

## Sally Ride EarthKAM on the International Space Station



# **Cool Career**

Planetary Scientist Carolyn Porco Space Science Institute

#### **Ring Around the Planets**

Call her a scientist with a thing for rings. Carolyn Porco studies the magnificent sheet of rings that surrounds Saturn—as well as those around Jupiter, Uranus, and Neptune. Her work has helped to explain what rings are—billions of bits of ice zipping around in the same direction as they orbit a planet. Her work has also helped to explain how rings interact with moons to create ringlets.

#### Hello, Saturn

Carolyn also keeps an eye on Saturn with her team. "We never tire of seeing this gorgeous giant," she says. The team chooses which images the Cassini spacecraft takes of Saturn and its rings and moons, including mysterious Titan. As *Cassini* orbits Saturn, it is giving scientists their closest views yet of the ringed planet.

An imaging scientist studies pictures captured by spacecraft and Earth telescopes to learn more about objects in space. Carolyn studies planets with rings. **Other imaging scientists** 

- > examine gullies on Mars for evidence of flowing water.
- > study volcanic plumes rising from Jupiter's moon lo.
- > track swirling storms on Saturn.
- > pick landing spots for future Moon missions.



Extra-terrific! When Carolyn was working on the next *Star Trek* movie, a model of ET was in the studio.



Carolyn takes a break from her mission of unraveling the mysteries of Saturn. Saturn is so huge that 750 Earths could fit inside it. After you read about Carolyn Porco, do these activities.

#### Wide, Wide World

Our planet is huge, right? Compare Earth to its neighbors in space. Earth's diameter is 12,756 kilometers (7,926 miles). Knowing this, calculate the approximate diameters of Mars, Saturn, and our Sun—in kilometers, and in miles.

- > The diameter of Mars is about one-half that of Earth.
- > The diameter of Saturn is about nine times that of Earth.
- > The diameter of our Sun is about 109 times that of Earth.

Make a list of the three planets and our star, the Sun. Put them in order from smallest in diameter to largest in diameter. Where does our planet rank?

Diameter of Mars:
Diameter of Saturn:
Diameter of the Sun:
Order of planets and Sun, from smallest to largest:

### Is Anyone Out There?

Carolyn was a consultant on the science fiction movie *Contact*. It was about searching for life beyond our planet. Do you think life exists on other planets or even moons? Write a paragraph explaining why or why not.