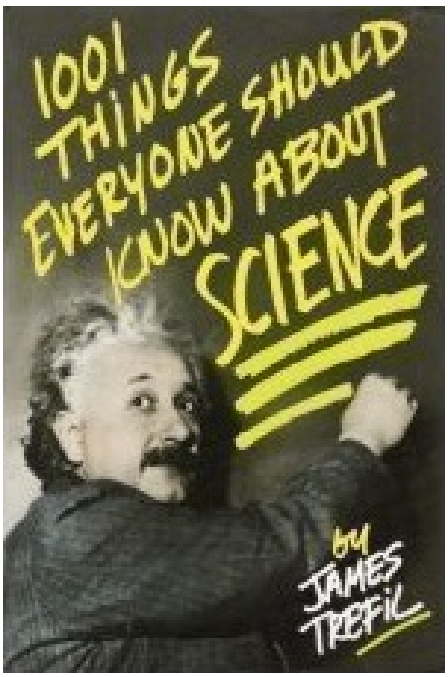

1001 Things Everyone Should Know About Science

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In 1001 plain-language entries--most of less than 200 words--readers can learn everything they need to know about the physical world. Broad topics are broken down into easily comprehensible statements, and Pop Quiz and Odd Fact sections help reinforce the learning process and keep things interesting. 100 illustrations.

1001 Things Everyone Should Know About Science Details

Date	:	Published December 1st 1991 by Doubleday (first published 1991)
ISBN	:	9780385247955
Author	:	James S. Trefil
Format	:	Paperback 305 pages
Genre	:	Science, Nonfiction, Reference

From Reader Review 1001 Things Everyone Should Know About Science for online ebook

Jeffrey says

Do you know why the grass is green? Why the sky is blue? Why it looks like the wagon's wheel's are going backwards when the wagon's going forward? Do you know why on a hot day the tar looks like it's evaporating? I do. But why do you need to know these things. Well, according to the intellectual Allan Bloom, people communicate best by knowing a standard set of information as regards history, geography, science, etc. That's nice, but I just like to actually be able to tell my three years old why the grass is green and why the sky is blue, even though he doesn't understand yet. But if you do do this, you plant the seeds for a beginning of intellectual curiosty that not only enlivens and feeds and stimulates the mind of the child, creating a life of greater depth and breadth, but you also begin your child on a path of greater success and fulfillment in all areas of life. A mind is a terrible thing to waste, indeed. This book is a good place to begin. Get interested! Be interesting, but use it sparingly, for no one's interested in your being interesting unless you're interested in them. Rock on, child of God. Rock on.

Jaber ab says

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Sarah says

This is a great science learning book. The authors 1,001 science facts and makes them easy to understand. You will learn everything from physics, to the universe, to the intricate details of our cells. It is a great little read for anyone interested in science.

Matt Mazenauer says

While this is a great starting point to refresh your basic science and learn some facts you may have missed in high school, the presentation is incredibly weak. Spelling errors, along with unlabeled and unhelpful diagrams which often aren't germane make the book feel unpolished. And as much as I don't mind poking fun at creationists in my own time, I'd expect a science book to be a little more politically neutral. Round it out with the fact that this book is getting up there in years (making a lot of the "cutting edge/future of science" discussions hopelessly outdated) and you're left with a very average read.

Remo says

Grandísima introducción a la ciencia, en 1001 cómodas píldoras que pueden más o menos leerse en el orden que se quiera. El estilo del autor es fluido y evita los tecnicismos todo lo que puede (tal vez demasiado). Un gran libro introductorio.

Cunningham Casey says

For the most part, the title isn't wrong. The book pretty much just provides information people already know. Although it didn't provide the all the fun facts I wanted to learn, it provides easy entertainment as a means to quiz your own know or others.

Alexa Billow says

I picked up this book because I am so overeducated that I can no longer distinguish between common knowledge and Awesome Science facts and it makes me seem really jaded--oh my god there are people who don't know that there are ten-foot-tall hydrogen sulfide-metabolizing worms at the bottom of the ocean and you just scrolled past it like it was boring!--so I figured a long list of facts that a scientist and an editor had agreed were not common knowledge would suit my purposes. It's completely out of date but there are enough things in science that don't really change that there are plenty of little post-it flags I can now mine for future blog posts.

Kaitlyn says

1001 Things Everyone Should Know About Science is very interesting! It talks about biology, evolution, molecular biology, classical and modern physical science, earth science, and astronomy. Though, they don't sound that interesting, some of the things in the book may answer a few questions like, "Why will there never be a hurricane in Kansas?" or "How do cells commit 'suicide'?" The best part is, you don't have to read from start to finish! Just open up to a random page and start reading, it even says so in the introduction. Fun fact learned from this: Dinosaurs might have died from constipation because of the plants!

Mohammed says

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Ania says

Since I will be taking a plant science course I skipped the parts about plant anatomy but this was such a fun read because it was originally published in 1938 and then edited in 1992, and yet the information was still mostly pertinent. The information that was outdated was also interesting in terms of science history (e.g. Linnaeus was still being used as the main resource for grouping organisms whereas cladistics is the preferred method today and it was interesting how he said that cladistics has been compared to Marxist ideology because I had never heard that before; some of the facts referred to complex organisms as 'more advanced' when we know today that complexity isn't directly proportional to advancement; DNA sequencing hadn't come into play when this was first published and the Human Genome Project was only a proposition; and Pluto was still being referred to as a planet, among others!).

A few of the facts were a little silly like that cows 'aren't really vegetarians' because the grass they consume has bacteria that their stomachs digest (which is essentially wrong because that would mean that herbivores don't exist if we take into account the bacteria and other microorganisms on plants and in their bodies) or too simplistic to make complete sense like the explanation that the sky is blue because blue light scatters more easily than red (it doesn't go into much detail about why this is the case).

I am glad that I knew most of the facts (aside from the modern physical science section) already as a science student but I did find out quite a lot of things or had my intuitions confirmed, a few of which I will list:
1 - Most centipedes and millipedes don't respectively have a hundred or a thousand legs; the numbers are generally much lower (I could never count 100 or 1000 legs when I would try so this confirmed my intuition)
2 - Sharks have no bones and instead cartilage (I probably should have already known that since I took animal physiology but I don't recall that we actually looked at shark anatomy)
3 - Dragonflies have over 20,000 lenses in each eye
4 - William Harvey not only discovered blood cells and their properties but proved that the ovum or egg is essential in reproduction
5 - The part of the strawberry that's the technical fruit is not actually the red part but the yellow seeds on top; the red part is an extension of the stamen
6 - Ethanol has a rotting effect and is often used to ripen produce that is picked unripe before being sold
7 - Due to his poor scholastic achievements, Darwin's father believed his son would end up being nothing but a disgrace
8 - Apparently the next mass extinction should occur in about 15 million years (but at the rate of destruction that humans are going I doubt we have anywhere near that much time left)
9 - The organism with the most chromosomes is a species of fern and with the least is an Australian ant
10 - Polar bears appear to have white fur because there are air bubbles in their fur that trap white light from the Sun
11 - The motion of liquid iron in the Earth's core gives rise to its magnetic field
12 - The Egyptians invented the first calendars followed by the Romans (I'm not sure if that's accurate but I'm sticking with it)

13 - I already kinda knew this but when an object falls due to gravity a tiny amount of the object onto which it is falling will also move up in turn; this is similar to land tides which exist in addition to water tides
14 - Fibre optic cables have actually been laid under oceans to enhance international communication
15 - A colloid is a mixture of substances in which one or more particles are suspended in a liquid such that they don't dissolve but are so small that the system acts like a fluid (I always forget this!)
16 - Earthquakes are caused by neutral boundaries between tectonic plates, new crust is formed by converging plates and the destruction of crust is caused by diverging plates
17 - The legend of Atlantis is based on the destruction of the island of Thera off the coast of Crete, which was inhabited by the Minoan civilization
18 - Hurricanes and typhoons are essentially caused by the same thing - low pressure areas over oceans - only the former occur near the Atlantic while the latter occur near the Pacific; monsoons on the other hand are winds that bring heavy rain to the Indian subcontinent
19 - In case I ever wanted to remind myself, cumulus clouds are like cotton balls, stratus clouds are slightly longer and flatter than cumulus, cirrus are highest up in the troposphere, wispy and long, and cumulonimbus are the tallest, very puffy versions of cumulus clouds; they are all made of the same stuff but each occurs during a different weather pattern (e.g. cirrus when the weather is shifting, cumulonimbus during a thunderstorm)
20 - There are two theories on how charge separation occurs in thunderclouds, one being that particles of water fall by gravity and transfer electrical charge to lighter particles while the other posits that light positively charged particles are lifted up by convection currents while heavy negatively charged particles are carried down by downdrafts; what is for certain is that thunderbolts begin when the charge in a thundercloud gets strong enough to ionize the open air in its vicinity, and since it is a good conductor the negative charge runs down in successive amounts until it almost reaches the ground, but is met by positive charges from the ground running up the cloud to neutralize the negative charge in the form of lightning, followed by heating of the air from the energy expenditure, pushing away of it and its return into the vacuum in the form of thunder

Needless to say I loved this book. It is great for people who want a brief summary of fundamental scientific facts without actually having to take a science class or study a textbook and also for people in the science field who want to brush up on their knowledge and count how many facts they already knew! I do think this book could certainly be difficult to understand not only for the average person but also for amateur scientists because some of the concepts are very abstract and complicated. Also, yes, there were a few spelling errors but only enough that I could count on one hand, so I would say the writing style definitely did not detract from my learning experience. Regardless, it is definitely worth the read because it has timeless information. I also love James' attitude about maintaining scientific integrity, like with his rejection of creationism and successful differentiation of evolution and gravity as both facts and theories because they can be physically observed.

The physical science portions were definitely the toughest parts for me to fully understand even though I had already seen most of the concepts because physics intimidates me and is definitely not my forté. They were still extremely interesting but maybe because the author is a physicist, what he was writing seemed simpler to him because it is his expertise and I am also a visual learner so the few diagrams that were there were not enough for me to grasp every concept entirely. I personally prefer biology and chemistry although physics is the glue that holds everything together. Another thing I thought while reading the physical science portion (and the astronomy portion) was that the more abstract physical concepts like the study of quarks and chaos do seem quite overhyped and very theoretical as James himself mentioned. I hate to sound like creationists who think 'evolution is just a theory' but I do think that that attitude can be applied to certain concepts that really haven't been proven to definitively exist in real life or even on paper (as of yet at least), and are more closely the result of a strong desire by researchers to achieve academic notoriety, which is certainly difficult

to do especially now with so many scientific advances. On that note, it was interesting (and slightly reassuring) to know that Einstein didn't believe in quantum mechanics until very late in his life. Anyway, I don't pretend to understand physics to that extent nor do I plan to but more power to those who do.

My favourite part of the book is definitely the astronomy section just because it's something you don't really learn in school but more from renowned physicists and the media (and I've always wanted to go to space even though I'm 99% sure I never will). It is also again very abstract since it's hard to have physical evidence of literally out-of-this-world phenomena so it's always interesting to read about and question (like how we apparently evolved from a couple of light nuclei!). Some things I'm still skeptical of just because for example, the Big Bang, although the most plausible theory for how the Universe began remains so unfathomable to me; I'm so glad that there are people who dedicate their lives to finding those answers, many of which directly relate to the meaning of life and what happens when we die. If you're a fan of science or just learning in general read this amazing book because it 100% delivers on its premise! I know I will definitely be going back on it whenever I feel like learning random science facts.

Brian Douglas says

Overall, probably a 3.5. This is a worthwhile read although a bit boring at times. The only issue is that it was written in 1999 and a lot has happened in the last 20 years especially with quantum mechanics and particle physics and cosmology. For example, he states that black holes are purely theoretical and there's no real proof that they exist. Since the publication of the book, there's been enough data collected for evidence of binary stars with black holes and black hole collisions as well as the massive black hole in the center of the Milky Way Galaxy.

Zuzanna G?owacka says

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Cheryl says

previewed in Pahrump; looks like I do know most of what's included... good to read on vacation because of small bits and being a substitute for surfing the internet...

Ian Ratowski says

The book is focused on presenting the main things important to science that people should know. Each thing is part of a paragraph or many paragraphs listed with the number and fact as the title of the paragraph or many paragraphs.
To me, the book is one of my favorite science books because of the facts presented in the book(for example: "How did wings evolve?"), the facts importance in education(the book had almost every fact needed for Biology) and the organization is very good in comparison to other factual science books I have read.
This book is great for anyone in high school because of the facts presented in the book. This is great for

obtaining the important facts for a science class like biology, astronomy, and physical science.
