Observing The Milky Way - Educator's Guide (Ages 8-11)

At the end of these Night Sky activities students will understand:

- How to find the Milky Way galaxy in the Night Sky
- All the stars we can see are in the Milky Way
- Dark rifts can be seen against the Milky Way
- The Milky Way's supermassive black hole cannot be seen

Astronomy background information

The Milky Way got its name because to ancient Greek and Egyptian stargazers it looked like a river of milk in the sky. In reality it is a spiral galaxy of gas, dust, dark matter and hundreds of billions of stars. The spiral structure of the Milky Way is a flat disk with a bulge at the center. The Solar System including the Earth are embedded in the disk of the Milky Way, explaining why the Milky Way seems to encircle us. The main disk is at least 120,000 light years across.

The Milky Way shows "rifts" where dark clouds of dust and gas block the light of the galaxy behind them. The central bulge of the Milky Way is in the direction of the constellations Scorpius and Sagittarius. This region is full of tightly-packed stars, but giant clouds of dust and gas block most of it from us. Most of what we know about the center of the Milky Way comes from radio, X-ray and gamma ray astronomy.

Radio astronomers have discovered that near the center of the galaxy there is a supermassive black hole 4.3 million times larger than the Sun. It is designated Sagittarius A* (pronounced "Sagittarius A-star").

Every star we can see in the sky with the unaided eye is inside the Milky Way.

Night Sky App Essential Settings

Go to Night Sky Settings and make sure the following Preferences are set.

Turn On these Effects:
Environment Based Horizon
Real Sky Representation
Show Constellation Lines

Turn Off these Effects:
Show Satellites
Draw Trajectories and Orbits
Day Time Effect

Accessible Learning:

- Text size can be increased in the Preferences section
- Star numbers can be reduced by sliding two fingers down the screen