



Exactly how big is our universe, and what place do we have in it? Come explore the Keck Observatory, where the human mind is opened to a vast realm of new possibilities.

CURRICULUM CONNECTIONS

Grades 3 - 8

Science

Earth and Space Sciences - Standard 3. Understand the composition and structure of the universe and the Earth's place in it

- Know that astronomical objects in space are massive in size and are separated from one another by vast distances (e.g., many stars are more massive than our Sun but so distant they look like points of light)
- Know that telescopes magnify distant objects in the sky (e.g., the Moon, planets) and dramatically increase the number of stars we can see
- Know characteristics of the Sun and its position in the universe (e.g., the Sun is a medium-sized star; it is the closest star to Earth; it is the central and largest body in the Solar System; it is located at the edge of a disk-shaped galaxy)
- Know that the universe consists of many billions of galaxies (each containing many billions of stars) and that incomprehensible distances (measured in light years) separate these galaxies and stars from one another and from the Earth

Resource - [McREL Content Knowledge – Standards & Benchmarks](#)

DISCUSSION QUESTIONS

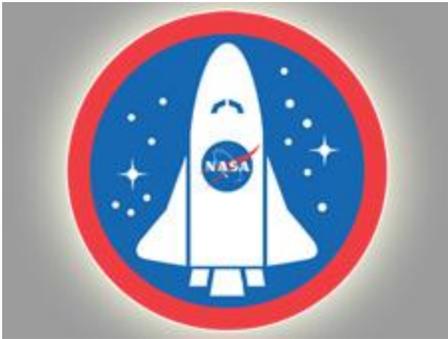
Pre-viewing question

- 🗨️ *Give examples of things we know because man (or woman) went exploring. Is the example given a result of survival (seeking resources, escaping danger, or finding room to expand) or from “a thirst for knowledge and adventure”?*

Post-viewing questions

- 🗨️ *Describe our solar system. Explain the earth’s relationship to the sun. Explain our solar system’s relationship to the universe.*
- 🗨️ *What is the farthest away object you have ever seen through a telescope? Describe the experience.*
- 🗨️ *Why is it better to observe the universe using telescopes on Earth, rather than observing from a telescope that is launched into space?*
- 🗨️ *Why are the stars we see in the sky not really there anymore?*
- 🗨️ *Why is it important to learn about the universe?*

BACKGROUND INFORMATION - RESEARCH SITES



NASA Articles

History of Telescopes

Hubble Telescope