

## Families' Guide to Solar System Exploration: *The New Horizons Mission at the Pluto System*

### Explore Dwarf Planets and the Solar System at Home!

Use the information and resources below to explore the solar system – including the New Horizons mission to Pluto – with your child(ren). Start by learning why Pluto is no longer considered a planet. Celebrate the solar system and the New Horizons mission by investigating websites and reading books together. See if any events are happening in your neighborhood through your local museum, planetarium, observatory, or astronomical club that you and your family can attend. Finally, watch for news stories to talk about with your child(ren).

### Why Explore the Solar System?

Interest in the stars and planets has been both a common and consistent characteristic of humanity. We are driven to explore what we don't know, discover new things, push the boundaries of our limits, and beyond. For now, humans must stay close to Earth when exploring space. Until the day humans can routinely visit other planets, we must rely on robotic spacecraft to be our eyes throughout the solar system. Exploring the solar system is not easy and individual missions do not last forever. At some point, all missions must come to an end. However, in the human spirit of exploration, we should always look forward, ready to explore farther.

### Exploring the Pluto System with New Horizons

The New Horizons mission will help us understand worlds at the edge of our solar system by performing the first exploration of Pluto and by venturing deeper into the distant, mysterious Kuiper Belt – a relic of solar system formation. Pluto, along with other Kuiper Belt objects and the larger asteroids, is classified as a dwarf planet. More recently, it has been more specifically classified as an ice dwarf. New Horizons launched on January 19, 2006. It will arrive at the Pluto system and conduct a five-month-long study of Pluto and its moons beginning July 14, 2015. As part of an extended mission, the spacecraft is expected to head farther into the Kuiper Belt to examine one or two of the ancient, icy mini-worlds in that vast region, at least a billion miles beyond Neptune's orbit.

### Upcoming Events

Find information and resources about upcoming celestial events and NASA mission milestones to share with your child(ren) at [http://www.lpi.usra.edu/education/look\\_up](http://www.lpi.usra.edu/education/look_up).



## Why Explore Science with your Child?

- Children are naturally curious about their world and science encourages continued curiosity and a deeper appreciation for nature.
- Science helps children develop critical thinking skills that can help them perform better in school, have more diverse job opportunities, and become better informed consumers and citizens.
- Science strengthens communication skills.

You are the most important role model your child(ren) have! By actively making science a part of family life, you send the message that science is important. Plus, participating in science doesn't require knowledge of math and science. It only takes curiosity, an interest in learning, talking about it, and having some fun together!

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## Peculiar Pluto

On this webpage, learners will read fun facts about Pluto and explore why it is no longer considered a planet.

<http://spaceplace.nasa.gov/ice-dwarf/en/>

## Selected Books About Pluto and Other Dwarf Planets

Pluto's Secret: An Icy World's Tale of Discovery

*Margaret Weitekamp & David DeVorkin, Harry N. Abrams (Publisher), 2015, ISBN 9781419715266*

Through whimsical artwork and an entertaining dialogue format, Pluto's Secret explains the true story of this distant world, including its recent reclassification. For ages 5–9.

Dwarf Planets: Pluto, Charon, Ceres, and Eris

*Nancy Loewen, Picture Window Books, 2008, ISBN 9781404839502*

They're like major planets, but not quite. Explore these unusual objects in this book about the dwarf planets. For ages 5-10.

## *Night Sky Viewing with a Local Astronomy Club*

Contact your local astronomy club or observatory to view the night sky through telescopes! Viewing planets through telescopes will give your child(ren) a personal connection with the very same objects being visited by spacecraft. You can find your local astronomy club through NASA's Night Sky Network: <http://nightsky.jpl.nasa.gov/clubs-and-events.cfm>

## *Websites*

NASA's Pluto Toolkit

<http://solarsystem.nasa.gov/planets/plutotoolkit>

NASA's New Horizons Mission

[http://www.nasa.gov/mission\\_pages/newhorizons/main/index.html](http://www.nasa.gov/mission_pages/newhorizons/main/index.html)

The New Horizons Mission at Johns Hopkins University

<http://pluto.jhuapl.edu/>

Pluto: An Overview

<http://solarsystem.nasa.gov/planets/profile.cfm?Object=Pluto>

Dwarf Planets: An Overview

<http://solarsystem.nasa.gov/planets/profile.cfm?Object=Dwarf>

What is a Planet?

<http://science.nasa.gov/planetary-science/planetary-science-multimedia-links/what-is-a-planet/>

NASA Solar System Exploration

<http://solarsystem.nasa.gov/index.cfm>

Eyes on the Solar System

<http://eyes.nasa.gov/index.html>

[http://www.lpi.usra.edu/education/look\\_up](http://www.lpi.usra.edu/education/look_up)