

# NOBLE PLANETARIUM GALLERY

A visit to the Noble Planetarium Gallery is a chance for your students to broaden their horizons, stimulate their curiosity about the universe, and foster a deeper appreciation for the wonders of space!

## CHARLIE MARY NOBLE

This exhibit is named after the great Charlie Mary Noble. Miss Noble began her career as a math teacher at Paschal High School in 1897 and teaching became the greatest love of her life. While at Paschal she started the Penta Club, one of the first science clubs for young people in Fort Worth. After 46 years of dedicated service, she retired from the high school-but not from teaching.

During World War II, Miss Noble was asked to teach a celestial navigation class for U.S. Navy officer trainees at TCU. In 1947 she began teaching an astronomy course at TCU. That same year she organized a Junior Astronomy Club at the Fort Worth Children's Museum, which would later become the Fort Worth Museum of Science and History.

Miss Noble received an honorary doctorate from TCU in 1950. In 1954 she received the Altrusa Civic Award as the "First Lady of Fort Worth" for stimulating interest in astronomy in young people. In 1955 the Museum's planetarium was dedicated to her, and in 1956 she became the first woman to receive the Astronomical Leagues' annual award for her advancement of astronomical knowledge.



*Charlie Mary Noble did so much  
or her students.*

## NOBLE PLANETARIUM

The centerpiece of the gallery is the awe-inspiring planetarium dome, where students will be transported to distant galaxies, witness breathtaking celestial events, and learn about the stars, planets, and other celestial bodies that fill our night sky.

Our digital projection system creates a mesmerizing visual experience, allowing students to embark on virtual space explorations. Accompanied by knowledgeable educators, students will have the chance to unravel the mysteries of the stars, understand the movements of celestial objects, and even take a virtual tour of our solar system!



## THE SPACE RACE

By the late 1950s, the United States and this Soviet Union were locked in a battle for technological supremacy. The more advanced nation would win key allies for the Cold War struggle. The launch of Sputnik by the U.S.S.R. in 1957 kicked this competition into overdrive. The ultimate goal became landing humans on the Moon. This was peaceful competition in name only- the technologies needed to land on the Moon would have significant military applications.

The two nations pursued this race through vary different strategies. The U.S.S.R. focused on winning "firsts" which had propaganda value. But, to do so, they took many shortcuts. The U.S. worked more slowly, building and testing each piece of the Moon landing puzzle. In the end, this strategy proved more successful. The Space Race ended in 1975, when a U.S. and Soviet spacecraft docked together for the first time.

## METEORITES

Students will discover how scientists collect and study meteorites! *Meteoroids* are what we call "space rocks" that range in size from dust grains to small asteroids. This term only applies when they're in space.

Most are pieces of other, larger bodies that have been broken or blasted off. Some come from comets, others from asteroids, and some even come from the Moon and other planets. Some meteoroids are rocky while others are metallic, or combinations of rock and metal.

When meteoroids enter Earth's atmosphere, or that of another planet, like Mars, at high speed and burn up, they're called *meteors*. This is also when we refer to them as "shooting stars." Sometimes meteors can even appear brighter than Venus - that's when we call them "fireballs." Scientists estimate that about 48.5 tons of meteoritic material falls on Earth each day.

When a meteoroid survives its trip through the atmosphere and hits the ground, it's called a *meteorite*.

## TEKS:

K: 3C, 8A,B,C

1ST: 3C, 8A,B,C,D

2ND: 3C, 8A,B,C

3RD: 3C, 8A,B,C,D

4TH: 3C, 8A,B,C

5TH: 3C, 8C,D

6TH: 3D, 11A,B,C

7TH: 3D, 9A,B

8TH: 3D, 7A,B,C,

8A,B,C

## ALL ABOUT ALAN BEAN

Many of the artifacts displayed in the Noble Planetarium Gallery were donated by astronaut, Alan Bean (1932-2018), a Fort Worth native and the fourth person to walk on the Moon during NASA's Apollo 12 mission in 1969. Bean was an accomplished naval aviator before joining NASA's astronaut program in 1963. His journey to the moon was a pivotal moment in space exploration, as he and his fellow crew members contributed to expanding humanity's understanding of our closest celestial neighbor. Bean also commanded the U.S. space station Skylab.

After leaving NASA, Bean turned to art to capture the essence of his experiences, producing a unique body of work that depicted the moon's landscapes and his personal encounters in space. Through both his pioneering space exploration and his creative expressions, Alan Bean left an indelible mark on the world, showcasing the profound connection between science and artistic inspiration. He passed away on May 26, 2018, but his legacy continues to inspire those interested in the wonders of space and human achievement.





# CLASSROOM CONNECTIONS

## PRE-VISIT ACTIVITIES:

**Exploring Space:** Discuss the impact of space exploration on scientific knowledge and technology. Talk about how studying space has led to innovations such as satellite technology, weather forecasting, and communication advancements. Have a class brainstorming session on how space exploration has influenced everyday life, and create a list on the board!

**Scale of the Solar System:** Create a scale model of the solar system using different objects representing planets and their distances from the Sun. Discuss the vastness of space and the relative sizes of planets in comparison to the Sun.

**Astronomical Terminology:** Familiarize students with essential astronomical terms such as galaxies, nebulae, black holes, and light-years. Encourage them to create a glossary or visual aid (ex. Frayer model) to reinforce their understanding.

**Research a Space Mission:** Assign students different historic or current space missions, such as the Mars rovers or the Hubble Space Telescope. Have them research and create presentations discussing the objectives, challenges, and discoveries of their assigned mission.

## SPARK CURIOSITY!

Encouraging children to use "**I Notice, I Wonder, I Imagine**" questions during a field trip can help them engage actively with the exhibits, stimulate their curiosity, and foster their creativity and critical thinking skills. It also provides an opportunity for meaningful discussions and reflections on their experiences.

For Example: "I notice captivating displays of celestial bodies, including very detailed models of planets, stars, and galaxies. I wonder how astronomers and scientists gather such intricate data and imagery. I imagine being part of a future mission to Mars, walking across the rusty terrain!"

## TRY THIS BACK IN THE CLASSROOM!

These lesson ideas will help extend the learning from your Museum visit and encourage students to explore space science and astronomy from various angles, fostering creativity, critical thinking, and a deeper appreciation for the wonders of the universe.

**Space Travel Diary:** Imagine students are astronauts on a journey to a distant planet. Have them write a series of diary entries detailing their experiences, observations, and emotions during the trip.

**Build a Satellite:** In a STEM-focused activity, challenge students to design and build a model satellite using basic materials. Discuss the purposes of satellites, such as communication, weather monitoring, and scientific research.

**Astronomical Artwork:** Encourage students to create artwork inspired by their field trip experience, drawing inspiration from Alan Bean. They can paint or color their favorite celestial objects, constellations, or scenes from the planetarium show.

**Create a Space Travel Brochure:** Have students design travel brochures for an imaginary space vacation. They can research different celestial bodies (planets, moons, asteroids) and create persuasive brochures highlighting the unique features and attractions of each destination.

