

## YOUR PASSPORT ON YOUR TOUR OF THE TELESCOPES

**Is the light from the object  
you are seeing in the  
telescope coming from:**

**Our Solar System?**

**Our Milky Way Galaxy?**

**Or the Universe outside of  
our Galaxy?**

**Light travels 186,000 miles  
each second!**

**Consider how long that  
light was traveling before  
it reached your eye.**

**Keep a log of each object  
you see on your tour!**



NASA has powerful telescopes discovering the secrets of the Universe – looking back to the beginnings of the Universe over 13 billion years ago.

**Learn more about NASA Science:**  
<https://science.nasa.gov/>

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**CREDIT: Adapted with permission  
from NASA's Night Sky Network,**  
<http://go.nasa.gov/nightskynetwork>

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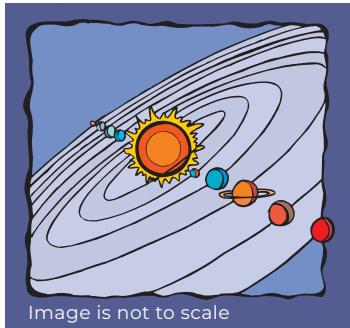
## PASSPORT THROUGH TIME



**Looking through a  
telescope is like jumping  
into a time machine.**

The light we see from most objects out in space has been traveling from a few minutes to millions or even billions of years.

# SOLAR SYSTEM



**Most light we see from objects in our solar system has traveled for minutes or hours.**



Moonlight takes less than 2 seconds to reach you. Sunlight takes about 8 minutes. Light from Saturn has traveled for over an hour. Light from Pluto's surface has traveled about 5 hours.

Where were you when the light from the planet you saw tonight started on its way to your eye?

## WHAT I SAW IN OUR SOLAR SYSTEM:

Sun: \_\_\_\_\_

Moon: \_\_\_\_\_

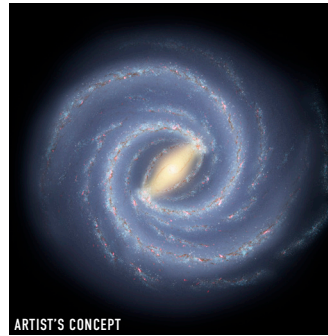
Planet: \_\_\_\_\_

Satellite: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# MILKY WAY GALAXY



Credit: NASA/JPL-Caltech/R. Hurt (SSC/Caltech)

**Light from objects in our Galaxy has traveled a few years to thousands of years.**



All the individual stars you see when you look up at the sky, or through the telescope, are in our Milky Way Galaxy.

Some of the light you see began its journey before your grandparents were born, or even before the Great Pyramid was built.

## WHAT I SAW IN OUR MILKY WAY GALAXY:

Star nursery: \_\_\_\_\_

Young star cluster: \_\_\_\_\_

Dying or exploded star: \_\_\_\_\_

Old star cluster: \_\_\_\_\_

Double star: \_\_\_\_\_

\_\_\_\_\_

# A UNIVERSE OF GALAXIES



Photo Credit: NASA, ESA, S. Beckwith (STScI)

**Most light from other galaxies has traveled millions to billions of years.**



As we look past the stars in our Milky Way Galaxy, we can peek out and see other galaxies in the rest of the Universe.

Some of the light started its journey before modern humans were on Earth, some before the time of the dinosaurs, and some even before Earth existed!

## WHAT I SAW OUTSIDE OF OUR GALAXY:

Galaxy: \_\_\_\_\_

Galaxy: \_\_\_\_\_

Galaxy: \_\_\_\_\_

Galaxy: \_\_\_\_\_