

4.0.4

THE SUN

0:06–1:19 This is our cosmic neighborhood. Nearly 5 billion years ago, a time before the sun.

THE TIME

BEFORE THE SUN If we go back before the sun came into existence, what we would see is sort of a vast cloud of gas and dust about a light-year across and containing the entire mass of the sun.

An ancient star explodes nearby. It unleashes a shockwave that rips through the gas cloud... And sends it into a tailspin.

It started collapsing, due to its own weight, and it spun faster and faster as it collapsed.

Gravity pulls together a dense cluster of debris in the center. The remaining cloud flattens out around it.

So now, we have a great spinning disk, and in this spinning disk the sun eventually coalesces under gravity, reaches this incredible temperature of 10 million degrees Celsius, and lights up. The sun lights up.

Let there be light.

The sun is born, and in its wake something else appears.

The sun gobbled up 99% of the matter in the cloud of gas, but a little bit was left over in this flat plane, and it coalesced into the different planets.

1:19–2:15

OUR SUN IS BORN

1:56-2:42

THE INTERNET AND
SPACE TRAVEL

2:43-3:14

GOVERNMENT
TRANSFORMS

3:15-4:11

DRIVER 2:
COMPETITIVE
MARKETS

WAGE-EARNERS
MOVE TO CITIES

4:12-4:36

NON-MARKET
SOCIETIES FAIL