

The Disappearing Spoon

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On the plane today flying from Vancouver to LA I finally finished reading the book "The Disappearing Spoon." I know that when I tell you this your estimation of me as being chronically weird will go up several notches, but believe me, this books is full of great stories and really, really interesting. It's a book about the history of the Periodic Table of the Elements that we all suffered through in Chemistry class - remember?

Periodic Table of the Elements © www.elementsdatabase.com

1 H																	2 He														
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne														
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar														
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr														
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe														
55 Cs	56 Ba	57 La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn														
87 Fr	88 Ra	89 Ac	104 Unq	105 Unp	106 Unh	107 Uns	108 Uno	109 Une	110 Unn																						
																		58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
																		90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

Legend:

- hydrogen (green)
- alkali metals (yellow)
- alkali earth metals (light blue)
- transition metals (orange)
- poor metals (medium blue)
- nonmetals (white)
- noble gases (red)
- rare earth metals (grey)

Actually, it's a book about the remarkable (and often very strange) people who contributed to its creation. Here are a few things I learned while reading it:

Remember when we all learned that the speed of light is a constant? Well, not necessarily. Sodium metal has the unique ability to slow light down from 186,000 miles per second to 38 miles per second.

But it actually gets even stranger. The element Praseodymium can actually capture light, hold it for a few seconds, and then send it ricocheting off in a completely different direction.

If you bite wintergreen Lifesavers in the dark, they create flashes of light.

There is a place in the central African country of Gabon called Oklo. In pre-Cambrian times it hosted the only known naturally-occurring fission reactor on Earth. Here's the story: there are shallow ponds there that have formed over naturally occurring deposits of Uranium. Blue-green algae grows in the water. The uranium contains a lot of U-235, which is highly volatile. So here's what happens. The algae releases a lot of oxygen into the water; the water becomes acidic and leaches the U-235 out of the uranium ore. The algae filters the water and concentrates the U-235. The water slows down the neutrons enough to allow them to be captured by neighboring nuclei, creating critical mass. The fission of the U-235 creates heat which evaporates the water, and the reaction stops. The pool cools off, water trickles back in, and the process starts again, going critical every 150 minutes.

What a world.

Thanks for reading.