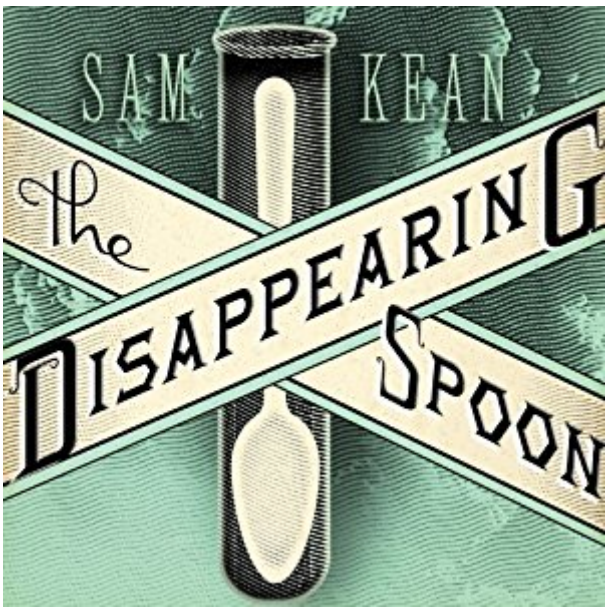
The Disappearing Spoon: And Other True Tales Of Madness, Love, And The History Of The World From The Periodic Table Of The Elements



Synopsis

"The Disappearing Spoon is my favorite kind of science journalism: it reveals a hidden universe in the form of a thrilling tale."—BoingBoing"Arthur C. Clarke once noted that truly advanced science cannot be distinguished from magic. Kean succeeds in giving us the cold hard facts, both human and chemical, behind the astounding phenomena without sacrificing any of the wonder - a trait vital to any science writer worth his NaCl."—Entertainment WeeklyScience Magazine reporter Sam Kean reveals the periodic table as it’s never been seen before. Not only is it one of man’s crowning scientific achievements, it’s also a treasure trove of stories of passion, adventure, betrayal, and obsession. The infectious tales and astounding details in The Disappearing Spoon follow carbon, neon, silicon, and gold as they play out their parts in human history, finance, mythology, war, the arts, poison, and the lives of the (frequently) mad scientists who discovered them.We learn that Marie Curie used to provoke jealousy in colleagues’ wives when she’d invite them into closets to see her glow-in-the-dark experiments. And that Lewis and Clark swallowed mercury capsules across the country; their campsites are still detectable by the poison in the ground. Why did Gandhi hate iodine? Why did the Japanese kill Godzilla with missiles made of cadmium? And why did tellurium lead to the most bizarre gold rush in history? From the Big Bang to the end of time, it’s all in The Disappearing Spoon.

Book Information

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Customer Reviews

I have to confess I didn’t pay much attention to chemistry. Once the instructor talked about electrons, protons, atoms and the nucleus I usually turned on my Walkman (the cassette kind, now

antique!). It never seemed interesting because it wasn't something that related at all to real life. If I had a teacher like Sam Kean, however, that could have been different.Fast forward too many years, and now I'm engrossed in this nonfiction 'memoir' of the Periodic Table of Elements. Like any good biography, this has scandal, lies, fraud, madness, explosions (!!!) and lots of name-dropping. Kean explains just what the periodic table is, but in a format that reads more like a novel, with anecdotal details to liven it up. Mercury pills were used by Lewis and Clark for their health? Yep, and you can trace their path (um, at least their bathroom trips on their journey) by where scientists have found unusually high amounts of mercury in the soil. The poet Robert Lowell? Did lithium ruin his work by making him sane? Who knew the lies and fraud and mind games played by scientists intent on getting a Nobel Prize!There's no getting around it, this is a book that makes you think. It's not simple and it assumes you have a basic knowledge of science. Some areas were over my head, but not for long. Kean is a wonderful teacher with a sassy wise guy voice that livens up any of the deeper areas.

Sam Kean has written a marvelous book that will delight general readers and experts alike. The writing is crisp and sharp and includes an unusual political savyness for somebody treating scientific issues. Kean uses his journalistic skills to succeed in doing what many, perhaps most, academics fail to do when presenting the relevance of chemistry to the real world. Not just applications but also how the history of individual elements has affected the lives of ordinary people. See for example his account of niobium and tantalum. Then there are chapters that weave together the lives of famous chemists and physicists such as one on Segre and Pauling, all in the context of the discovery of elements and developments in twentieth century chemistry and physics. Technicalities are kept to a minimum and when necessary explanations are provided in a clear and lucid manner.Everybody should read this book, period.Dr. Eric Scerri, author of The Periodic Table, Its Story and Its Significance, Oxford University Press, 2006.

This book is worthwhile, interesting overall, and fascinating in places. I think it offers a good read to intelligent persons of almost any background. However, there are a number of glib misstatements, mis-characterizations, bumbled explanations, misspellings, and outright howlers that could have been caught and corrected by an editor with an ear for inelegant phrasing and a decent breadth of general scientific knowledge (i.e., the kind of knowledge that a popular-science-book editor ought to have). A few examples:The author writes, "The body will rid itself of any poison, mercury included", as the explanation for the efficacy of a mercuric chloride laxative pill. This is both glib and

inaccurate. It smacks of that kind of knowing, breezy folk wisdom that sounds right but is misleading or false. There are many noxious substances that elicit no gastrointestinal reaction at all when ingested, as well as many substances that elicit a reaction without being poisonous. In fact, the diarrheal action of mercuric chloride does not depend on its being a compound of a poisonous element.The enzyme tryptophan synthetase is referred to as "a relative of [tryptophan]". It is not. Tryptophan synthetase is a protein and therefore a string of amino acid molecules, while tryptophan is simply one of many amino acids . Tryptophan synthetase catalyzes some of the reactions by which tryptophan is synthesized. Although tryptophan is by coincidence a component of tryptophan synthetase, the enzyme is not "related to" tryptophan any more than to any other of its constituent amino acids.A real howler is the description of the collision of Comet Shoemaker-Levy with Jupiter as "the first intergalactic collision humans ever witnessed." Wrong on two counts: The location was not intergalactic (occurring in the space between the galaxies, or involving more than one galaxy), but within not only our own galaxy but of course our Solar System; it should have been described as an "extraterrestrial" collision. And intergalactic collisions, those occurring between two galaxies, have been well known for decades and are easily observable, though we cannot see the action, as it were, since the movement is too slow on so vast a scale to be apparent on time scales of human history.The author refers to Jupiter’s prominent atmospheric feature informally and unconventionally as its "giant red spot" and "giant red eye", but nowhere by its common and widely recognized name, the Great Red Spot, which is how laymen, amateur astronomers, and professionals alike all know it. Using other terms in order to avoid being repetitive would be OK if he’d first referred to the feature by its universally known proper name.In the discussion of atomic weights as given in the Periodic Table, he states that because of differing isotopic abundances, "in a different galaxy" the average atomic weights could be different. True, but not BECAUSE it’s a different galaxy, as the usage implies. It would have been better to say "in a different location in space" or "in a different location in our galaxy". If, let’s say, the point of a discussion is how the frost in Florida is affecting the price of the oranges we bring home from week to week, it wouldn’t be relevant to say, "They cost 99 cents a pound at the market down the street, but in Australia the price might be higher or lower."The phrase "Most solar systems probably formed from supernovae" is awkward and misleading. In the mind’s eye, the phrase conjures the image of the debris clearing after a supernova explosion, revealing a star and its newborn dust cloud, ready to start forming a planetary system, or alternatively the idea that debris from a given supernova can condense somewhere else to form a planetary system. Neither of these, of course, is the case. The discussion would be improved by describing how supernovae actually do contribute to the formation of planetary systems: By synthesizing higher

elements and blowing them off to enrich (but not to actually create) the interstellar medium (which consists of remnant hydrogen and helium from the formation of the galaxy), they provide the heavier material that will enable the later formation of solid stuff like planets; and their shock waves propagating through the interstellar medium trigger the condensation of areas of higher density, leading to formation of a star and its system. And, strictly speaking, the term "solar system" should be reserved for our own planetary system, the Solar System.The author refers to the hypothesized dim star "Nemesis" as the Sun's "roaming companion star, around which the Earth circled too slowly for us to notice". This utterly baffling phraseology is partly incorrect and partly quite misleading. Nemesis would not "roam", implying a sort of meandering or wandering, but rather would move in a rigidly defined, highly eccentric (elongated) elliptical orbit around the Sun (or, rather, both would orbit their common center of mass in highly eccentric elliptical orbits). And the Earth would not orbit ("to circle", as a verb describing the Earth's motion, is neither accurate nor informally preferable to the correct verb "to orbit") the star Nemesis, of course, since Earth manifestly orbits the Sun. What would happen is that Nemesis and the Sun would orbit each other too slowly for us to notice any periodic irregularity in the path or motion of the Sun; and that (the very dim) Nemesis would spend so much of its orbital period far away from the Sun and the Earth that its existence has escaped our notice, while its 26-million-year close approaches to the Sun are what trigger disruptions in the orbits of asteroids, resulting in bombardment of Earth.And that's only the first few chapters; I could go on, but won't.This may seem like nitpicking, but a science book, in order to be fully worthwhile, needs to have its statements and claims factually correct and its language smooth and elegant. This book is worthwhile, and a second printing should first be reviewed and corrected by a broadly knowledgeable science-book editor with an ear for fumbled explanations and inelegant language.

As a professor of chemistry, I have to say I was a bit worried after reading Chapter 1 of this book. A great case study in classic misconceptions -- that there is something "satisfying" for an atom to have a complete octet, for example, or that lungs regularly deal with carbon dioxide and so "see nothing wrong with absorbing its cousin, SiO2...." or that in chemical compounds, "rings are states of high tension" just to cite a few.But overall, it was a great read. Kean has a great sense of comic timing and is a wonderful story teller. I especially enjoyed the story of aluminum (aka aluminium), which I had never heard.Just ignore most of the chemistry being "taught"! Start in Chapter 2.

the Periodic Table: The Fast and Easy Way to Memorize Chemical Elements The Periodic Table: Elements with Style! The Periodic Table of Elements Coloring Book Amber's Atoms: The First Ten Elements of the Periodic Table Periodic Tales: A Cultural History of the Elements, From Arsenic to Zinc The Periodic Table: Its Story and Its Significance Periodic Table Basic (Quickstudy: Academic) Periodic Table Advanced (Quickstudy Reference Guides - Academic) Basher Flashcards: Periodic Table (Basher Science) The Periodic Table Store Front II - A History Preserved: The Disappearing Face of New York The Wooden Spoon Book of Old Family Recipes: Meat and Potatoes and Other Comfort Foods Kosher USA: How Coke Became Kosher and Other Tales of Modern Food (Arts and Traditions of the Table: Perspectives on Culinary History) Cadillac Desert: The American West and Its Disappearing Water, Revised Edition Disappearing Ink: The Insider, the FBI, and the Looting of the Kenyon College Library The Art of Disappearing: Buddha's Path to Lasting Joy Unfaithful Music & Disappearing Ink Pipsie, Nature Detective: The Disappearing Caterpillar (Pipsie, Nature Detective Series)