



Teacher Guide

Cool Career

Astronomer

Sandra Faber

University of California Observatories

Galaxy Gal

As a young girl, Sandy Faber loved to watch the night sky with her father. But it wasn't until she was in college that she really took stargazing seriously. Today Sandy is one of the most respected astronomers in the world. Her observations of galaxies have helped to explain how they form.

Seeing Stars

The road to stardom wasn't easy. On the first night that she observed the sky in college, Sandy fell off a telescope platform and got a concussion!

Telescopic Traveler

Sandy has never left Earth, but she has "traveled" billions and billions of miles into space. She uses some of the most powerful telescopes around. The telescopes she uses include the Hubble Space Telescope, the Lick Telescope in California, and the Keck Telescopes in Hawaii. These telescopes allow Sandy to "go" into deep space and see galaxies forming. Now, that's far out.

An astronomer uses telescopes, satellites, and similar instruments to observe other worlds and celestial objects beyond Earth. Sandy studies how galaxies, such as our own Milky Way, were formed. Other **astronomers**

- > investigate the mystery of dark energy that fills much of the Universe.
- > explore the birth of stars.
- > search for Earth-like planets outside our solar system.



Sandy uses the Hubble Space Telescope to study galaxies.

After you read about Sandra Faber, do these activities.

Hello from Earth

Imagine you could send a message into space that would reach an alien civilization in another galaxy. What would your message say about Earth and its inhabitants? What are the most important things you think another civilization should know? Work with a team to write a message. Then share it with the class.

STANDARDS ALIGNMENT

NGSS MS-ESS1.A.2: Earth and its solar system are part of the Milky Way galaxy, which is one of many galaxies in the universe.

CCSS W.6-8.3: Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

Interview with an Alien

Now think about what you would like to know about an alien civilization. With your team, write down at least five questions. With the class, discuss your questions and how they would help you understand alien beings from far, far away.

1. _____
2. _____
3. _____
4. _____
5. _____

Future Astronomer?

Like most astronomers, Sandy is curious and creative. She likes to solve puzzles, explore, and work on teams. What do you have in common with Sandy? Which of your qualities would make you a good astronomer? Write a brief description of those qualities.
