

NASA SpacePlace

March – April 2010 / Vol. 3, Issue 2

News and Notes for formal and informal educators

The Space Place is a NASA website for elementary school-aged kids, their teachers, and their parents.

It's colorful!
It's dynamic!
It's fun!

It's rich with
science, technology,
engineering, and
math content!

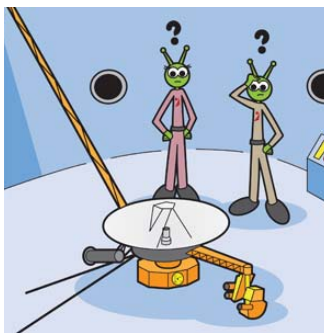
It's informal.
It's meaty.
It's easy to read and
understand.
It's also in Spanish.
And it's free!

It has 130 (and
counting) separate
modules for kids,
including hands-on
projects, interac-
tive games, animated
cartoons, and
amazing facts about
space and Earth
science and
technology.

Our Milky Way Galaxy is one of at least 100 billion galaxies in the Universe. But that does not make our galaxy small or insignificant. The Milky Way has 200 billion to 400 billion stars! We can't take a picture of our own galaxy, but we can study other galaxies we believe are similar, such as our neighbor, the Andromeda Galaxy. The Space Place has a lot of material to offer about our galactic home.

What's new on spaceplace.nasa.gov . . .

The Voyager 1 and Voyager 2 spacecraft, launched in 1977 and still going strong, are about to break free of our solar system and be the first human-made objects to reach interstellar space. They will be galactic explorers! Although they aren't expected to keep transmitting information much beyond 2025, they will still keep going. A new Amazing Fact page on The Space Place (<http://tiny.cc/vgr>) imagines what it might be like if some extra-terrestrials find one of the Voyagers someday and play its Golden Record. Find out what is on the record that brings news of Earth to an unknown listener.



Spotlight on Dr. Marc's offerings

The expert science advisor for The Space Place, Dr. Marc Rayman, loves to talk and write about astronomy. Marc was only 14 when he joined an adult as-

tronomy club and met his first real astronomer. His favorite galaxy, the Milky Way, is a topic in his "Phone Dr. Marc" archives. He speculates on the number of solar systems in our galaxy (<http://tiny.cc/drmarc>). He also explores the constellations, also all part of our galaxy (<http://tiny.cc/drmarc526>).



In a Podcast (also available in transcript and MP3 form), Marc discusses how the Milky Way got its name (<http://tiny.cc/marcpod>).

All Dr. Marc's explanations are in simple language so that educators can themselves answer these fascinating questions when curious students ask.

Space Place en español

With help from Engineer Ruth Fragoso, Dr. Marc's discussion of solar systems and constellations in our galaxy are also available in Spanish at <http://tiny.cc/ss279> and <http://tiny.cc/constel>, respectively.



For the Classroom

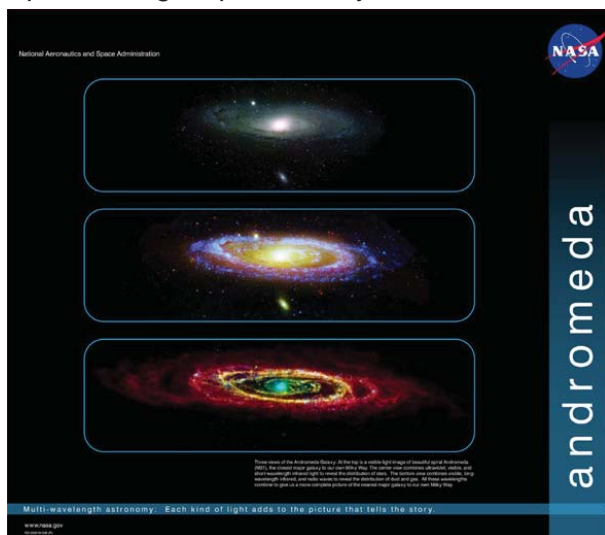
We would love to be able to offer you a giant poster with a highly detailed and high-resolution Hubble Space Telescope, Spitzer Space Telescope, or Galaxy Evolution Explorer image of the beautiful barred spiral galaxy we call the Milky Way. Unfortunately, we're just a little too close to get a good

shot of it! But, next best thing, we have several large, high-res images you can download of the Andromeda Galaxy, M31. Andromeda is our nearest galactic neighbor and is thought to be similar in appearance to our own Milky Way (although it's about twice as large).

You can download all these files at <http://spaceplace.nasa.gov/en/educators/posters>.

First is a poster with an ultraviolet view of Andromeda, captured by the Galaxy Evolution Explorer. Articles on the back of the poster explain how telescopes see back in time and why the night sky is black, in spite of 200 billion suns shining right here in the Milky Way galaxy. Activities include crossword and word find puzzles based on vocabulary in the articles, as well as a creative writing activity. The poster front is available in .pdf format for professional printing at full-size (22 x 26).

Second is an 8½ x11 lithograph, with another even more dramatic view of the ultraviolet M31. On the back of the litho is a description of the galaxy and the special insights provided by the UV view.



The third print product is a large poster (25½ x 22) with multiwavelength views of Andromeda. It shows why we need telescopes that see at different wavelengths, because the information from visible, infrared and ultraviolet light, in different combinations, reveal very different characteristics of the galaxy. On the back of the poster are classroom versions of the two experiments that originally spawned the discovery of infrared and ultraviolet light at the turn of the 19th century.

For After School

Print and read aloud "Lucy's Planet Hunt: Or, how to see things in a different light." It is the story

in verse and cartoon illustrations of a girl who dreamed of finding other Earth-like planets in our galaxy. She made her dream come true by becoming a scientist and helping to design and build an infrared space telescope! (<http://tiny.cc/lucy208>).



Time to Celebrate

March is Listening Awareness Month. One can learn a lot by just listening, especially to such rich material as in the Podcasts at The Space Place (<http://tiny.cc/marcpod>).

March 15: Absolutely Incredible Kid Day. We love this "holiday" at The Space Place! We wish we could write a letter of support and encouragement to every one of our Web site visitors. We can't. But you can—at least to some of them!

March 20: International Earth Day. Make "Gummy Greenhouse Gas" molecules and learn about the greenhouse effect on our planet. Also in Spanish. (<http://tiny.cc/gumdrop>).

April 10: Encourage a Young Writer Day. Ask them to write about a black and starry night or a brilliant blue-sky day. (<http://tiny.cc/bluesky171>).

April 19: Humorous Day. Read the online or print version of "The First Annual Planet Awards." A cross between the Miss America Pageant and the Oscars, this "award show" gives each planet a chance to prove its worthiness for an award. (<http://tiny.cc/planetawards>).



April 24: Astronomy Day. A good day to play the Spitzer Concentration game and learn to recognize some exciting astronomical objects in our galaxy. Also in Spanish. (<http://tiny.cc/concentration822>).

And another thing . . .

Our Scouting pages have found wider uses than only for Scouts and their leaders. Teachers, as well, have told us this resource has given them ideas for rewarding projects for their students. In cooperation with the scouting organizations, we have identified activities on The Space Place that partially or completely fulfill specific achievement requirements.



Visit <http://spaceplace.nasa.gov/en/kids/scouts.shtml>.