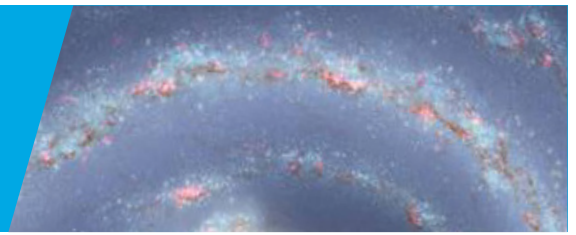


# CURIOSITY AT HOME

## MILKY WAY HAZE



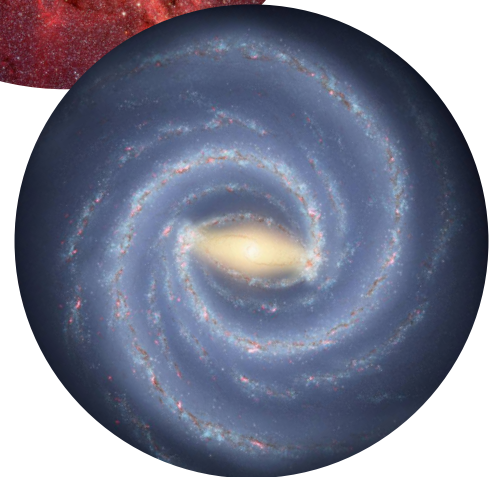
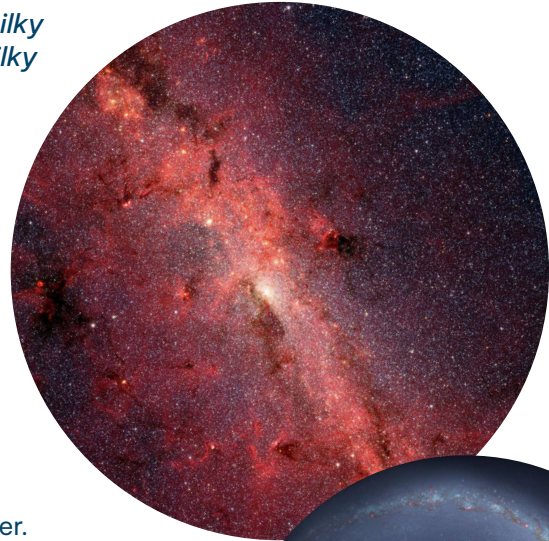
*A galaxy is a group of stars, gas and dust. Our solar system is part of the Milky Way Galaxy. This galaxy appears as a milky haze in the night sky. Have you ever wondered why the Milky Way resembles a hazy, cloud-like strip in the sky?*

### MATERIALS

- Paper hole punch
- Black construction paper
- Masking or painter's tape
- Paper or science notebook
- Glue
- White paper
- Pen

### PROCEDURE

- Use the hole punch to cut out 50 circles from the white paper.
- Glue the circles very close together in the center of the black sheet of paper.
- Tape the black construction paper to a pole, tree, wall or other outside object you will be able to see from a distance.
- Stand so your nose is almost touching the black construction paper.
- Draw or write about your observations on a piece of paper or in your science notebook.
- Slowly back away until the separate circles can no longer be seen.
- Estimate or measure how far away you were when you could no longer see the separate circles.
- What do you notice about the circles seen from a distance as compared to close up?



### DID YOU KNOW

Our eyes are unable to distinguish small points of light that are very close together. Rather, the separate points of light blend together. In our galaxy, the light from distant stars blends together to form the Milky Way haze. The Milky Way galaxy is home to all of the stars that are visible to the naked eye as well as billions of stars that are so far away our eyes are unable to distinguish each individual point of star light.

The Milky Way galaxy is a group of stars, including our own Sun. Our solar system is located about halfway from the center, on one of the spiral arms. When we look towards the center of the galaxy, we see the milky haze in the night sky.



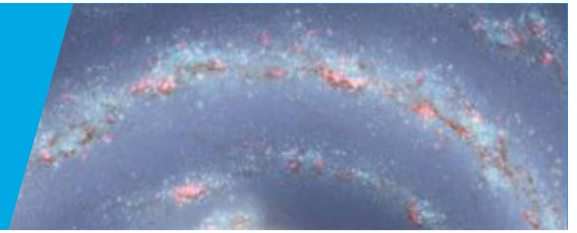
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# CURIOSITY AT HOME

## MILKY WAY HAZE



### K–2 GRADE EXPLORATION

Here are some questions you can explore together.

- Did the dots look the same up close and far away?
- How did the what you see change as you moved farther away?
- If we can't see the individual stars in the Milky Way haze with our eyes, how do we know they are individual stars?
- What is the closest Star to Earth?

Put these in order from smallest to largest.

Earth

Universe

Moon

Milky Way Galaxy

Solar System

Sun

Mars

### RESOURCES TO EXPLORE MORE

NASA Space Place: <https://spaceplace.nasa.gov/galaxy/en/>



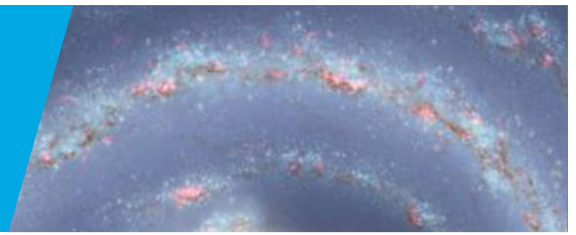
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# CURIOSITY AT HOME

## MILKY WAY HAZE



### 3–5 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

- How does your perception of the dots change as you move farther from the black construction paper?
- If we can't see the individual stars in the Milky Way haze with our eyes, how do we know they are individual stars?
- There are three types of galaxies based on their shape: Spiral, Elliptical, and Irregular. Which type of galaxy is the Milky Way?
- Can you find an example of the two other types of galaxies?

### CELESTIAL OBJECTS

Planet	Dust	Asteroid
Star	Solar System	Dwarf Planet
Black Hole	Dark Matter	Galaxy
Comet	Nebulae	
Moons	Gas	

Write the celestial object in the place in space you can find the object.

**Note:** Some objects might appear in multiple places.

Solar System	Galaxy	Universe

### RESOURCES TO EXPLORE MORE

NASA Space Place: <https://spaceplace.nasa.gov/galaxy/en/>

Hubble Information and Images: <https://hubblesite.org/>

Tour of the Galaxy: <https://kcts9.pbslearningmedia.org/resource/buac18-35-sci-ess-tourofgalaxy/tour-of-the-galaxy/>

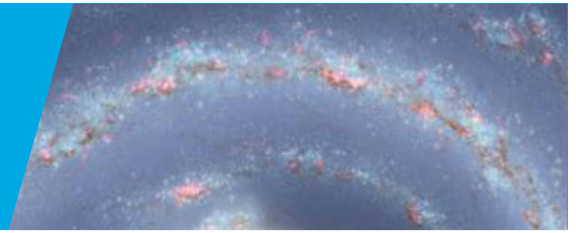


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# CURIOSITY AT HOME

## MILKY WAY HAZE



### 6–8 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook

- How does your perception of the dots change as you move further from the black construction paper?
- What tools do scientists use to confirm what makes up the Milky Way Haze?
- There are three types of galaxies based on their shape; Spiral, Elliptical, and Irregular. Which type of galaxy is the Milky Way? How do we know?
- Can you find an example of the two other types of galaxies?
- Why do galaxies form? What holds them together?
- Our Solar System sits on an outer arm of our galaxy, about 25,000 light years from the center. A light year is the distance light travel in one year. If it takes thousands of light years or more for the light from distant stars and galaxies to reach Earth, are the images we see today telling us about the past or the present?
- Write down additional questions you have about galaxies in your science notebook. What information can you find to help answer those questions?

### RESOURCES TO EXPLORE MORE

NASA Space Place: <https://spaceplace.nasa.gov/galaxy/en/>

Hubble Information and Images: <https://hubblesite.org/>

Modeling Galaxies: <https://kcts9.pbslearningmedia.org/resource/nvbh-sci-modelgalaxy/wgbh-nova-black-hole-apocalypse-modeling-galaxies/>



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