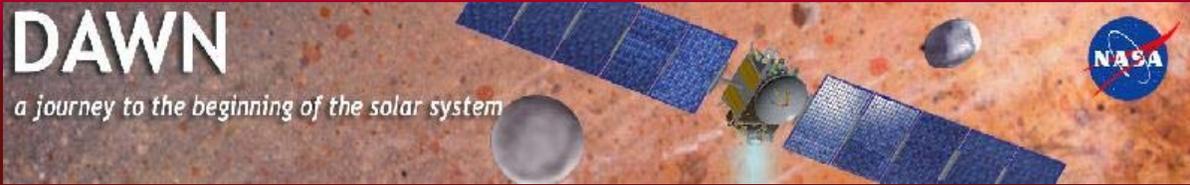


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Dawn Mission Outreach E-News,
2009

23rd Edition August

DAWN'S EDUCATION ISSUE

Psssst! Educators! It's August... and do we have Exciting classroom materials for You! Highlighting...

- New hands-on activities that help Kids see the WOW scientists see!
 - Vesta in 3D: <http://dawn.jpl.nasa.gov/DawnKids/vesta3D.asp>
- Career Connections!
 - Explore cool career paths: <http://dawn.jpl.nasa.gov/people/careers/index.asp>
- Dynamic On-Line Interactives
 - *Find a Meteorite*: <http://dawn.jpl.nasa.gov/Meteorite/index.asp>
 - *Ion Propulsion Engine*:
http://dawn.jpl.nasa.gov/mission/ion_engine_interactive/index.html
 - *GRaND Interactive*: http://dawn.jpl.nasa.gov/technology/GRaND_inter.asp
 - *Flashbacks*:
http://dawn.jpl.nasa.gov/DawnCommunity/flashbacks/Dawn_flashback.swf
- Engaging, Standards-aligned, Content Modules that give you everything you need:
 - History and Discovery of Asteroids!
http://dawn.jpl.nasa.gov/DawnClassrooms/1_hist_dawn/index.asp
 - Ion Propulsion! http://dawn.jpl.nasa.gov/DawnClassrooms/2_ion_prop/index.asp
- Compelling Mission News (as always!)
- All make Dawn's Cutting Edge Science Come Alive!

Read below for more detail, and cruise Dawn's education page:
<http://dawn.jpl.nasa.gov/education/index.asp>

DAWN MISSION HIGHLIGHTS

MISSION STATUS: DAWN is Thrusting Nominally with the Ion Propulsion System

August 3, 2009: The first Vesta scenario test executed successfully in the testbed last week, and the flight team reviewed the results. This test of a flight-like Vesta orbit sequence is an important step forward towards validation of the design and operations processes that will be used at Vesta.

To see previous mission status updates, click here: <http://dawn.jpl.nasa.gov/mission/status.asp>.

DAWN IS IN "QUIET CRUISE"

JUST HOW QUIET IS QUIET?

From Dawn's Chief Engineer, Marc Rayman:

Shhhh! Dawn is in "quiet cruise," and we do not want to disturb it. The indefatigable spacecraft is devoting most of its time to thrusting with its ion propulsion system, applying a gentle but persistent pressure to its trajectory around the Sun. With patience, it will reshape its orbit to match those of the mysterious and intriguing protoplanets, Vesta and Ceres. In order to conduct its detailed explorations of each of these exotic worlds, Dawn will accompany them around the Sun, visiting with Vesta in 2011-2012 and rendezvousing with Ceres in 2015.

- Excerpted from Chief Engineer Marc Rayman's Dawn Journal, July 28, 2009.



To learn more about how the elegant ion propulsion system moves Dawn to its destinations, go to: http://dawn.jpl.nasa.gov/mission/journal_7_28_09.asp.

CAREER CONNECTIONS

MISSION PROGRAM SECRETARY, VALERIE MCKAY



Valerie McKay has been the Dawn Mission Program Secretary at JPL for three years, and according to Chief Engineer Marc Rayman, "She lets me get my job done!" Valerie manages all of the non-technical aspects of the program, keeps everything running smoothly - and she does it with humor: "I enjoy the variety of things I do in a given day. I'm not stuck in an office doing one thing. Thankfully, I'm an organized person. If I weren't, I'd be in big trouble... It's nice to work with degreed people who are not status conscious-people, who do silly things on a whim, but are brainiacs! They make it all worthwhile... I appreciate the fact that my staff trusts me and allows me to do my job. Autonomy. I like that, I like that a lot."

Valerie describes her unique career path and her work for Dawn in her full interview:

http://www.dawn.jpl.nasa.gov/people/mckay_V/interview.asp.

For links to other intriguing Dawn Mission interviews, go to:

http://dawn.jpl.nasa.gov/people/interviews_archive.asp.

To launch a career investigation in your middle or high school classroom, explore the activity Career Connections: <http://dawn.jpl.nasa.gov/people/careers/index.asp>.

CHECK OUT DAWN'S LIVELY EDUCATION PAGES

DAWN KIDS: Vesta Gets a 3-D Spin!

Hey you! Parents and out-of-school-time educators! We've developed a new set of activities just for your kids in 3rd - 8th grades. With an engaging Explorers' Guide that kids may read independently or with you, and two fun activities that help students visualize Vesta's rotation as it orbits the Sun, help kids feel the excitement and envision the larger science objectives of the Dawn Mission:

<http://dawn.jpl.nasa.gov/DawnKids/vesta3D.asp>.



Aster's Hoity Toity Belt now in Audio Format

Jacinta Behne, author of *Aster's Hoity Toity Belt*, has now recorded the story, a fun jaunt to the asteroid belt for Dawn Kids that offers both science and fantasy.

Listen in at: <http://dawn.jpl.nasa.gov/DawnKids/stories.asp>.

DAWN CLASSROOM: What Educators are Saying!



Dawn has a menu of engaging, standards-based modules and activities that help students build a life-long understanding and appreciation for space science ready for integration in your 5th-12th grade classroom. Pilot and field tested by teachers and kids, we include teacher guides as well as student guides, and always standards alignment. Here's what students and fellow educators are saying:

- *I could turn my students loose with the web-based, ion engine demonstrations in the Dawn Mission lessons. Even my cynical, ready-for-college seniors found it interesting to "play" with the engine design parameters.* - high school physics teacher
- *Learning about Vesta was fun when we did the model with the clay and the asteroid flipbook - and it made sense!* -Cindy, Colorado 6th grader
- *The primary strength for me is the real-life example of a technology in use that is so simple but which has such profound impact.* -physical science teacher

Review our rich range of materials at: <http://dawn.jpl.nasa.gov/DawnClassrooms/index.asp>.

DAWN DICTIONARY: Audio Format Coming This Fall!

Science vocabulary can intimidate kids, and the research says our students need all the rich vocabulary support they can get. *Dawn Dictionary* offers an important resource for our classroom materials. Further, when kids come across key vocabulary in our interactives, such as *Find a Meteorite* and *Ion Propulsion**, the words are hot-linked straight to the dictionary.

Soon kids will be able to listen along as they read, too, hearing both accurate pronunciation as well as a clear definition of every word in the *Dawn Dictionary*. In response to teacher feedback, we are improving Dawn's education resources so the great science we are promoting is accessible to more and more terrific kids!

Listen in: <http://dawn.jpl.nasa.gov/dictionary/index.asp>

*Explore *Find a Meteorite*: <http://dawn.jpl.nasa.gov/meteorite/index.asp> or

Ion Propulsion: http://dawn.jpl.nasa.gov/mission/ion_engine_interactive/index.html



JOIN US AT STEM PALOOZA and

COLORADO SCIENCE CONFERENCE

STEMapalooza at the Colorado Convention Center, October 16-17, Denver, Colorado

We will be showcasing Dawn interactives, career connections, and curricula that fit informal science venues (after school programs, museums, summer camps), as well as sharing mission-related educational materials.

Colorado Science Conference, November 19-20, Denver, Colorado

Dawn's education and public outreach team will participate in the Colorado Science Conference,



the annual conference sponsored by the Colorado Association of Science Teachers, at the Denver Merchandise Mart, November 19-20, 2009. Dawn Classrooms will be the star of this show. We will be presenting materials to support the conference themes, *Explore the Nature of Science* and *Explore Science Beyond the Classroom*, as well as sharing mission-related educational materials.

Find out more at: <http://dawn.jpl.nasa.gov/education/index.asp>

**TELL US WHAT YOU THINK, FORWARD OUR NEWS,
SUBSCRIBE!!**

The Dawn Education and Public Outreach team is continually seeking ways to improve the mission Web site and is eager to receive your feedback. Please share your thoughts by completing a brief [survey](https://vovici.com/wsb.dll/s/13d56g382d7) at <https://vovici.com/wsb.dll/s/13d56g382d7>

Please feel free to forward this e-mail to others interested in NASA missions. We welcome new subscribers! Visit our Web site and join the Dawn mission e-news mailing list at http://dawn.jpl.nasa.gov/DawnMedia/e_news.asp.

Dawn Mission Outreach E-News features information about the mission, its outreach Web site, and products, services, and materials available from the Dawn Education and Public Outreach (E/PO) team. Dawn is the ninth Discovery mission in NASA's Science Mission Directorate and is a collaborative partnership made up of the University of California, Los Angeles; Jet Propulsion Laboratory; Orbital Sciences Corporation; Los Alamos National Laboratory; German Aerospace Center; Max Planck Institute for Solar System Research; Italian Space Agency; and Italian National Institute of Astrophysics. Dawn outreach materials are developed under contract by Mid-continent Research for Education and Learning (McREL), Denver, CO.

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