

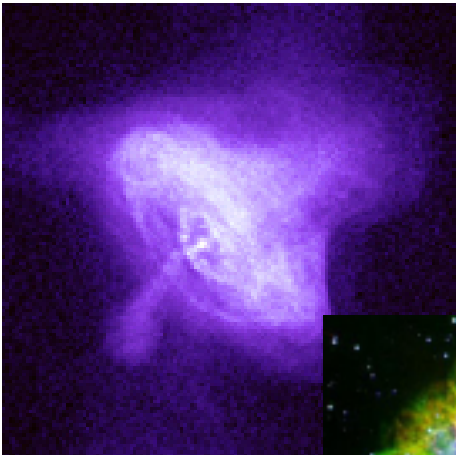
## Universe! Education Forum

Hosted by the Harvard-Smithsonian Center for Astrophysics  
Sponsored by NASA's Office of Space Science

*"If being educated means having an informed sense of time and place, then it is essential for a person to be familiar with the scientific aspects of the universe and know something of its origin and structure."*

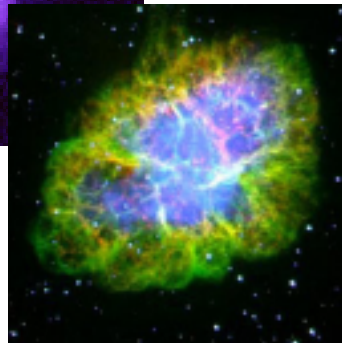
- Project 2061, Benchmarks for Science Literacy

The *Universe!* Education Forum is a national center for teaching and learning about the scientific study of the structure and evolution of the universe. The Forum aims to create and support educational ventures that use the unique resources of NASA's space science research program to create exciting and substantive learning experiences for students, teachers and the public.



Chandra Xray Image  
NASA/CXC/SAO

Palomar  
Observatory  
Optical image



### **Two Views of the Crab Nebula**

**Lower left:** 6000 light years from Earth, the Crab Nebula is the remnant of a supernova explosion that was seen by Chinese astronomers in 1054 AD.

**Upper left:** A recent image from NASA's Chandra Xray Observatory shows the center of the bright nebula, where a rapidly spinning neutron star, or pulsar, emits pulses of radiation 30 times a second. (<http://chandra.harvard.edu>)

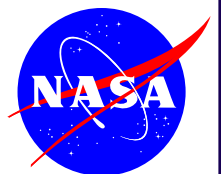
**Visit our website.**

**Enter a gateway to the Universe!**

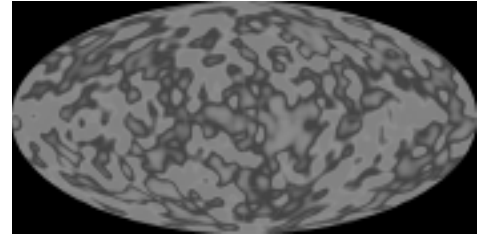
**<http://cfa-www.harvard.edu/seuforum>**

Please see the reverse side for more resources to get you started exploring the Universe!

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**It's a big Universe out there. Where are the best places to find resources for the classroom, images and information, connections to current space science research? Here is a list of some of our favorite links to get you started...**



infrared view of sky,  
NASA/COBE

### Lesson Plans and Classroom Activities

**Space Sciences Education Resource Directory** — NASA's newsite helps educators find exciting, current, and accurate space science resources for the classroom.  
<http://teachspacescience.stsci.edu>

**Imagine the Universe!** — A site from the High Energy Astrophysicists at NASA's Goddard Space Flight Center. Lots of lesson plans, news and features, and in-depth information on the Universe. <http://imagine.gsfc.nasa.gov/>

**Teacher's Guide to the Universe** (*in development — send feedback!*) — Lesson plans to help high school teachers address the "origin and evolution of the universe" content standards. Currently being piloted by Lindsay Clark, education specialist for NASA's "MAP" mission to study the cosmic microwave background.  
<http://www.astro.princeton.edu/~clark/teachersguide.html>

**Cosmic Survey** — Print out this image set and lesson plan to assess your students' ideas and have a class discussion on the size, scale and age of the universe.  
<http://cfa-www.harvard.edu/seuforum/teachers/L3/survey/survey.htm>

### Images and Info

**Multiwavelength Milky Way** — Each "window" of the electromagnetic spectrum gives us a new view of the universe. You'll find images, a poster, or 35mm slides of NASA's multiwavelength satellite data. <http://adc.gsfc.nasa.gov/mw/milkyway.html>

**Introduction to Cosmology** — Questions and answers about the origin and evolution of the universe from NASA's "MAP" mission to study the cosmic microwave background radiation (photons left over from shortly after the Big Bang!)  
[http://map.gsfc.nasa.gov/html/web\\_site.html](http://map.gsfc.nasa.gov/html/web_site.html)

**Hubble Space Telescope Images** <http://oposite.stsci.edu/pubinfo/pictures.html>

**Astronomy Picture of the Day** <http://antwrp.gsfc.nasa.gov/apod/lib/aptree.html>

### NASA Space Science Missions Exploring the Universe (a sampler)

**Chandra Xray Observatory** • <http://chandra.harvard.edu/>

**Microwave Anisotropy Probe** • <http://map.gsfc.nasa.gov/>

**Gravity Probe B Relativity Mission** • <http://einstein.stanford.edu/>

**Swift Gamma Ray Burst Observatory** • <http://swift.sonoma.edu/>

**NASA's Structure and Evolution of the Universe Science Theme**  
<http://universe.gsfc.nasa.gov/>



**Access our web site for more!** <http://cfa-www.harvard.edu/seuforum>