

Cosmic Chronicles

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Your Journey Through Space and Ideas



The Endless Story of the Universe

From the earliest days of human civilization, space has captured the imagination of people across cultures and generations. Ancient civilizations studied the stars to understand the passing of time, to guide travelers across deserts and seas, and to explain the mysteries of life through myths and legends. Even without modern technology, humans felt a deep connection to the sky, believing it held answers to questions they could not yet explain. Today, although science has advanced greatly, space remains a powerful symbol of curiosity, discovery, and endless possibility.

The universe is unimaginably vast. Scientists believe it began with the Big Bang, an enormous explosion that marked the

beginning of space, time, and matter. Since that moment, the universe has been expanding continuously. Galaxies formed, stars ignited, and planets took shape over billions of years. When we observe distant galaxies, we are not seeing them as they are now, but as they were in the past, because their light has taken an incredible amount of time to reach Earth. This makes astronomy a unique science that allows us to study the history of the universe itself.



Galaxies are massive systems composed of stars, planets, gas, dust, and dark matter, all held together by gravity. They come in different shapes and



sizes, including spiral, elliptical, and irregular galaxies. The Milky Way, our home galaxy, contains hundreds of billions of

stars and stretches across thousands of light-years. Our solar system is located in one of its spiral arms, far from the crowded center, allowing life on Earth to develop in a relatively stable environment.

Stars are born deep within nebulae, where clouds of gas and dust collapse under gravity. As the pressure and temperature increase, nuclear fusion begins, releasing enormous amounts of energy. This process allows stars to shine for millions or billions of years.

The life of a star depends on its mass: smaller stars burn slowly and live longer, while massive stars burn quickly and end their lives in powerful explosions. These explosions spread elements throughout space, helping form new stars, planets, and even the building blocks of life.

Our Sun is a perfect example of how stars influence their surroundings. As the center of our solar system, it provides the energy that drives Earth's climate, weather, and biological systems. The balance between the Sun and Earth allows water to remain liquid, making life possible. This delicate relationship shows how closely connected space and life truly are.

Planets form from the left-

over material surrounding young stars. In our solar system, planets are divided into rocky planets and gas giants. Earth, Mars, Venus, and Mercury have solid surfaces, while Jupiter, Saturn, Uranus, and Neptune are composed mainly of gas and ice. Each planet has unique features, from Jupiter's massive storms to Saturn's iconic rings. Studying these planets helps scientists understand how planetary systems form and evolve.

The discovery of exoplanets has expanded our understanding of the universe even further. Thousands of planets have been found orbiting distant stars, many of them unlike anything in our solar system. Some are extremely hot, others are frozen worlds, and a few



exist in conditions that might support life. These discoveries raise profound questions about whether humanity is alone in the universe and what forms life might take beyond Earth.

Among the most mysterious objects in space are black holes. They represent regions where gravity becomes so intense that space and time are distorted. Although black holes cannot be seen directly, their presence is revealed through their interaction with nearby



matter. Studying black holes helps scientists understand the limits of physics and the behavior of the universe under extreme conditions.

Space is also filled with cosmic phenomena such as asteroids, comets, and meteoroids. These objects are remnants from the early formation of the solar system and provide valuable clues about its history. Occasionally, they collide with planets, reminding us that space is dynamic and sometimes unpredictable.

Human space exploration has dramatically changed our view of the universe. The launch of the first satellite marked the

beginning of the space age, followed by missions that sent humans beyond Earth's atmosphere. Walking on the Moon was one of humanity's greatest achievements, demonstrating what is possible through determination and scientific cooperation. Since then, robotic missions have explored Mars, Saturn, Jupiter, and beyond.

Space technology plays a critical role in modern society. Satellites enable global communication, monitor environmental changes, and support scientific research. Space-based observations help scientists study climate change, natural disasters, and Earth's ecosystems. This shows that space exploration is not separate from daily life, but deeply connected to it.

As technology advances, new possibilities emerge. Modern telescopes can observe **distant galaxies with incredible clarity**, while space agencies plan missions to return humans to the Moon and prepare for journeys to Mars. Private companies are also contributing to innovation, making space exploration more accessible and efficient. These efforts represent humanity's desire to explore and push beyond known boundaries.

Beyond science and technology, space has a strong influence on culture and imagination. Stories about

space exploration, alien worlds, and futuristic societies inspire creativity and encourage people to think beyond Earth. Space invites us to ask philosophical questions about existence, responsibility, and the future of humanity.

This is the heart of Cosmic Chronicles. The magazine is more than a collection of articles—it is a record of humanity's ongoing relationship with the universe. Each page reflects curiosity, learning, and the desire to understand the unknown. Cosmic Chronicles aims to make space knowledge approachable, inspiring readers to explore science while appreciating the beauty of the cosmos.

The word “Chronicles” emphasizes storytelling. The universe is not static; it evolves constantly, and every discovery adds a new chapter. **By reading and learning, students become part of this story, connecting past discoveries with future possibilities.**

Looking ahead, the future of space exploration depends greatly on young minds. Education, research, and innovation will shape the next era of discovery. Students who study space today may one day design spacecraft, discover new planets, or answer questions humanity has asked for centuries.

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Cosmic Chronicles, readers are invited to journey through the universe, expand their knowledge, and imagine the endless

possibilities that lie beyond the stars.

Humanity's Connection to Space
Space is not only a scientific field of study; it is deeply connected to human identity and curiosity.

Throughout history, humans have searched the sky for meaning, guidance, and inspiration. The stars were once used to create calendars, guide explorers, and shape cultures. Even today, space continues to influence how people understand their place in the universe.

Modern astronomy has allowed humanity to move from imagination to observation. Powerful telescopes and advanced technology have transformed distant points of light into detailed worlds filled with complexity and beauty. This shift has changed not only scientific knowledge, but also human perspective. Space reminds us that borders, conflicts, and differences on Earth disappear when viewed from a cosmic scale. Studying space also teaches important values such as patience, collaboration, and responsibility. **Space missions often**

require years of planning and cooperation between countries and scientists from different backgrounds. These efforts show that exploration is most successful when humanity works together toward a shared goal. For students and young readers, space offers more than facts—it offers inspiration. Learning about the universe encourages critical thinking, creativity, and problem-solving skills. It pushes learners to ask questions, challenge assumptions, and imagine futures that do not



yet exist. Space education is not only about discovering new worlds, but about discovering human potential. Cosmic Chronicles celebrates this connection between humanity and the universe. By exploring space through knowledge and storytelling, the magazine invites readers to see science as an ongoing journey rather than a fixed destination. Each article, image, and idea becomes part of a larger story—one that continues to grow with every new discovery.

Space and the Future of Human Exploration

As humanity continues to advance, space exploration is becoming one of the most important fields shaping the future. What was once considered science fiction is now part of real scientific plans and international projects. Missions to the Moon, Mars, and beyond represent not only technological progress, but also humanity's desire to expand knowledge and explore the unknown.

One of the most exciting aspects of future space exploration is the possibility of human life beyond Earth. Scientists are researching ways to build sustainable habitats on other

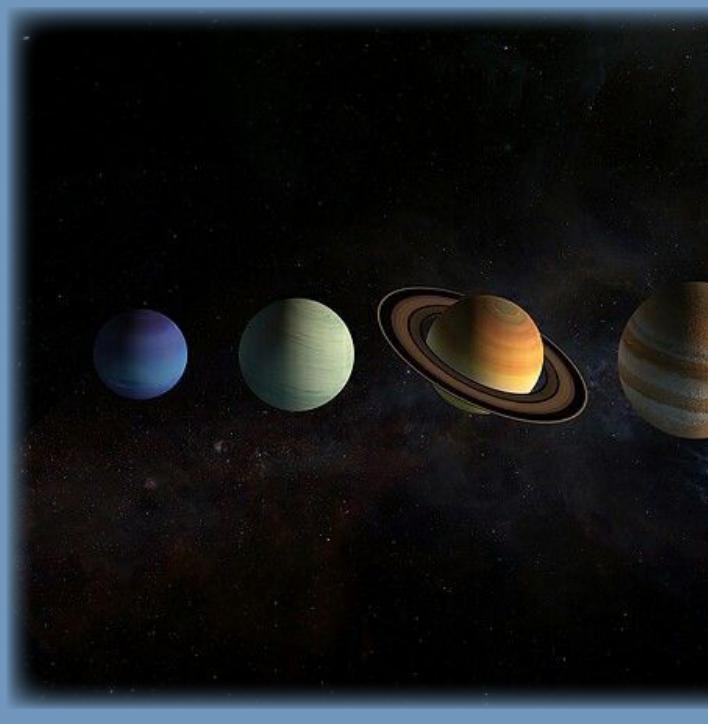
planets and moons. These studies focus on energy sources, food production, and protecting humans from extreme conditions. Such research does not only prepare humans for space, but also improves technology and sustainability on Earth.

Artificial intelligence and robotics play a growing role in space missions. Robots can explore dangerous environments where humans cannot safely travel, while AI helps analyze massive amounts of data collected from space.

These technologies make exploration more efficient and allow scientists to discover patterns and information that would otherwise be missed.

Space exploration also raises important ethical and environmental questions. As humans expand into space, responsibility becomes essential. Protecting celestial environments and using space resources wisely are topics that scientists and policymakers continue to discuss. These conversations help ensure that exploration benefits humanity without causing harm.

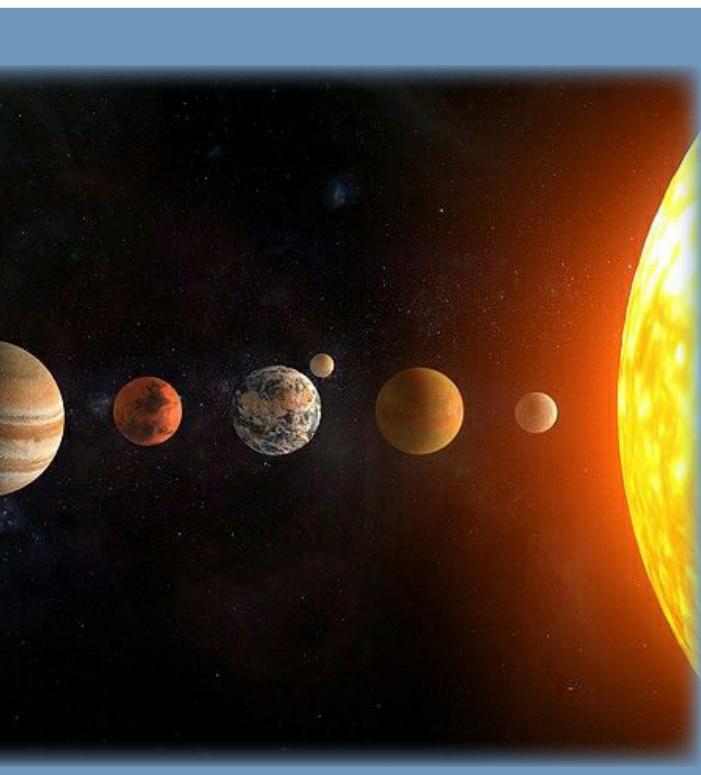
Through these advancements, space remains a symbol of hope and progress. It represents humanity's ability to dream, to innovate, and to work together toward a greater understanding of the universe. Cosmic Chronicles highlights these ideas by presenting space not only as a scientific topic, but as a shared human journey that continues to evolve with time.



The Universe as a Living Story

The universe is not a silent or empty place, but a living story that has been unfolding for billions of years. Every star, planet, and galaxy carries a chapter of this story, written through time, energy, and motion. Humans are relatively new characters in this cosmic narrative, yet our curiosity has allowed us to read parts of the universe that were once completely unknown.

When we look at the sky, we are not simply observing distant objects; we are witnessing history. Light traveling through space carries information from the past, allowing astronomers to understand how the universe has evolved. This connection between time and space makes astronomy unique among sciences. It allows humanity to explore not only distant locations, but distant eras as well.

A collage of various celestial bodies, including the Sun (a large, bright yellow/orange sphere), Earth (a blue and green planet), and several smaller planets and moons against a dark, star-filled background.

The universe began in a state of extreme heat and density. Over time, matter cooled and formed the first atoms, stars, and galaxies. These early structures

shaped everything that followed. The elements found in our bodies today were created inside stars long before Earth existed. In this way, humans are deeply connected to the universe, made from the same cosmic materials as stars and planets. Galaxies act as the universe's cities, filled with stars, planets, and cosmic systems. They interact with each other through gravity, sometimes colliding and merging to form new galaxies. These massive events may seem violent, but they are essential to the evolution of the universe. Without them, many of the

structures we observe today would not exist.

Within galaxies, stars live complex lives. They are born, mature, and eventually die, releasing energy and elements into space. This cycle of creation and destruction is necessary for the formation of new stars and planets. It reminds us that change is a natural and essential part of the universe.

Planets, including Earth, are shaped by delicate balances. Distance from a star, atmospheric composition, and internal structure all determine whether a planet can support life. Earth's position in the universe is not random, but the result of countless physical processes working together over billions of years. Studying other planets helps scientists understand how rare or common such conditions might be.

Human exploration of space represents one of the most ambitious efforts in history. Reaching beyond Earth required imagination, courage,

and scientific innovation. Early space missions faced great risks, yet they opened doors to new knowledge and possibilities. Each mission added valuable information, building the foundation for future exploration.



Space stations orbiting Earth serve as laboratories where astronauts study the effects of microgravity on the human body, plants, and materials. These experiments help improve life on Earth, from medical advancements to new technologies. This shows that space exploration is not distant from daily life, but closely connected to it.

As humanity plans future missions, questions about responsibility become increasingly important. How should space be explored? Who owns space resources? How can celestial environments be protected? These discussions reflect humanity's growing awareness that exploration must be guided by ethics as well as curiosity. Education plays a vital role in

shaping the future of space exploration. Students who learn about space develop critical thinking skills and a broader understanding of science and technology. Space education encourages creativity and problem-solving, helping young minds imagine solutions to challenges that do not yet exist.

This is where Cosmic Chronicles becomes meaningful. The magazine acts as a bridge between scientific discovery and human understanding. It transforms complex ideas into stories that inspire curiosity rather than fear. By presenting space as an ongoing narrative, Cosmic Chronicles invites readers to see themselves as part of the universe's story.

The universe also reminds humanity of unity. When viewed from space, Earth appears as a small, fragile planet without visible borders. This perspective encourages cooperation and shared responsibility. Space exploration has often brought nations together, proving that science can unite people beyond political and cultural differences.

Technology continues to push the limits of what humans can observe and understand. Telescopes now detect planets around distant stars, measure cosmic radiation, and study the earliest moments of the universe. Each technological breakthrough adds new pages to the cosmic story.

Despite all discoveries, the universe remains full of unanswered questions. What is dark matter? What is dark energy? Are there other intelligent forms of life? These mysteries ensure that exploration will never truly end. They remind humanity that knowledge is always incomplete and curiosity is always necessary.

In the end, space is more than a subject of study—it is a source of inspiration, humility, and hope. It teaches humans to think beyond themselves and to appreciate the vastness of existence. Through Cosmic Chronicles, readers are invited to continue exploring, questioning, and imagining, knowing that the universe's story is far from complete.

Worlds Beyond Earth

Planets are among the most fascinating creations of the uni-

, each one shaped by time, gravity, and cosmic forces that operate beyond human control. Unlike stars, planets do not produce their own light, yet they carry unique identities that tell stories about their origins and evolution. Some planets are born close to their stars, enduring extreme heat and radiation, while others exist in distant orbits where cold and darkness dominate. These differences create worlds that are dramatically diverse, ranging from rocky surfaces and frozen landscapes to massive gas giants filled with powerful storms.

Studying planets

allows scientists to understand how solar systems form and how delicate balances can lead to stability or destruction. The presence of an atmosphere, the distance from a star, and internal geological activity all play critical roles in shaping a planet's environment. Earth's ability to support life is the result of such precise conditions, making it both rare and valuable. When scientists study planets like Mars or distant exoplanets, they are not only searching for life, but also seeking to understand Earth itself.

Planets also reflect the dynamic nature of the universe.

They change over time through volcanic activity, asteroid impacts, and atmospheric evolution. These changes remind us that planets are not static objects, but evolving worlds with complex histories. By exploring planets beyond Earth, humanity gains insight into the past, present, and possible future of our own planet. In this way, planets become more than distant objects in space—they become mirrors that help humanity understand its place in the universe.

Space remains one of the greatest mysteries of existence, endlessly expanding and constantly inviting humanity to explore, learn, and reflect. It reminds us that knowledge has no limits and that curiosity is the beginning of every discovery. As science continues to reveal the secrets of the universe, space will always inspire wonder, unity, and hope—encouraging future generations to look beyond what lies ahead.



24時間、900ml。

私たちの皮膚や呼吸から、気づかぬうちに水分が蒸発しています。これを不感蒸発と言い、その量は、1日で 900ml になります。失われた水分は、ただの水ではありません。体液の組成に近いポカリスエットで、1日1本 900ml、すみやかに補給してください。



あなたの生活に
ジャストサイズ。

- 多すぎない、少なすぎない、900ml。
- 冷蔵庫のポケットに収まりやすい。
- 少人数の家族にも、ちょうどいい。

水よりも、ヒトの身体に近い水。

ION SUPPLY DRINK
POCARI SWEAT **PURE**
900



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