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
- White paper
- Pen
- Paper or science notebook

**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 the spiral arms. When we look towards the center of the galaxy, we see the milky haze in the night sky.

Show us how you’re being curious! Share your results with us.
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

<table>
<thead>
<tr>
<th>Planet</th>
<th>Dust</th>
<th>Asteroid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star</td>
<td>Solar System</td>
<td>Dwarf Planet</td>
</tr>
<tr>
<td>Black Hole</td>
<td>Dark Matter</td>
<td>Galaxy</td>
</tr>
<tr>
<td>Comet</td>
<td>Nebulae</td>
<td></td>
</tr>
<tr>
<td>Moons</td>
<td>Gas</td>
<td></td>
</tr>
</tbody>
</table>

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

Note: Some objects might appear in multiple places.

<table>
<thead>
<tr>
<th>Solar System</th>
<th>Galaxy</th>
<th>Universe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

RESOURCES TO EXPLORE MORE

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

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


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