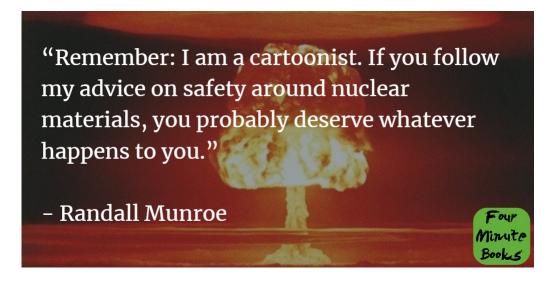
What If? Summary

fourminutebooks.com/what-if-summary/

1-Sentence-Summary: <u>What If?</u> is a compilation of well-researched and scientific-based answers to some of the craziest hypothetical questions you can imagine.

Read in: 4 minutes

Favorite quote from the author:



What do you think would happen if someone threw a baseball at 90 percent the speed of light? Do you know fast you can hit a speed bump and still live? Or have you ever thought about how much force power Yoda actually outputs in Star Wars? If you've ever wondered what would happen if some of the craziest and most impossible events actually happened, you're not alone.

So what do you get if a former NASA roboticist opens up his website to field wacky <u>questions</u> and answer them with science? That's where Randall Munroe comes in. He is the author of the webcomic <u>xkcd</u>, which also hosts his "What If?" platform. Anyone can submit any question they can think of to his site, and Munroe uses real scientific principles to answer his favorites.

A few years ago, some of the best questions and answers were compiled into a book called *What If?: Serious Scientific Answers to Absurd Hypothetical Questions*. If you like science and you like humor, you're going to love this one.

Here are 3 of the most interesting scientific scenarios from this book:

1. There are a surprising number of advantages to earthlings if the Sun went out.

- 2. If we separated every individual on the planet for a few weeks, we could eliminate the common cold entirely, but it's not worth it. (blink 5)
- 3. The idea that everyone in the world having a random soulmate would make for a very lonely world if it were true. (blink 6)

Are you ready for some of the weirdest questions and most interesting science you've ever heard of? Let's get going!

Lesson 1: If the Sun suddenly stopped pumping its light and energy to us, it wouldn't be all bad, maybe.

What are the consequences on Earth if the Sun goes dark without warning? Interestingly, there are actually a few benefits in this situation.

For one, solar flares wouldn't pose a risk to us anymore. The geomagnetic storms that follow solar flares disrupt Earth's magnetic field. In 1859 one such storm sent strong currents through telegraph wires. The extra energy started fires and obliterated communications. The problem is, we have a lot more wires now, and another storm like that would be devastating to our modern world. Without a Sun, this hazard is no more!

Also, we would save a lot of money in many different places if our Sun were gone.

Take the bridges we use to cross rivers and lakes. Without a Sun, the water freezes so think we can just drive on it. And that means we don't have to spend money to maintain all those bridges anymore, saving an estimated \$20 billion in repairs each year!

We'd also spend significantly less on trade. Because of our Sun, we have time zones. These differences in time across the world make it hard to <u>conduct business</u> internationally. If we had no Sun, we would all be in the same time zone and have no problem communicating. The global economy would soar with that kind of cost reduction!

All this sounds like fun and games until you realize that without a Sun everybody on earth freezes and dies. It's probably better we keep the Sun around.

Lesson 2: You probably don't want to do what would be necessary to eliminate the common cold.

Do you remember the last time a cold kept you home from work or school? Although a day off is nice, having a sore throat and fever is no picnic. Wouldn't you do whatever was necessary to <u>eliminate the chances of ever getting a cold again</u>? Well, the science doesn't really check out on this being a good idea.

The common cold thrives by spreading from person to person. **If we quarantined everyone for a couple of weeks, however, we could starve the virus and it would die.** Sadly, two weeks is enough time for society to collapse entirely.

Before we get there though, let's look at the medical implications of this scenario. People with weaker immune systems sometimes carry the cold virus for years. They'd need a lot longer time in quarantine to eradicate this sickness completely.

<u>Economically</u>, this decision is devastating to humanity. Our overall annual economic production is roughly \$80 trillion. If all industrial activity halted for two weeks, we'd lose trillions of dollars.

And practicality takes the cake for why this is a bad idea. Evenly dividing the world's land area between all people in the world means that each person would be 77 meters away from the next. While this is enough to stop the sickness, some people will have to stand in the tundra or scalding desert and that doesn't work so well.

Lesson 3: f you believe in having a random soulmate, chances are you'll never find love because almost nobody will.

Do you believe that you have a <u>soulmate out there</u> just waiting for you to find them and fall in love? You're going to want to think again about that idea after learning about the math behind it.

Even with the assumption that our soulmate lives at the same time we do, the odds of ever meeting them are wildly small. Let's also say that locking eyes is the requirement to find your soulmate, and you did that every day with about 24 new people. Over an estimated 60-year lifetime, the math gives you meeting eyes with about 50,000 people.

About seven billion people live on earth. Whittling down our options of preferred sex and age, we come out with about 500 million potential soulmates. **Arithmetic on these numbers gives us about 10,000 of our estimated 60-year lifetimes to make eye contact with every possible soulmate!**

Let's then say that this was true and society had to change to accommodate the idea of the soulmate. Even if we could chat with potential soulmates for a large part of our days, it would take decades for everyone to find the one. That sounds like a very <u>lonely world</u> to me!

What If? Review

I got <u>What If?</u> as a present a few years ago and it's been one of my favorite books since. If you've got an inquiring mind like I do, you'll love these scenarios and the science that Munroe uses to answer them. This book is funny, educational, and comes highly recommended!

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<u>Learn more about the author >></u>

Who would I recommend the What If? summary to?

The 34-year-old programmer who likes to ponder hypothetical questions, the 22-year-old college student who thinks that science is boring, and anyone who is curious about how the world works.