



# Tour the Universe! A museum guide exploring REALMS Intermediate

## The Earth-Moon Realm

Shoot for the Moon **5**  
Upper Level



**Fact:** On a clear night when the Moon is full, you can see craters on the Moon. These craters were made by things like asteroids and meteors crashing into the Moon. Craters can tell you a lot about a planet or a moon. The more craters a surface has, the older it is, probably. The Moon doesn't have any lava, water, wind or earthquakes to change a crater once it's made, so the crater just stays there.



**Find and Try:** Model of the Moon. Feel the craters.



**Think:** Do you think the Moon's surface is older or younger than the Earth's? Why? What do you think it would feel like on the Moon when an asteroid hit it? Try making your own crater at the Crater Maker, in the Our Solar System Gallery.

Shoot for the Moon **5**  
Upper Level

**Fact:** We have dated the age of Moon rocks to be about the same age as those on Earth.



**Find and Try:** Moon rock.




**Think:** What about it looks the same as rocks you've seen on Earth? What about it looks different? Why might that be? Look around the gallery for other rocks and compare them to the Moon rock.



**T**he Universe is a really big place. It's hard to imagine it sometimes, because there's just so much of it! To help us think about it, we can divide up the Universe into four different sections, or realms - the Earth-Moon realm, the Solar System, the Milky Way Galaxy and the Universe of Galaxies.

## How to use this guide

**Fact**  This symbol represents a fact that you can use.

You'll see this symbol when you need to find something in the museum.



**Find it!**

**Think!**



This symbol is something to try, or something to think about.

Use these numbers and the maps on page two to find your way around.



## The Solar System

Our Solar System Gallery **1**  
Upper Level



**Fact:** We have sent spacecraft to many different planets in our Solar System to find out about them.



**Find and Try:** Exploration exhibit and planet models.



**Think:** What planet would you like to visit in our Solar System? Why? What would you like to find out? What do you think it would be like there? Draw a picture of the spacecraft you would design to visit the planet.

Milky Way Galaxy Gallery **2**  
Upper Level

**Fact:** The Sun is the biggest thing in our Solar System. It gives off lots of different types of energy.



**Find and Try:** Sun Dome. Look at the pictures of the Sun.



**Think:** How does this image compare to images you have seen in cartoons, or that you might draw for a picture? Why do you think we usually draw the Sun that way? Do you think it's accurate? Why or why not?





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## The Milky Way Galaxy

### From the Night Sky to the Big Bang ③

Lower Level



**Fact:** Before the 1920's we didn't know if our galaxy was the only thing in the Universe, or even if it was the whole Universe. Edwin Hubble discovered that the things we called Nebulae were actually very large and outside of our galaxy, not smaller and inside the galaxy.



**Find and Try:** Edwin Hubble looking in his telescope. Try closing one eye and smushing other people in the gallery who are farther away from you just by using your index finger and your thumb. This is the same idea of perspective that Hubble thought about. The people you're smushing aren't really as small as your fingers, but because they're far away, they look smaller.



**Think:** 1920 was about 90 years ago. Do you know anyone who is 90? What discoveries do you think will be made about the Universe in your lifetime?

### Cyberspace Gallery ④

Lower Level

**Fact:** We can't see many of the things in our galaxy using just our eyes. We need telescopes, and often telescopes that collect different kinds of light than our eyes use.



**Find and Try:** Explore the sky at different wavelengths on one of the interactive on the plasma screens.

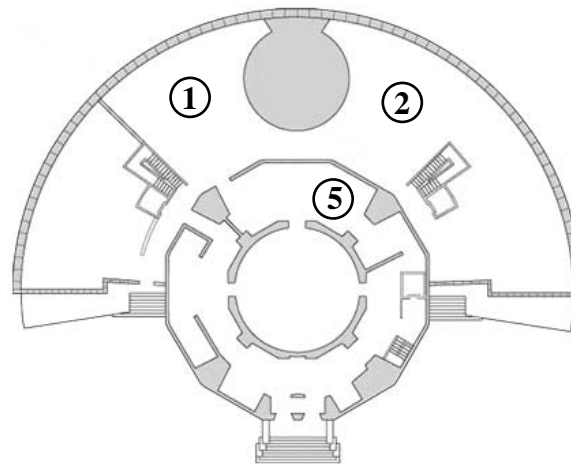


**Think:** What are some reasons that we might need special telescopes to look for things in the galaxy? Look for something in the gallery that shows YOU in a different kind of light!

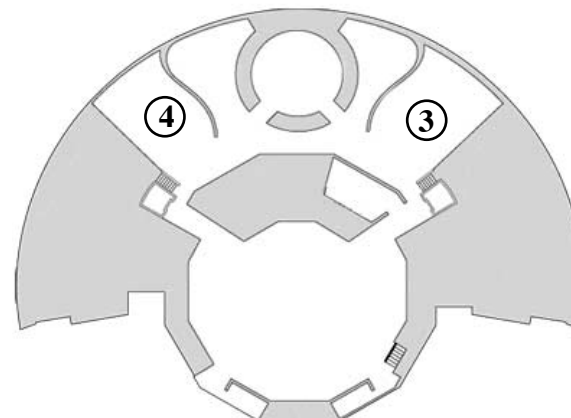


## MAPS

### Upper Level



### Lower Level



## The Universe of Galaxies

### From the Night Sky to the Big Bang ③

Lower Level



**Fact:** The Universe is expanding. But it's expanding from everywhere, so there's no one point that's "the middle."



**Find and Try:** Expanding Universe. Press the button and watch the galaxies travel away from each other.



**Think:** What do you think the Universe is expanding into? What might be on the other side of the Universe? As you look around the museum, look for other questions we have about the Universe and the things in it.

### Our Milky Way Galaxy Gallery ②

Upper Level

**Fact:** We can organize galaxies into 4 kinds— spiral galaxies, barred spiral galaxies, elliptical galaxies and irregular galaxies. The Milky Way is either a spiral galaxy or a barred spiral galaxy. We still need to investigate to find out for sure.



**Find and Try:** The silver plate with galaxies etched on it.



**Think:** Do all of the galaxies look the same? Why do you think galaxies have different shapes? Make a rubbing of one of the galaxies using your pencil.

