

# S.P.A.C.E. Magazine

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**Featured:**

Can we make a brand new Earth?

Colourized Edition!



Georges Lemaître:  
The Big Bang  
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Dark Matter: Why does it matter?

Pg. 10

Jada Betts

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There are many different theories as to how life on Earth will end: pollution, over population, the death of our Sun or getting sucked into a black hole. Every sci-fi movie has a different idea on how to save Earth. But what if we weren't so concerned with preserving life on Earth? What if we preserved life *off* Earth? On a new planet? And not a planet billions of light years away. One in our very own solar system.

Now, we know that of all the planets orbiting our Sun, only Earth can sustain life. It is unreasonable to assume Earth's precarious balance will remain forever, so what if we created a new planet? A new Earth? We have yet to find another planet with life, and although it is possible another one exists, it would most likely take over a lifetime to get there.

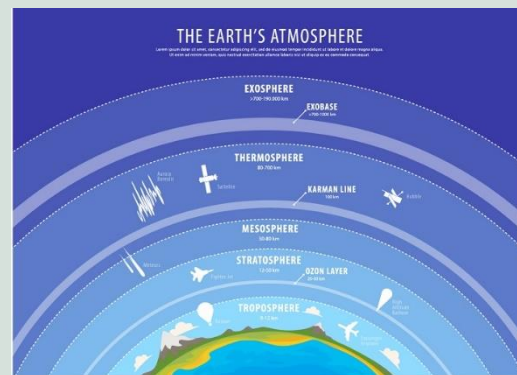


## But How?

Planets are born when one tiny speck of cosmic dust connects to another then another until a huge celestial body is formed. Think of Earth as a kind of giant dust bunny. As each collection of particles swirls around the Sun, its

gravity pulls everything tightly towards its center. Over time it becomes more and more compressed, with enough energy to form the molten core at the center of the planet.

Naturally, it takes the perfect conditions, and the force of a star to create a new solar system. We already have the solar system and the star, so all we need to create a planet is a way to start the core. This would be very difficult considering planets take millions of years to create and lots of resources. Thankfully, we have an estimated 5 billion years until our Sun explodes.



There is more to consider than just the planet itself. Life on Earth depends on our atmosphere. It not only contains the air we breathe and our weather, but also protects us from the direct heat of the Sun and collision from other celestial objects. There are 5 layers in our atmosphere which are held in place by the planet's gravitational pull.

The new planet's size would need to be large enough to create enough gravitational pull to maintain its atmosphere. As well, this new planet would need the correct balance of nitrogen, oxygen, argon, and other gases as here on Earth.

All the elements that make up our planet can be found naturally in space. However, human intervention might be necessary to ensure that the correct elements form the planet. There is water in space, trapped in gigantic chunks of ice. If the new Earth were between our Earth and Mars but closer to Earth, we could use the heat from the Sun to melt this ice, giving the planet water.

Then it would only be a matter of transferring plant, bacteria, and animal species there. It would take time to establish a stable eco system, and not all Earth species would be fit for the colder temperatures. Over time everything could adapt, and eventually, there could be a new Earth.



Adding another planet to our solar system would also be difficult, since each of the current planets in our solar system already have a set orbit. However, if the planet were slightly smaller than our own Earth, it is possible we could place it between the orbits of two other planets. By locking it in orbit opposite to the surrounding planets, there would be less chance it would collide or alter the course of the existing planets in our solar system.

The death of our Sun is the most likely cause of the end of Earth, and it is completely out of our control. For this reason, it would make more sense for the new planet to be located slightly further from our Sun. Even so, a second Earth could be a solution for pollution and over population but would not survive if the Sun exploded. Creating a new earth could be a part of the solution, to preserving Earth life.

#### Bibliography:

Dunbar, Brian. "What Kinds of Planets Are Out There?" *NASA*, NASA, [www.nasa.gov/vision/universe/starsgalaxies/Earthsized\\_planets.html](http://www.nasa.gov/vision/universe/starsgalaxies/Earthsized_planets.html).

Howell, Elizabeth. "How Are Planets Formed?" *Phys.org*, Phys.org, 30 Jan. 2015, [phys.org/news/2015-01-planets.html](http://phys.org/news/2015-01-planets.html).

Misachi, John. "What Is The Earth Made Of?" *WorldAtlas*, WorldAtlas, 8 May 2018, [www.worldatlas.com/articles/what-is-the-Earth-made-of.html](http://www.worldatlas.com/articles/what-is-the-Earth-made-of.html).

National Geographic Society. "Atmospheric Pressure." *National Geographic Society*, 9 Oct. 2012, [www.nationalgeographic.org/encyclopedia/atmospheric-pressure/](http://www.nationalgeographic.org/encyclopedia/atmospheric-pressure/).

"Planets and How They Formed." *Las Cumbres Observatory*, [lco.global/spacebook/solar-system/planets-and-how-they-formed/](http://lco.global/spacebook/solar-system/planets-and-how-they-formed/).