# **How Stones From Outer Space Made Our World**



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The history of our Earth is filled with fascinating events, one of which involves stones from outer space. Meteorites, rocks that survive the journey through Earth's atmosphere and land on our planet's surface, have played a crucial role in shaping our world as we know it today. In this article, we will delve into the extraordinary impact meteorites have had on Earth's geological history, atmosphere, and even the emergence of life.

Meteorite: How Stones from Outer Space Made
Our World by Tim Gregory(Kindle Edition)



★★★★★ 4.6 out of 5

Language : English

File size : 5527 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

X-Ray : Enabled



: Enabled

: 242 pages

### **Meteorites as Geological Timekeepers**

Word Wise

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Meteorites provide us with invaluable insights into the history and evolution of our planet. These extraterrestrial rocks are remnants of the early solar system, formed from the same processes that shaped Earth. By studying meteorites, scientists can determine the age of our solar system, the composition of its ancient building blocks, and even the conditions necessary for the formation of life.

### **Craters and Catastrophes**

The impact of meteorites on Earth's surface has left behind visible scars — craters. These impact craters are evidence of catastrophic events that shaped the geological landscape of our planet. The most famous example is the Chicxulub crater in Mexico, created by an asteroid impact roughly 66 million years ago. This catastrophic event is believed to be responsible for the extinction of the dinosaurs and opened up ecological niches, allowing mammals to thrive and eventually evolve into the diverse species we see today.

#### **The Water Connection**

Another significant contribution of meteorites to our world is the delivery of water. It is believed that Earth's early oceans formed due to the bombardment of icy comets and water-rich asteroids. These extraterrestrial visitors brought precious water to our planet, shaping its climate and enabling the emergence of life. Recent research even suggests that the water found on Earth today may have originated from comets and asteroids from the outer reaches of our solar system.

### **Space Seeds of Life**

Meteorites aren't only responsible for delivering water to Earth. They also contain complex organic compounds, including amino acids – the building blocks of life. Scientists have discovered these compounds in various meteorites, suggesting that the seeds of life may have been planted by extraterrestrial sources. This discovery raises intriguing questions about the possibility of life existing elsewhere in our universe.

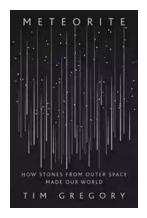
### **Mining the Universe**

Meteorites have not only shaped our planet but have also influenced human civilization. Throughout history, meteorites were revered as sacred objects and used as valuable resources. Ancient civilizations, such as the Inca and the Egyptians, incorporated meteorite metals into their religious ceremonies and crafted them into weapons and tools. In the modern era, scientists analyze meteorites to gain insights into the formation and composition of our solar system and develop new materials and technologies.

Stones from outer space have, quite literally, shaped the world we live in.

Meteorites have provided us with a glimpse into the early history of our solar system, altered Earth's surface, influenced its climate, and potentially played a role in the emergence of life. As we continue to explore our universe, studying

meteorites will undoubtedly reveal more about our cosmic origins and our place within the vast expanse of space.



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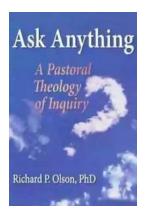


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Explore the universe and immerse yourself in the story of our solar system, planet, and life through meteorites. "Meteorite is a treasure"--Wall Street Journal

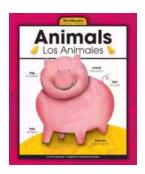
Meteorites have long been seen as portents of fate and messages from the gods, their fiery remains inspiring worship and giving rise to legends that have persisted for millennia. But beyond the lore, meteorites tell an even greater story: that of our solar system. In Meteorite, geologist Tim Gregory shows that beneath the charred crusts of these celestial stones lies a staggering diversity of rock types. Their unique constituents, vibrant colors, and pungent smells contain thrilling tales of interstellar clouds, condensing stardust, and the fiery collisions of entire worlds. Gregory explores the world of meteorites to uncover new insights into what our solar system was like before our sun became a star, into the forging of our planet, and into the emergence of life on it. Humans have long looked to the

skies for answers to big questions. Meteorite reveals how science is finally arriving at those answers.



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