages (9)
- 10 Conventional part of economics (5)
- 11 Ninja foundered around the Nobel laureate (8, 6)
- 13 These animals like trees by the sounds of it (4)
- 14 Orphan's tea prepared for rhetorical effect (10)
- 17 Surprisingly slippery goth is leaving a mark on rock (10)
- 18 Very dry but right blend (4)
- 20 Unusually hard chair agitates crime writer (6, 8)
- 23 Some grim idea for a compound (5)
- 24 Cries about club containers (9)
- 25 A little regimen is cited for such surfaces (7)
- 26 Bizarrely amass extremely oleaginous snacks (7)

Down

- 1 Strong and healthy astronomer (4)
- 2 Calculus after definition altered (15)
- 3 Oscar and Charlie mixed neat fuel (6)
- 4 Flies main engineer for penultimate match (4-5)
- 5 First tune from master amplifier (5)
- 6 Doctors do ration this dish (8)
- 7 A dramatic spell can create very small things (6, 9)
- 8 On arrangement, actor names the capital (10)
- 12 Homage about pigs eating dirt? (10)
- 15 Guess burp could produce such bacteria (9)
- 16 I left chi lesson preparing for the lake (4, 4)
- 19 I love Mum's form of heavy metal (6)
- 21 These germs can often cause critical infections initially (5)
- 22 Snakes around pass (4)

Quick

Across

- 1 Bituminous road material (7)
- 5 Sodium carbonate (4, 3)
- 9 Nebula in the constellation Ophiuchus, which obscures part of the Milky Way (4, 5)
- 10 Baking ingredient (5)
- 11 First German woman to be awarded a doctorate in chemistry in Germany (5, 9)
- 13 _____ Pavlov, physiologist known for work on conditioning of dogs (4)
- 14 *Myrmarachne* _____, a jumping spider that mimics an ant (10)
- 17 Stating under oath (10)
- 18 _____ of Dogs, a peninsula in London (4)
- 20 French chemist whose name is inscribed on the Eiffel Tower (6, 8)
- 23 Shinobi (5)
- 24 Site of nuclear accident in Ukraine in 1986 (9)
- 25 Without a stalk (7)
- 26 $\text{CH}_3(\text{CH}_2)_3\text{COOH}$, _____ acid (7)

Down

- 1 Assistant (4)
- 2 Astronomical units of length (8, 7)
- 3 Stick (6)
- 4 Area (9)
- 5 Vapourised water (5)
- 6 Bend light or sound waves (8)
- 7 6.022×10^{23} (9, 6)
- 8 Inventor of the spinning jenny (10)
- 12 Nitrogen compounds involved in immune responses (10)
- 15 Russian chemist credited with the invention of the periodic table (9)
- 16 Elite of digitalisation, social media etc (8)
- 19 London university named after a Victorian engineer (6)
- 21 Krebs _____, describing a series of chemical reactions that release stored energy (5)
- 22 Large cluster of solids formed in water treatment (4)

July 2023 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

1 Fish (3)

2 Chimed (4)

3 Ire (5)

4 Peril (6)

5 A member of the French constabulary (8)

6 Physicist (5, 4)

Quick quiz:

- Who was the only person to discover a whole new periodic group of elements (and what were they collectively called)?
- William Perkin accidentally made the first synthetic dye at the age of 17 when he was trying to synthesise quinine. What was the colour?
- US physical chemist Harold Urey was awarded the 1934 Nobel prize in chemistry for his discovery of an isotope. What was it?
- 'Capital experiment today.' So wrote the Cornish chemist on the day he discovered potassium by the electrolysis of potash. His brother described him leaping ecstatically around the room. What was the chemist's name?
- 'This was the first time in history that the announcement of a new element was sponsored by Alka-Seltzer.' So wrote Glenn Seaborg about his announcement of the discovery of two new elements on *Quiz Kids* TV programme on 11 November 1945. What were the elements?

Solutions: 1. William Ramsay (noble or inert gases, Group 18 of the periodic table) 2. Mauve 3. Deuterium 4. Humphry Davy 5. Americium and Curium

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.

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 email a scan or photograph of this page with your completed entries to us by **20 July 2023**. The winners of this month's puzzles will be published in the August 2023 issue, along with the solutions.

Email: chemistryworld@rsc.org

Name

Address

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).

July 2023 Word grid

Use the element symbols from the panel on the right to complete the word grid below.

I	N	S		
N				
Fl	O			Ne
		K		
	K	I		S

Al	Am
Es	Ho
Mo	P
Re	Te
U	Y

June 2023 solutions and winners

Cryptic

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

Quick

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

Wordoku

The French chemist working in the area of catalysis for renewable energy development was Elsje QUADRELLI

Science scramble

1 Mar; 2 Marl; 3 Realm;
4 Mailer; 5 Maltier;
6 Material; 7 Marietta Blau

Word grid

W	Ra	S	Se	S
As		P		I
H	I	At	U	S
Er		U		Ti
S	O	La	Ni	Ne

June winners

Cryptic crossword
Iam Laming
Chippenham, UK

Quick crossword
Robin Price
Cowes, UK

Wordoku
Stan Carter
Brigg, UK

Science scramble
Derek Chadwick
Bromley, UK