



VERMONT SPACE EDUCATION PROGRAM

•
**SPACE LADY
ENTERPRISES**

• **ATII SLED DOGS**

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(& Musher/Skijorer)**

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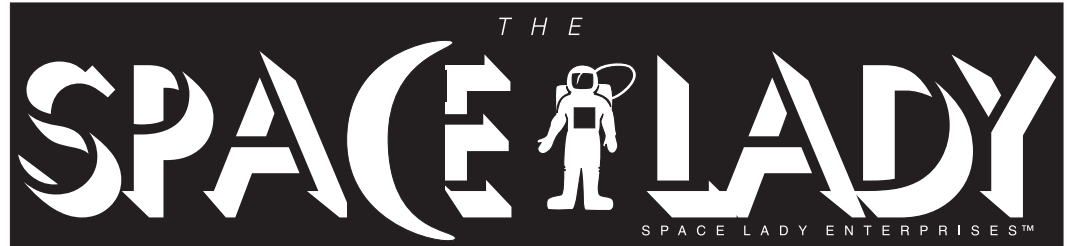
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BITS & BYTES/SPACE EDUCATION NEWS

OCTOBER 2003 / Happy autumn to all. I hope your school year started well and that you and your students have been enjoying a fun start to this academic year. I'm writing this while it's 17 degrees F outside—quite a change from the gift of very warm summer-like days we enjoyed just last week. My sled dog team and I are enjoying the early morning cold weather that gets us back on the trails and in active training on the wheeled contraptions before the white stuff arrives.

I'm sorry I will be unable to attend and have an exhibit booth at the VT-NEA convention this year. Instead, I hope this newsletter will be of some help. (See #6 for a Mail Order book sale of space related books.)

Inquiries have been arriving about my availability to help in schools this year so it seems to be the time to send this to all of you: Yes, I'm still doing both space related and sled dog programs for students as well as professional development workshops. No, it's not too late to schedule either for this school year.

Please forward, post on bulletin boards, and share this with other colleagues. I look forward to hearing from you!

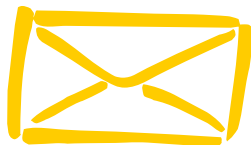
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1. New E-LIST being created for BITS & BYTES newsletter to avoid duplicate messages received.

We're all inundated with unwanted e-mail, and I don't want to be one of those offending people sending you something you don't want. However, I am trying to get information to educators that might be of interest.

Sincerest apologies if you received any duplicate messages. Please continue reading.



To avoid sending undesired e-mail, I am creating a new e-mail distribution list for 2003-04 and will be purging my old lists. This should also take care of the problem of any duplicate messages you might have just received.

If you, or another educator you know, would like to CONTINUE to receive these periodic messages, please do the following.

- 1) Send me an e-mail. gbres@madriver.com
- 2) In the SUBJECT line, cut & paste in: "REMAIN ON VT-VSEP 03-04 DISTRIBUTION LIST"
- 3) In the MESSAGE body: Please send me your current contact info—name, school or organization, position, and/or grade levels you work with.

This information will NOT be sold or shared with anyone. It will remain confidential and in my personal files. I am requesting this information so I know who is on my list and can target specific information that might be of interest to your school / organization and/or your students.

2. Space Education in the classroom: planning for space thematic related programs.



The Space Shuttle will not be flying until the next school year—but humans are still in space aboard the International Space Station. Additionally, there are many other current, relevant topics that fit in with Vermont's (and national) learning standards and frameworks.

These exploration and astronomical events, anniversaries, and topics lend themselves to "hands-on, minds-on" learning experiences that can be and should be included in classrooms. There are numerous web sites available to assist you—but perhaps you don't have the time to search and find the good ones. Help is available. I am still continuing to work with educators and their students in their classrooms. Professional development workshops can also be provided to help you with ideas, resources, and content.

3. The Space Shuttle's Return to Flight Mission & Educator Astronauts

- Return to Flight is currently being targeted for a Sept. 2004 launch, which may slip further into the year pending updates to the orbiters.
- Eileen Collins, the first woman Shuttle pilot and commander, will be Commander of the Return to Flight mission.
- Barbara Morgan, formerly known as the Teacher in Space Designee, is an official astronaut and member of NASA's Astronaut Corps (selected in 1998.) Morgan will still be flying on a Shuttle mission AFTER the Return to Flight as Mission Specialist. She is currently manifested and still training for STS-118, which will be an International Space Station construction mission. She is the first Educator Astronaut member of the official Astronaut Corps.
- NASA is still in the process of selecting additional Educator Astronauts (EA). The application deadline was this past April 30. An announcement of the new folks who will join the next Astronaut Training Class will be announced this Jan. or Feb. 2004.



4. Upcoming Missions...Some Major Space Events & Anniversaries during 2003-2004

Dec. 17, 2003—Centennial of Flight. This year marks the 100th anniversary of Orville & Wilbur Wright's first flight. The Internet is full of related information and there is a huge array of hands-on activities related to the history and physics of flight of all kinds. (See "Time Sensitive Opportunities" below for interesting classroom opportunities for students.)



January, 2004—Jan. 2: Stardust's Wild-2 Flyby

Jan. 4, 2004: Mars Exploration Rover "Spirit" due to arrive at Mars. NASA's two Mars Rovers will hopefully be arriving and landing on Mars to provide a wealth of information. This provides a great opportunity to learn more about Mars in contrast to Earth; to learn about robotics; to learn about previous missions to Mars—including the Pathfinder mission when the last robotic rover landed and explored on Mars. *Do you know what other countries have launched Mars missions—past and present?*

March 5, 2004. Space Day Design Challenges are due

March 10-29. Messenger mission to Mercury launch window.

May 6, 2004. Space Day 2004

5. TIME SENSITIVE OPPORTUNITIES

The following time sensitive opportunity may be of interest to you or your teaching colleagues!

5.1 SMART-1 Mission to the Moon

The probe was built and recently launched by the European Space Agency. It is the only moon mission since the Prospector mission. The URL is <http://sci.esa.int/science-e/www/area/index.cfm?fareaid=10>

5.2 Weather Contest of the Century: Notice of Opportunity for Teachers

Starting September 25, students in grades K-12 are being challenged to predict what the weather conditions at Kill Devil Hills, N.C., will be on Dec. 17, 2003, the 100th anniversary of the Wright Brothers first powered flight. This contest gives students a once-in-a-lifetime chance to be part of history as media from around the world cover the attempt to re-create the first flight. It also gives students an exciting way to apply and learn theories of mathematics and science to a real-life situation. All of the activities align with the National Science Education Standards, the National Principles and Standards for School Mathematics, or some combination of both.



Teachers are asked to go online to register their classes between September 25 and November 3 to participate in the program. Once on the Web site, teachers will also find activities and information to help their students explore aviation and meteorology. All educators **MUST** register their class by November 3rd in order to participate. Please address all questions to: Julie Breissing (804.675.8167), Christian Markow (804.675.8153) or by email to: forecast@www.fi.edu.

For more detailed information regarding the Weather Contest of the Century, please check out the Centennial of Flights website: <http://www.centennialofflight.gov/2003FF/index.html>

Additional educational materials and resources related to the history of flight are available at: <http://www.centennialofflight.gov/user/edu.htm>.

5.3 Einstein Fellows

The Albert Einstein Distinguished Educator Fellowship Program is seeking applications for the 2004-05 program. Highly accomplished science, math and technology teachers (K-12), with at least five years teaching experience, are encouraged to apply on-line at <http://www.scied.science.doe.gov>. The paid fellowships (\$5250 per month) give teachers a voice in Washington at many Federal agencies with science

missions and with policymakers on Capitol Hill. Relocation and professional travel allowances are also provided. Successful applicants will be invited to interview in Washington, DC in April. For more information log on to: [http:// www.triangle-coalition.org](http://www.triangle-coalition.org). Applications close Feb 1, 2004.



5.4 Space Day 2004: May 6, 2004

Three different problem-solving design challenges for students created by the Challenger Center for Space Science Education. These challenges are based on national standards and include assessment rubrics for use by students and educators. A downloadable Teachers' Guide is available at the Space Day web site on the "Teachers Mission Prep" page. (Grades 4-8 are eligible to compete for national prizes—or any other grades may just do this for the fun and educational benefits derived. If competing, register online and the submission deadline is March 5, 2004.)

Register by Nov. at <http://www.spaceday.org>

5.5 NASA Student Involvement Program

- Annual national competition for grades K-12: 6 different competitions for varying grade levels; team competitions, classroom, or individual students may apply based on requirements for each category. Deadlines: January 15 & 31, 2004 <http://www.nsip.net/index.cfm>

5.6 Student "Brain" Competitions

The American Academy of Neurology, the American Academy of Neurology Education & Research Foundation, and the Child Neurology Society invite your students to enter the following 2004 Awards competitions:

1. Neuroscience Research Prize

This prize encourages high school students to explore the world of the brain and nervous system through laboratory research. http://www.aan.com/professionals/awards/award/awa_neu_res.cfm

2. Neuroscience Creativity Prize

This prize identifies students whose creativity and ability to use the scientific method indicate the potential to make significant contributions in the field of neuroscience; and to reward the efforts and dedication of the teachers who have supported these students. http://www.aan.com/professionals/awards/award/awa_neu_cre.cfm

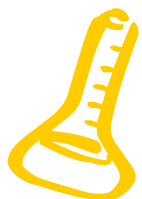
The deadline for submission of Entry Forms and complete research projects is December 1, 2003. Participants will be notified of competition results in February 2004.

6. Space Lady Enterprises' Book Sale—30% off—Mail Order only



- I need more office storage space so am offering a sale: 30% off on all stock I currently have on hand. (Shipping & handling charges will be applied to the total for all items ordered.)
- Please send an e-mail to request a list of sale items. gbres@madriver.com

7. NEEDS ASSESSMENT: Interested in a workshop?



- Contact me if you'd be interested in attending a workshop to learn more about other space education resources to use in your classroom and /or Mars related activities you can do in the classroom—or another topic of interest to you.
- Be sure to include the topic(s) you are interested in and the grade level(s) you work with. Also the best time of year you'd prefer a workshop—and what format:
 - Summer? (late June, July, or early August) / Fall? (October or November) / Spring? (March, April, May)
 - Full day during the school week (Use a professional day; 9-5 or 8:30-4:30 workshop) / After school ends for the day? (2 -3 hours) / Weekend? (Saturday)
- If there is sufficient interest, I can make arrangements to offer professional development workshops based on the results of the needs and interest expressed.

8. SKY WATCH NEWS

If Mother Nature cooperates, and the skies are clear, sky watchers can see two bright planets, the crescent moon and a meteor shower before dawn on Wednesday, Oct. 22nd. The best local viewing time is before dawn, between 5:00- 5:30 am.



Give your eyes time to adjust to the dark. (Don't use a flashlight unless it has a red bulb or red lens. White lights will dilute the images and make it harder to see.)

Earth will be making her annual trek through dusty debris from Comet Halley. The bits of comet dust, some no bigger than grains of sand, will appear as "shooting stars." The Orionid meteors should be visible every 5 minutes or so. Meteors will be coming out of the Orion constellation's shoulder area. Look South and up to find Orion. It will be near Saturn on Wed. morning. The shoulder area is in Orion's left corner. While nifty to see, those streaks will appear short due to the angle and foreshortening. For a more dramatic view look about 90 degrees away in any dark areas; the streaks will appear longer.

(If you need more help, check out a star-gazing map—use a night sky wheel, a book, Astronomy magazine, or online.)

###—end of newsletter—###