

1.0

A BIG HISTORY OF EVERYTHING

0:06–2:48

WE TURN BACK TIME

This is the epic story of our world...but it's not the one we're used to. It's the story of how we almost didn't happen. We turn back time 4.5 billion years... to our Solar System still forming around the sun. This planet is early Earth. It's at a critical distance from the Sun. It is in this zone that liquid water will be able to exist. Any closer and our future cities would burn and our oceans boil. Any further out and our future freezes over. Earth's location is just one of many lucky breaks. The next comes in the form of cosmic disaster. A massive object the size of Mars collides into early Earth. If the collision were head-on, our planet would have shattered. Instead, the debris forms our Moon. The Moon is a counter-balance, stabilizing Earth's rotation, which will prevent catastrophic swings in climate. Another lucky break.

As Earth cools, the heaviest metals sink and form a spinning core...sending a giant invisible force field around the planet, a magnetic field that will one day protect us from deadly radiation...and keep our atmosphere from blowing away. But since most heavy metals sank to the core, Earth's surface is devoid of the vital materials — the iron, tin, lead, and gold — that we will one day need. That is, until Jupiter and Saturn step in to help. Millions of miles away, these massive planets shift in their orbits... sending billions of metal-rich asteroids through space...showering Earth and replenishing our supply. Then, another lucky break. Jupiter's orbit stabilizes, and its massive gravity begins to vacuum up most of the remaining rocks, keeping our future home safe. Without a giant neighbor like Jupiter, Earth would still be under constant asteroid attack. If just a single one of these things had not happened in precisely the right way, our story would unfold differently, or not begin at all. Earth would not have the minerals and metals, the stability... The seasons to support the amazing saga that is to come. In this special presentation, we'll see that everything is connected.

2:48–5:35

EARTH BEGINS TO COOL

You can't look at this as tiny, little remote events. These are huge, coupled aspects, events that themselves are part of a larger history. They are Big History.

5:35–6:53

A LARGER HISTORY

We think of history as a timeline, a series of events stretching a few thousand years into the past. It's time to think bigger. Instead of a line, imagine a web of infinite connections interacting over billions of years, linked together to create everything we've ever known: our Universe, our planet, and us. History as we know it is about to get big.

Big History takes events all over the cosmos, all over the Solar System, all over our planet, and connects them together into a seamless whole and then connects those events in human history into the context of the planet, the Solar System, and the Universe.

6:53–7:42 The story we just saw, the series of lucky breaks that led to the formation of the Earth, is what Big History calls a threshold moment.

THRESHOLD
MOMENTS

The idea is basically that the early Universe, in all sorts of ways, was really quite simple — no stars, no life, no planets, and then, gradually, over 13 billion years, new things appear. And that idea provides a great shape and structure and a sort of plotline. We focus on a number of moments when something critical appeared, and that's what we mean by threshold moments.

7:42–8:11 In the story of Big History, there are a total of eight threshold moments, moments when the Universe crosses a line and can never turn back. The creation of the Earth is the fourth threshold. We'll reveal them all and uncover the surprising secret that links them together.

NO TURNING BACK