

# Aviation Education News



Distributed Quarterly to Promote Aviation Education and Awareness in Virginia

February 2009

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**For Aviation Scholarship Information visit the Careers in Aviation website: [www.careersinaviation.org](http://www.careersinaviation.org)**

## **Virginia Art Contest Winners Selected**

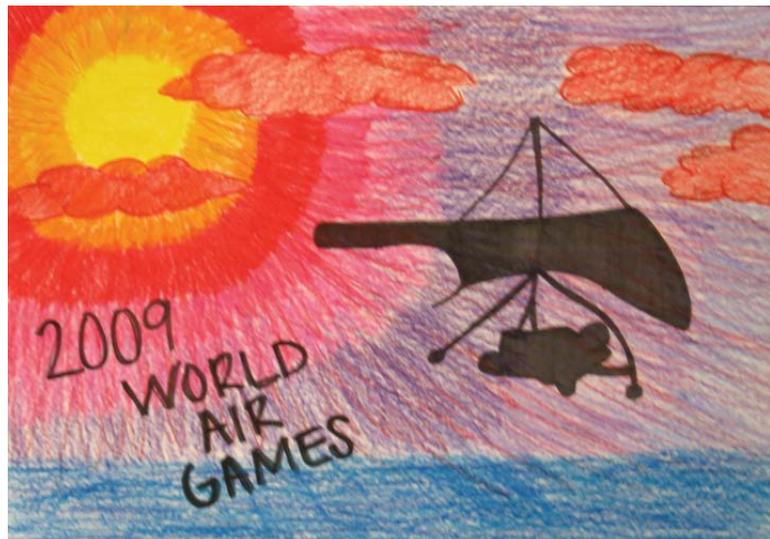
Students from across the Commonwealth submitted artwork for the 2009 International Aviation Art Contest (Virginia Level). Over 200 pieces of artwork interpreting the theme "Design a Poster for the World Air Games 2009" were received by the Virginia Department of Aviation.

The World Air Games 2009 ([www.worldairgames.org/2009](http://www.worldairgames.org/2009)) will take place in Turin, Italy, June 6-13, 2009. It will include aerobatic competitions and other air sports. Attendees will see airplanes, helicopters, ultralights, gliders, hot air and gas balloons, hang gliders, paragliders, skydivers and more competing in various events involving speed, endurance, and precision. With all these exciting events planned, participants in the art contest had many options to choose from in creating a poster.

The American Society of Aviation Artists once again participated by judging the Virginia contest. Dr. Luther Gore and Mr. Dick Carpenter, from Charlottesville, Virginia, reviewed the artwork and selected the top three in each category.

Virginia's winning artwork has been sent to the National Association of State Aviation Officials (NASAO) offices in Washington, D. C. for United States national judging.

Congratulations to all the young people who participated in this year's contest.



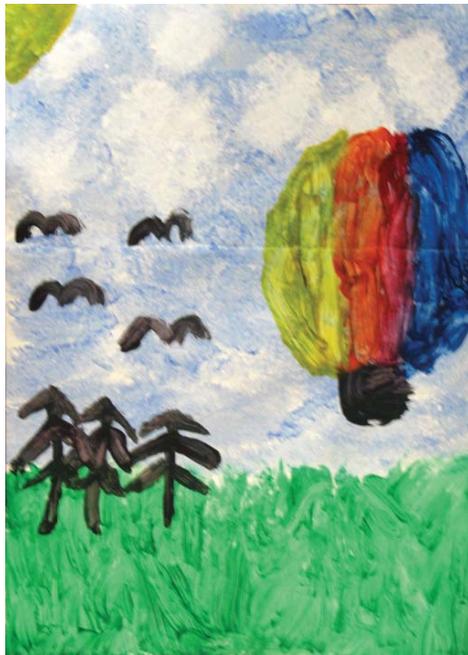
*Lauren McClure, Age 16  
South Riding, Virginia*



*First Place, Category I*  
Roshan George, Age 8, Charlottesville, Virginia



*Second Place, Category I*  
Dustin Wright, Age 9, Newport News, Virginia



*Third Place, Category I*  
Nicholas Alexander Baker, Age 7, Louisa, Virginia

**VASEF AVIATION EDUCATION NEWS** is published quarterly in support of aviation education in the Commonwealth of Virginia by the Virginia Department of Aviation.

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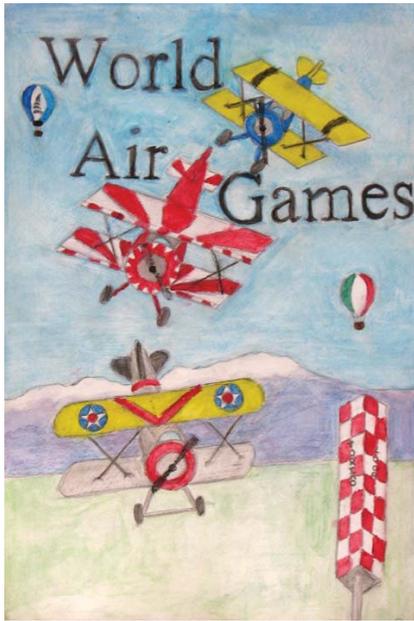
Please send story ideas, photographs, calendar events, and other items for possible inclusion to:

Betty Wilson  
Virginia Department of Aviation  
5702 Gulfstream Road  
Richmond, Virginia 23250-2422  
(804) 225-3783  
(804) 236-3635 (fax)  
betty.wilson@doav.virginia.gov  
<http://www.doav.virginia.gov>



#### VASEF PURPOSE

The Forum is a non-profit organization to promote and foster aviation and space education among public and private schools, colleges and universities, and community and civic groups, and to promote increased public understanding of aviation and space and their economic, social, and career values in our society and in the Commonwealth of Virginia.



*First Place, Category II  
Matthew Severance, Age 13, Clifton, Virginia*



*Second Place, Category II  
Aaron Burstein, Age 12, Lynchburg, Virginia*



*Third Place, Category II  
Teah Ivey, Age 10, Newport News, Virginia*

## National Air and Space Museum Calendar

### General Electric Aviation Lecture

#### Heroism, Self-sacrifice, and Personal Bravery

Col. Leo K. Thorsness, USAF, (Ret.), Medal of Honor Recipient, POW of Vietnam War

Thursday, March 12, 8:00 pm

Lockheed Martin Imax Theater

National Mall Building

Admission: Free, Tickets Required

### Family Day: Women in Aviation & Space Day

Saturday, March 14, 10:00 am to 3:00 pm

Throughout the Steven F. Udvar-Hazy Center

Admission: Free, Parking \$12

### Family Day: Kites of Asia

Saturday, March 21, 10:00 am to 3:00 pm

Throughout the National Mall building

Admission: Free

### Exploring Space Lectures

#### Why is Astronomy so Popular?

Speaker: David Levy

Wednesday, March 25, 7:30 pm

Lockheed Martin Imax Theater

National Mall Building

Admission: Free, Tickets Required

### Family Day: Explore the Universe

Saturday, April 04, 10:00 am to 3:00 pm

Throughout the National Mall building

Admission: Free

### Exhibit Opening

#### Universal Dimensions: The Space Art of Wang Ming

Thursday, April 09, 10:00 am

Military Unmanned Aerial Vehicles (UAV) - Gallery 104

National Mall Building, Admission: Free

### Exploring Space Lectures

#### What IS the Universe?

Speaker: Vera Rubin

Thursday, April 09, 7:30 pm

Lockheed Martin Imax Theater

National Mall Building

Admission: Free, Tickets Required

### Family Day: 100 Years of Military Aviation

Saturday, April 25, 10:00 am to 3:00 pm

Throughout the Steven F. Udvar-Hazy Center

Admission: Free, Parking \$12

### Saturday Star Party

#### Star Parties at Sky Meadows State Park

Host: Sean O'Brien

Saturday, April 25, 8:00 pm to 11:00 pm

Sky Meadows State Park, near Paris, Virginia

### General Electric Aviation Lecture

#### A Pilot and the Enemy He Shot Down

Speakers: Gen. Dan Cherry (USAF, Ret.) and

Nguyen Hong My, F-4 and MiG 21 adversaries

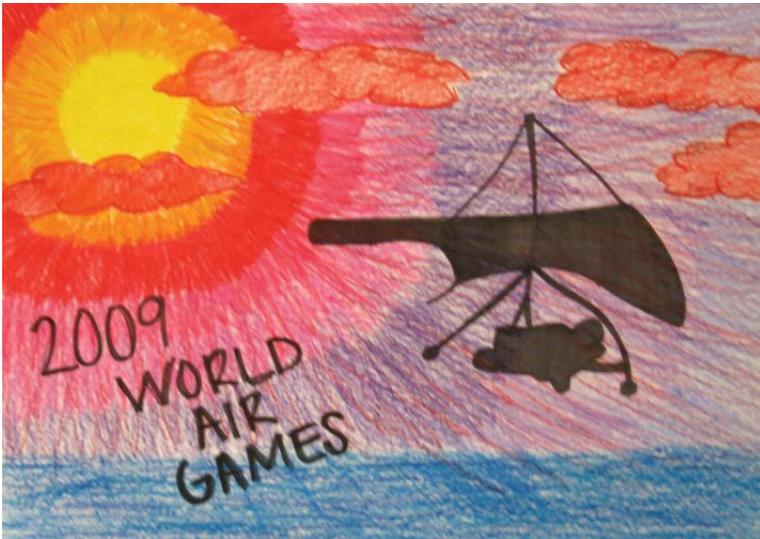
Tuesday, April 28, 8:00 pm

Lockheed Martin Imax Theater

National Mall Building

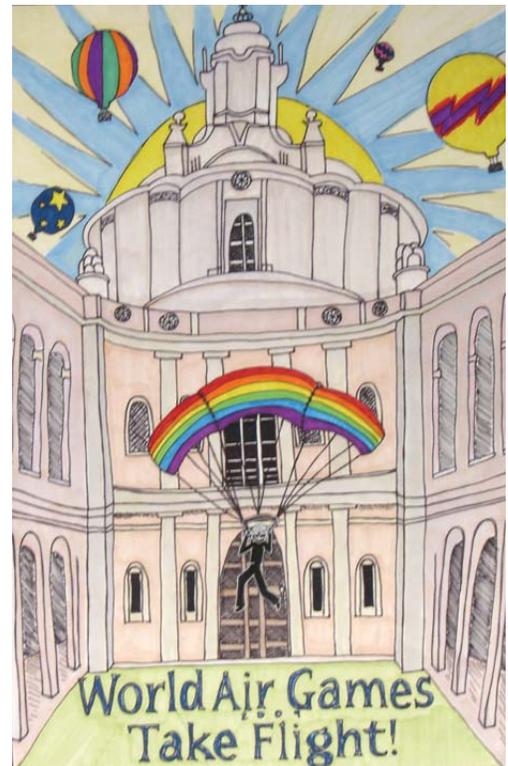
Admission: Free, Tickets Required

For more information visit: [www.nasm.si.edu](http://www.nasm.si.edu)

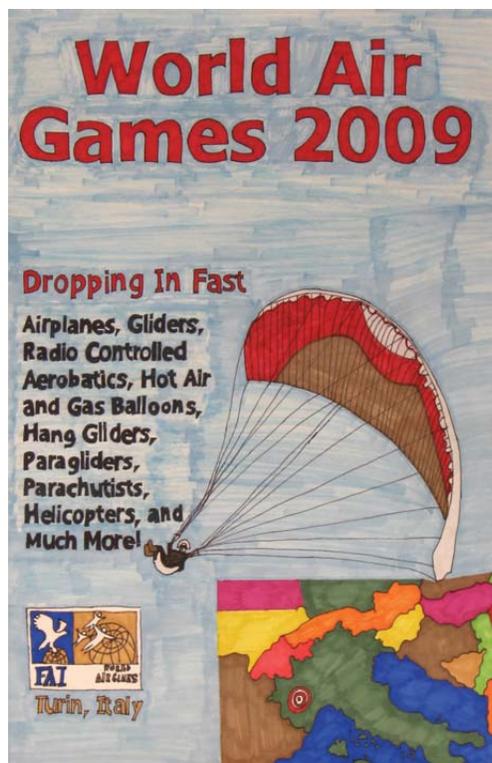


*First Place, Category III  
Lauren McClure, Age 16,  
South Riding, Virginia*

*Second Place, Category III  
Lindsey Northrup, Age 15,  
Virginia Beach, Virginia*



*Third Place, Category III  
Matt Wilson, Age 15,  
Virginia Beach, Virginia*



## NASA eCLIPS: A New Approach Learning

NIA and NASA released a new web-based educational product, NASA eClips, an educational program offered free to every student, from kindergarten level through life-long learners, in the county. The launch of NASA eClips was part of NASA's Future Forum in Boston, Massachusetts, where NASA leadership, astronauts, scientists, and engineers along with Massachusetts business, technology and academic leaders and government officials discussed the role of space exploration in advancing science, engineering, technology education and the economy.

Capitalizing on today's technology, NASA eClips are short, 5-10 minute video segments available on-demand via the internet for the 2008-09 school year. Over 220 short segments are planned with on-demand availability. This highlights NASA's commitment to providing the important science, math and engineering educational materials in a useful video format that can be used in the classroom, at home, and by informal education institutions such as museums, Boys and Girls Clubs and scouts.

With a goal of increasing science literacy, NASA eClips are designed to inspire students to learn more about science, technology, engineering and mathematics (STEM) and to understand the application of these subjects in the real world -- all in an accessible, on-demand way.

NASA eClips is produced by the National Institute of Aerospace under a cooperative agreement with NASA. Partnering with Caption Max, Internet Archive, and You Tube allows for the widest distribution while optimizing resources. NIA's project team also includes Crewstone Technologies, the University of Virginia, Virginia Tech and the William and Ida Friday Institute at North Carolina State University.

"Our economy depends on innovation that has its roots in a scientifically and technologically literate future workforce," said Bob Lindberg. "NASA eClips is an important new approach to assist teachers with relevant and exciting content that can reach in every classroom in the nation."

Visit: [www.nasa.gov/education/nasaclips](http://www.nasa.gov/education/nasaclips).

*from the Fall 2009 edition of the National Institute of Aerospace Explorer Newsletter*

## The Moon: Back to the Future

### NASA Art & Design Contest

The National Aeronautics and Space Administration invites high school and college students from all areas of study to enter, including the arts, industrial design, architecture, computer design, and the fine arts. Students are asked to submit their work on the theme: Life and Work on the Moon. Artists are encouraged to collaborate with science and engineering students. Such collaboration is not required, but would help to ensure that the art is valid for the Moon's harsh environment. Any full time student can enter, regardless of major or area of study.

Entries will be accepted in three categories: two-dimensional, three-dimensional, and digital, including video. Entries will be evaluated not only on their artistic qualities, but also on whether they depict a valid scenario. Each category will have pre-determined size limits. All entries (college and high school) are due not later than April 15, 2009. Prizes include awards and exhibit opportunities.

Download the short video animation Back to the Moon -- <http://sacd.larc.nasa.gov/multimedia/LATrailer.html>. For contest information visit <http://artcontest.larc.nasa.gov/>.

Winners are expected to be announced in May of 2009. All entries will initially be submitted digitally as 300 dpi jpeg images. An online gallery is planned for public viewing of the artwork.

Winners will be asked to ship their work to NASA for exhibit purposes.

Please direct any questions to Dr. Elizabeth Ward at [Elizabeth.B.Ward@nasa.gov](mailto:Elizabeth.B.Ward@nasa.gov)

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## Aviation Education Corner

### Rocket Car

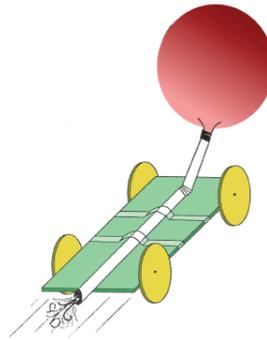
**TOPIC:** Newton's Third Law of Motion

**OBJECTIVE:** To construct a car to demonstrate how rockets move by means of action and reaction.

**DESCRIPTION:** A small car is propelled by the action/reaction force generated by a balloon.

#### MATERIALS and TOOLS:

- 4 pins
- Styrofoam meat tray
- Cellophane tape
- Flexi-straw
- Scissors
- Drawing Compass
- Marker pen
- Small party balloon
- Ruler
- Emery Board



#### PROCEDURE:

Using the ruler, marker, and drawing compass, draw a rectangle 3 by 7 inches and four circles 3 inches in diameter on the flat surface of the meat tray. Cut out each piece. Use an emery board to make the wheels as round as possible.

Push one pin into the center of each circle and then into the edge of the rectangle as shown in the picture. The pins become axles for the wheels. Do not push the pins in snugly because the wheels have to rotate freely. Test them to be sure they rotate freely. It is okay if the wheels wobble.

Inflate the balloon a few times to stretch it out a bit. Slip the nozzle over the end of the flexi-straw nearest the bend. Secure the nozzle to the straw with tape and seal it tight so that the balloon can be inflated by blowing through the straw.

Tape the straw to the car as shown in the picture.

Inflate the balloon and pinch the straw to hold in the air. Set the car on a smooth surface and release the straw.

#### DISCUSSION:

The rocket car is propelled along the floor according to the principle stated in Isaac Newton's third law of motion. "For every action there is an opposite and equal reaction." The balloon pushes on the air and the air pushes back on the balloon. Because the balloon is attached to the car, the car is pulled along by the balloon.

*CONTRIBUTED BY: Gregory Vogt, Oklahoma State University*

*EDITED BY: Roger Storm, NASA Glenn Research Center*

## Virginia Aviation Museum Calendar

**Mar 7 Out of Sight Flight:** A three hour program designed to meet most of the requirements of the Girl Scout's Junior Aerospace activity Badge. Classes meet from 9:30 a.m.-12:30 p.m. Pre-registration is required. Visit [www.vam.smv.org](http://www.vam.smv.org) for complete details.

**Mar 7 Weather Watch:** A three hour program designed to meet most of the requirements of the Girl Scout's Junior Weather Watch activity badge. Classes meet from 1:30 p.m.-4:30 p.m. Pre-registration is required. Visit [www.vam.smv.org](http://www.vam.smv.org) for complete details.

**Mar 14 Introduction to Aviation:** A Boy Scouts of America (BSA) Merit Badge Opportunity (but open to all 11 years or older). Classes meet from 9:30 a.m.-4:30 p.m. Pre-registration is required. Visit [www.vam.smv.org](http://www.vam.smv.org) for complete details.

**Mar 21 Wings and Rails:** Tenth annual model railroad extravaganza. Program is free with museum admission. 9:30 a.m. - 5:00 p.m.

**Mar 22 Wings and Rails:** Tenth annual model railroad extravaganza. Program is free with museum admission. 9:30 a.m. - 5:00 p.m.

**Mar 28 Young Scouter Day:** Build and fly paper airplanes, rotors, a UFO, and more. Explore the dynamics of flight using hands-on exhibits. Take the controls and "fly" a Piper Cub. Program is included with regular paid museum admission. Reservations are not required but an e-mail would be appreciated ([dreisenwitz@smv.org](mailto:dreisenwitz@smv.org)). Two sessions available: 10:00-11:30 a.m. and 11:30 a.m. - 1:00 p.m.

**May 16 Meet Jay Jay Day:** Bring your family and friends when Jay Jay the Jet Plane lands at the Virginia Aviation Museum. Meet Jay Jay and have your picture taken with this adorable little plane. Plus face-painting, balloon art, button-making, crafts, and more. Reservations are required. Tickets are \$8 for all ages and includes Virginia Aviation Museum admission. 11:30 a.m. - 3:00 p.m.

**May 9 Out of Sight Flight:** A three hour program designed to meet most of the requirements of the Girl Scout's Junior Aerospace activity Badge. Classes meet from 9:30 a.m.-12:30 p.m. Pre-registration is required. Visit [www.vam.smv.org](http://www.vam.smv.org) for complete details.

**May 9 Weather Watch:** A three hour program designed to meet most of the requirements of the Girl Scout's Junior Weather Watch activity badge. Classes meet from 1:30 p.m.-4:30 p.m. Pre-registration is required. Visit [www.vam.smv.org](http://www.vam.smv.org) for complete details.

**May 30 Air Fair:** Educational family event.

The Virginia Aviation Museum is located at the entrance to the Richmond International Airport. For additional information on museum hours and programs call (804) 236-3622.

## 23rd Annual A. Scott Crossfield Aerospace Education Teacher of the Year Award “Call for Entries”

(February 5, 2009 – Dayton, OH) The National Aviation Hall of Fame is taking submissions for the annual A. Scott Crossfield Aerospace Education Teacher of the Year Award. The Crossfield Award, celebrating its 23rd year, is a juried competition to recognize and reward teachers for outstanding achievement in aerospace education.

Founded by the late A. Scott Crossfield in 1986, the award is open to current classroom teachers from grades K through 12 from any public, private or parochial school. A review committee of aerospace industry and education professionals will examine nominations for documentation of a teacher’s effectiveness, creativity and ability to maintain high standards for their students and themselves, with aerospace being the core subject matter or their curricula.

The Crossfield Award winner will be presented a \$1,500 cash stipend at the NAHF President’s Dinner Friday, July 17, 2009. The selected educator, and guest, will receive an all expenses paid trip to Dayton and be NAHF’s guest at the 48th Annual Enshrinement Ceremony, held Saturday, July 18th.

Our 2008 winner, Chantelle Rose, a science teacher at Graham High School in St. Paris, Ohio, engages her students with her passion for flight, but also enthusiastically shares her expertise with other classroom teachers and young people in her community. An innocent fascination with rocketry has expanded into an entire curriculum on flight – beginning with Harriet Quimby to the NASA Engineering Design Challenge. Each year she gives her students opportunities to engineer and create tasks associated with NASA projects. Over the course of two weeks, students research past shuttle missions and write a mission script, research past mission patches and explore the symbolism involved, design a mission patch for their mission and construct a 1/3 scale model of the space shuttle orbiter. It is a challenging project that ends with a simulated “shuttle launch.”

Crossfield was inducted into the NAHF in 1983 in recognition of his contributions made as a naval aviator, aerospace engineer and test pilot. He is best known as the first man to successfully fly at speeds of Mach 2 and Mach 3, and contributing to the safety of manned spaceflight, among his many other achievements.

The deadline for nominations is May 1, 2009. Information about the Crossfield Award purpose and qualifications may be found along with submission forms at [www.nationalaviation.org](http://www.nationalaviation.org) or

### 2009 Teachers Grant Recipients

Late last year, educators from across the Commonwealth submitted their lesson plan ideas to the Virginia Department of Aviation in order to be considered for 2009 Aviation Teachers Grants. The grants, of up to \$250.00 each, are awarded annually to selected educators who utilize aviation and/or space concepts to enhance the teaching of their subject. Previous recipients have been teachers of science, math, social studies, technology, art, and many other other disciplines.

Educators selected to receive 2009 grants were notified in January and will be profiled in the next edition of the VASEF Aviation Education Newsletter.

### Research Summer Scholars (LARSS) Program

NASA Langley Research Center invites rising undergraduate juniors and seniors, and graduate students who are pursuing degrees in engineering (aeronautical, chemical, computer, electrical, environmental, mechanical, systems), engineering management, materials science, mathematics, computer science, chemistry, physics, atmospheric science or selected aerospace-related majors and other majors that lend support to NASA’s mission in special project areas such as but not limited to accounting, business, public administration, journalism, history, photography and media arts to apply for the LARSS program. Information, application, and deadlines are available at <http://research.nianet.org/larss>

## Science Museum of Virginia Calendar

### IMAX Films

The Alps  
The Greatest Places

### Carpenter Science Theater Company

Endless Forms Most Wonderful: The Life and Work of Charles Darwin - March 28–May 3, 2009

### Events

**Mindbender (exhibit)** Unravel brain teasers and puzzles

**Geek Festival (event)** Celebrate your inner science nerd with high-tech gaming, music and modern culture. Bring friends to compete in the Rock Band contest on a Wii. Test your texting skills. 10 a.m.-4 p.m.

### Lunch Break Science (lecture)

Pack a lunch. Experts share easy to understand information on a wide range of fascinating science topics. 12-1 p.m. Free

### Livesky

Informal “live” planetarium presentation of the month’s celestial events. Third Friday of every month (except Oct.)

### Skywatch

Third Friday of every month (weather permitting) on the front lawn.

24-Hour Information: (804) 367-0000

Web Site: [www.smv.org](http://www.smv.org)

## Virginia Air and Space Center Calendar

### Exhibits

Adventures in Flight Gallery  
Aircraft and Spacecraft  
Ham Radio Exhibit

### Traveling Exhibits

#### RISK

February 7, 2009 - September 7, 2009

Fasten your seatbelt and strap on your helmet as we examine the science behind risk-taking! Take a “crash-course” in risk management with this new hands-on traveling exhibit that explores life experiences, decision-making, and the science, mathematics, and technology that support it.

### IMAX Films

Monsters vs. Aliens 3D in IMAX  
Under the Sea 3-D  
The Dark Knight

### Sigma Lecture Series

March 3, 2009, 7:30 p.m.  
Soft Smart Materials: From Electroactive Polymers to  
Biomolecular Systems by Dr. Don Leo

Call (757) 727-0900 for showtimes  
Web Site: [www.vasc.org](http://www.vasc.org)

### Calendar of Events

March 1, 2009

Real World Design Challenge - Governor's Cup State Level Challenge deadline.

April 13, 2009

Virginia Aviation Safety Week program will be held from 7:00 - 9:00 p.m. at the VA Tech Montgomery County Airport in Blacksburg. Speaker Andy Miller will discuss "GPS from the Ground Up." Sponsored by the Virginia Department of Aviation and the AOPA Air Safety Foundation.

April 14, 2009

Virginia Aviation Safety Week program will be held from 7:00 - 9:00 p.m. at the Danville Regional Airport in Danville. Speaker Andy Miller will discuss "GPS from the Ground Up." Sponsored by the Virginia Department of Aviation and the AOPA Air Safety Foundation.

April 15, 2009

Virginia Aviation Safety Week program will be held from 7:00 - 9:00 p.m. at the Virginia Aviation Museum on Richmond International Airport. Speaker Andy Miller will discuss "GPS from the Ground Up." Sponsored by the Virginia Department of Aviation and the AOPA Air Safety Foundation.

April 16, 2009

Virginia Aviation Safety Week program will be held from 7:00 - 9:00 p.m. at the Virginia Air and Space Center in Hampton. Speaker Andy Miller will discuss "GPS from the Ground Up." Sponsored by the Virginia Department of Aviation and the AOPA Air Safety Foundation.

April 25-26, 2009

AirPower Over Hampton Roads will take place at Langley Air Force Base in Hampton, Virginia. The United States Air Force Thunderbirds will be performing.

May 30-31, 2009

Virginia Regional Festival of Flight will be held at Suffolk Executive Airport.

For a complete calendar visit: [www.doav.virginia.gov](http://www.doav.virginia.gov)

### Aviation Education Supporters

VASEF projects are funded by our membership fees and by donations from our member organizations. We would appreciate your support through membership in our organization.

\_\_\_\_\_ Regular Membership \$25.00 annually (July-Dec. \$12.50)

\_\_\_\_\_ Non-Profit Organization \$25.00 annually (July-Dec. \$12.50)

\_\_\_\_\_ Corporate Membership \$100.00 annually (July-Dec. \$50.00)

\_\_\_\_\_ New Member \_\_\_\_\_ Renewal

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Name of Organization: \_\_\_\_\_

Occupation: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

Please Return to: Tom Tyndall, VASEF Treasurer  
5702 Gulfstream Road  
Richmond, Virginia 23250-2422



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**Inside:**

- Aviation Art Contest Results
- NASA Programs
- Crossfield Teacher of the Year Info



February 2009

# Please Post for Teachers