Cosmic Discoveries

Design Intent

The universe is vast and most certainly awe-inspiring. While the story told inside the *Cosmic Discoveries* room ends at the edges of our solar system, it still offers an amazing view of the stars. Beautiful images from the Hubble Telescope encompass the walls surrounding a rocket ship that awaits in the center of the room. The textures of each planet dot the colorful palette of the cosmos, egging the children to explore the possibilities of this new found frontier, turning their eyes to the heavens and letting imaginations take flight.

T**echnology Components**

Rocket Monitor - Collection of video clips

Mural Features

- Galaxy - A galaxy is a vast system composed of dust, gas, stars, and their solar systems, all bound together by gravity. Our galaxy, The Milky Way, contains hundreds of billions of stars, including the Sun and the planets that orbit it. It has a distinctive spiral shape, stretching across space in a rotating structure.
- Satellite - A satellite is anything that orbits a planet, star, or moon. Mercury is a satellite orbiting the Sun. The Moon is a satellite orbiting Earth. Often, the word satellite refers to a spacecraft that is launched into space and moves around Earth or another body in space.
- Astronaut - An astronaut typically receives two years of basic training and additional training for their assigned mission. NASA astronauts must have a master’s degree in a STEM field plus two years of relevant experience.
- Stars - A star is a sphere of gas held together by its own gravity. The closest star to Earth is our Sun. Astronomers estimate that the universe could contain up to one septillion stars (1 followed by 24 zeros).
- Meteor Streak - A meteor streak is a trail of light that flashes across the night sky when a small piece of space rock burns up in Earth’s atmosphere. As it travels at high speed, friction with the air heats it causing it to glow in colors like white, yellow, or even green. Most meteor streaks last only a few seconds before fading away. They are often called “shooting stars,” even though they are not actually stars.

Themes to Explore

- Observations
- Earth, Moon, and Sun
- International Space Station (Comparing Homes)
- Force and Motion
- Ultraviolet Rays
- Lunar/Solar Eclipses and Shadows
- Space Transportation

Mounted Artifacts

- Rocket - A rocket is a vehicle that propels out of Earth's atmosphere and into space. Rockets are used to carry astronauts, satellites, supplies, and other spacecraft. A rocket produces thrust by burning fuel.

Classroom Tables

- Moon - A moon is a natural object that orbits a planet in space. Moons can be made of rock or ice and come in many different sizes and shapes. Some moons help create tides on their planets, like Earth's Moon. Other moons have mountains, craters, or even frozen oceans.
- Satellite (Sensory Table) - A satellite is anything that orbits a planet, star, or moon. Mercury is a satellite orbiting the Sun. The Moon is a satellite orbiting Earth. Often, the word satellite refers to a spacecraft that is launched into space and moves around Earth or another body in space.

Flooring

- Planet - A planet is a celestial body that orbits a star, is massive enough to be rounded by its own gravity, and does not have other objects around it. There are 8 planets in our solar system. Exoplanets are planets that exist outside of our solar system.
- Mercury - Mercury, the smallest planet in our Solar System, is the closest to the Sun. It is a terrestrial planet composed of silicates, rocks, and metals. The surface is marked by numerous craters.
- Venus - Venus is the second planet from the Sun. It is a terrestrial planet and is closest in mass and size to Earth. Venus has the densest atmosphere of the terrestrial planets, composed of carbon dioxide with sulfuric acid cloud cover.
- Earth - Earth is the third planet from the Sun. It has a dynamic atmosphere that supports diverse ecosystems and a magnetic field shielding it from solar radiation. Earth continues to evolve through natural processes like plate tectonics. Weather cycles, and biological interactions.
- Mars - Mars is the fourth planet from the Sun. The surface of Mars is orange-red because it is covered in iron oxide dust. The surface of Mars is dry, rocky, and bitter cold. Mars is also one of the brightest objects in Earth's sky.
- Jupiter - Jupiter is the fifth planet from the Sun and is the largest in our Solar System. It is a gas planet with a mass more than 2.5 times that of all the other planets. Its diameter is eleven times that of Earth, and a tenth that of the Sun. Jupiter's Great Red Spot is a giant storm bigger than Earth.
- Saturn - Saturn is the sixth planet from the Sun and the second largest planet in our Solar System, after Jupiter. It's a gas planet with an average radius nine times that of Earth with 52 known moons. Saturn is a massive ball made mostly of hydrogen and helium and surrounded by rings.

Flooring

- Uranus - Uranus, the seventh planet from the Sun, is classified as an ice giant and ranks as the third-largest planet in our Solar System. It has at least 28 moons and is surrounded by faint rings. What makes Uranus particularly unique is its extreme axial tilt, causing it to appear as if it is spinning on its side.
- Neptune - Neptune is the eighth and farthest planet from the Sun. It is the fourth largest planet in our Solar System and is the only planet not visible to the naked eye. Neptune is an ice giant that is known for being dark, cold, and whipped by winds.
- Sun - The Sun is a glowing ball of hot gases at the center of our solar system. It produces light and heat through a process happening deep in its core. Tiny particles called hydrogen are pushed together so tightly that they join to form helium, releasing a huge amount of energy. That energy slowly travels outward and eventually leaves the Sun as the light and warmth we feel on Earth. Even though it looks small in the sky, it is so large that over a million Earths could fit inside it.

To Find Out More

- NASA Stem Education
- Jet Propulsion Laboratory-Education