

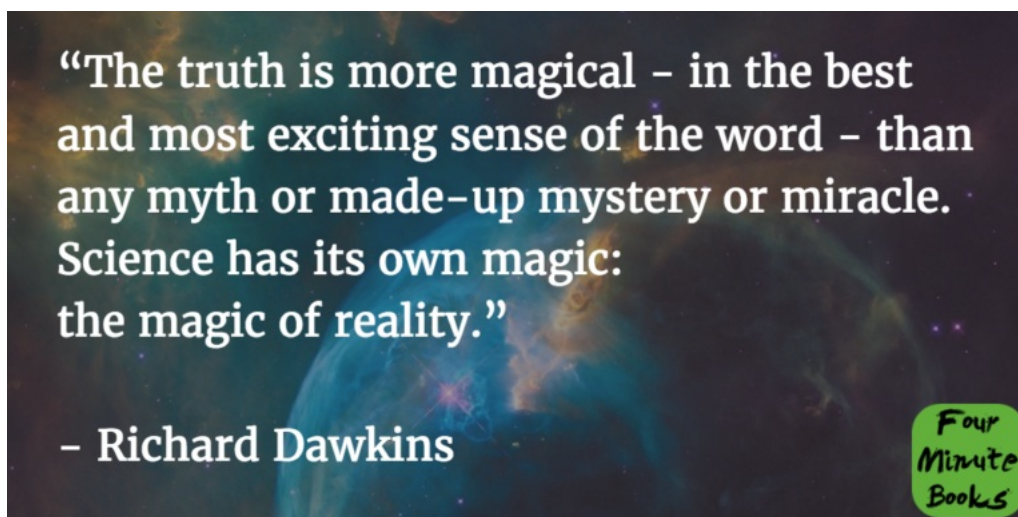
The Magic Of Reality Summary

 fourminutebooks.com/the-magic-of-reality-summary

1-Sentence-Summary: *The Magic Of Reality explains many of the world's natural phenomenons in a scientific way, so that you can understand how the elementary components of our planet work together to logically, yet beautifully, create the place we all call home.*

Read in: 4 minutes

Favorite quote from the author:



Do you believe in magic? Aliens? The supernatural? There's something beautiful about believing in something, even when we can never know for sure it actually exists.

However, declaring something to be supernatural robs us of the chance to find out what might be equally beautiful: finding out how it really, scientifically, works. In the end, most phenomena can be explained through a combination of physics, chemistry, math and logic, and the real explanation is often more beautiful than even the craziest myths we could think of.

This is what Richard Dawkins, the world's most celebrated evolutionary biologist, calls the magic of reality. With *The Selfish Gene* as his most notable work, he's forever changed the way biology views genetics. *The Magic Of Reality*, however, is aimed more at children and young adults, trying to get them to understand the fundamentals of how the world we live in works.

It explains concepts like evolution, atoms, DNA, planets, light and even science itself with relatable, interesting examples, so that you can have a better understanding of the world.

Here are my 3 favorite lessons:

1. Elements are created by planets, as they fuse atoms under heat and pressure.
2. Looking at the spectrum of light is what allows us to learn about the universe, thanks to the Doppler effect.

3. When you can't explain something with science, don't give up!

Ready to discover the magic of reality? Let's learn something about the building blocks of the world!

Lesson 1: Natural elements are created by fusing atoms, which is something only stars can do.

Do you know how the natural elements of our periodic system, like hydrogen, oxygen, helium, iron, etc. are created? It's neither easy, nor obvious, so don't feel bad in case you don't know (I didn't either).

Everything you can touch, feel and see is made up of atoms, but where do their different kinds come from? You probably know that all planetary bodies, including stars, have a gravity field around them. These interact with each other, such as the moon causing high and low tide through its gravitational pull on earth.

Gravity causes atoms to vibrate and the more they do, the hotter they get. So if a big star, like the sun, has a super strong gravity field, **the pressure and heat eventually get so big that atoms melt together** – for example two hydrogen atoms fusing into one helium molecule, thus creating a new element.

If a star burns through its hydrogen very fast, all the excess energy that's created in the process leads to more atoms bashing into each other, and the new helium molecules in turn fuse into other, bigger, heavier elements, like iron, carbon or oxygen.

In case of a supernova, a big star exploding, all of these elements are hurled into the universe creating giant clouds of gas and dust, which slowly build their own gravity field, that then repeats the process – and that's how natural elements are created

Lesson 2: By looking at the spectrum of light different planets and galaxies emit, we can learn more about the universe.

Can you name all the colors of a rainbow? I can't! I think I can name some, but not all of them. There are seven in total, ranging from one end of the visible spectrum of light to the other: red, orange, yellow, green, blue, indigo, violet.

These colors represent different wavelengths and frequencies, with red being longer waves, that are emitted less often (=less frequently) and violet being very short waves, that are more frequent.

Just like each rainbow has a unique combination of colors, so has each element that's part of a star. Scientists can use spectrometers to see the range of colors that represents the whole star, which looks like a barcode, based on the different wavelengths of the light.

This is then used to derive what elements a star contains, which in turn tells us how far away the star is. Even cooler, because this spectrum keeps changing – for example the red portion gets stronger as a star moves away from us, because the waves get longer – scientists were even able to tell how fast stars and galaxies move and thus **calculate that the expansion of the universe must have begun 13 to 14 billion years ago.**

The scientific effect that's made all of this possible is called the doppler effect, which says that the frequency of sound, light or other waves changes, depending on how far the source and observer are away from each other.

Essentially, the changing color spectrum of a galaxy as it speeds away from us is just like the pitch of a siren or noise of a car going from high to low as it drives towards you and then passes you by.

Lesson 3: If there seems to be no scientific explanation for something, see it as a challenge to find one!

Philosopher David Hume once said that miracles should only be accepted as such, if all other, possible explanations are even less likely, and therefore even bigger miracles.

For example, if you think about Moses parting the sea, possible explanations include:

- it being a clever illusion,
- Moses actually parting the sea,
- the whole thing being nothing more than a good story.

Looking at all three events separately, which do you think has the highest likelihood of being true?

As you can see from just thinking about this (I'm not trying to force an answer or attack anyone's religious beliefs here), **just because something doesn't have a scientific explanation yet, it doesn't mean there won't ever be one in the future.**

Think about earthquakes, solar eclipses or even electricity. All of these things were once believed to be supernatural, yet eventually, we found logical, scientific explanations for them.

So the next time something mysterious happens, don't let it destroy your scientific spirit. See it as a challenge to make progress, change your models of the world and come closer to the truth.

The Magic Of Reality Review

Wow, hardly had a summary so jam-packed with insights. Guess that tells you how informational *The Magic Of Reality* is already, highly recommended!

Read full summary on Blinkist >>

[Free Preview >>](#)

[Learn more about the author >>](#)

What else can you learn from the blinks?

- Which instruments we can use to determine if something is real when our senses won't do
- The three things a scientific model does to help us understand
- What a stack of 185 million photos can teach you about evolution
- Why DNA is a language
- How far atoms are apart in a molecule (when compared to footballs)
- Why in the end, all energy comes from the sun
- What light is made of
- Why we believe in paranormal things

Who would I recommend The Magic Of Reality summary to?

The 15 year old, who's interested in biology and nature, the 35 year old family father, who thinks science is nonsense, and anyone who recently heard about a miracle and doubted it.