



- **THE VIRTUAL SCIENTIST GUEST LECTURE SERIES FINALIST IN NATIONAL STEM COMPETITION. VOTE TODAY!**
- **BAT POPULATIONS IN DANGER OF BEING ELIMINATED**
- **SPACEPORT AMERICA, NM OFFICIALLY OPENS – HOME BASE FOR VIRGIN GALACTIC COMMERCIAL SPACE VEHICLES**
- **BI-LINGUAL STEM EDUCATORS OPPORTUNITY**
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### **Virtual Scientist Selected as Finalist**

In 2010, we launched the Virtual Scientist Guest Lecture Series, which extends the STEM education scope of the SCIENCE SCREEN REPORT by bringing scientists directly into America's classrooms in real time via the Internet. Using a combination of Skype and videoconferencing, The Virtual Scientist Guest Lecture Series provides a forum for scientists and students to experience an interactive dialogue that inspires and engages students about dynamic new technologies and cutting-edge research. Educator and student feedback has been extremely positive – and we are pleased to announce that the “Virtual Scientist” has been selected as a **top ten finalist** (out of 265 entries) in the national Partnering for Excellence: Innovations in Science, Technology, Engineering and Math (STEM) Education competition. The following link will take you to the list of finalists in this year's competition so you can review the entries which represent some of the most imaginative and innovative STEM education initiatives in the U.S. today and vote for the one you believe is the most innovative: <https://www.changemakers.com/stemeducation> Our entry is titled: [The Virtual Scientist Guest Lecture Series: Bridging the Gap Between the Lab and Classroom](#). A sample “virtual presentation” can be seen on our website at: [http://www.ssrvideo.com/Virtual\\_Scientist\\_Video1.html](http://www.ssrvideo.com/Virtual_Scientist_Video1.html)

### **Nova Scotia Brown Bats Becoming Extinct**

The mysterious condition, known as white nose syndrome, is believed to have originated in New York. The condition has spread from coven to coven, carrying with it a mortality rate of 96-100%. New Brunswick is at risk of losing its entire bat population to white nose syndrome. Tearing its way through bat populations in North America, white nose syndrome is wiping out populations in a short period of time. Without bats in North America, insect species will go on living unchecked.

**Learn more about bats in this year's Science Screen Report program: BATS: CREATURES OF THE NIGHT.**

### **Spaceport America Officially Opens**

Looking skyward, more than 800 guests marveled at Virgin Galactic's commercial space vehicles as they soared through the skies of southern New Mexico during the dedication ceremonies of Virgin Galactic's new home at Spaceport America. The flight of WhiteKnightTwo and SpaceShipTwo was the highlight of a spectacular ceremony which featured the dedication of the Sir Norman Foster-designed building and announcements of new scientific and educational customers for the world's first commercial space line.

The Virgin Galactic Gateway to Space, a combined terminal and hangar facility, will support up to two WhiteKnightTwo and five SpaceShipTwo vehicles. [New Mexico Governor Susana Martinez](#) participated in the dedication ceremony with U.S. Congressman Steve Pearce, representing New Mexico's 2nd District.

“New Mexico has a long tradition of pioneering innovation in aerospace and related technologies,” said Governor Martinez. “We already possess an impressive array of facilities and expertise in advanced technologies. Spaceport

America and the opening of the Virgin Galactic 'Gateway to Space' significantly deepen those capabilities and strengthen our global position as a powerhouse supporter of the space industry. Our partnership with Virgin Galactic is a perfect example of how government and private industry can work together to drive economic growth and science education.”

**Learn more about COMMERCIAL SPACE FLIGHT in this year’s Science Screen Report program: EVERYDAY ASTRONAUT.**

Check out the SSR blog for links to this and other stories and news items at: [www.sciencescreenreport.com](http://www.sciencescreenreport.com)

#### **BI-LINGUAL STEM EDUCATORS OPPORTUNITY**

The Science Screen Report team is looking for a bi-lingual science teacher of middle or high school grade level students to join its advisory panel. The panel of eight STEM classroom educators provides suggestions for future SSR programs and ensures that the content meets state standards. If you are interested in learning more, please email: **Jon Glassman at [jon@ssrvideo.com](mailto:jon@ssrvideo.com)**.

## **2011/12 PROGRAM DESCRIPTIONS**

**Rate this year’s programs. Click on the following links and give us your feedback on individual programs and suggest ideas for future releases!**

#### **SCIENCE SCREEN REPORT® -- VOLUME 41.**

**Rate programs using this link:** <http://www.zoomerang.com/Survey/WEB22CUN5SDBGB/>

#### **ENGINEERING – BRIDGES BY DESIGN**

Some of the most elegantly expressed engineering technology is found in bridges, both ancient and modern. Four case studies of cutting-edge bridge design are showcased in this program including the U.K’s remarkable ‘tilting’ bridge. *17 mins.*

#### **ECOLOGY – BATS: CREATURES OF THE NIGHT**

Texas is the site of a wild night time spectacle. Annually from May through October, some 40 million Mexican free-tailed bats migrate to their breeding home in Bracken Cave, San Antonio. This program examines the importance of bats to the overall health of the environment. *17 mins.*

#### **SPACE SCIENCE – EVERYDAY ASTRONAUTS**

As America bid a fond farewell to the Space Shuttle this summer, speculation about the future trajectory of the country’s space exploration initiative revealed a myriad of entrepreneurs lining up to enter the new space-race, and with it new opportunities for private space travel. From conception to reality, sub-orbital vehicles are taking flight for research, education and general transport. New generations of space vehicles will transport researchers, educators and average citizens, not only around the planet, but also to the International Space Station, fast closing the gap between science fiction and science fact. *16 mins.*

#### **ELECTRONICS – THE SCIENCE OF CIRCUIT BOARDS \***

Increasingly complex computerized systems are speeding up all elements of society. This program illustrates how circuit boards are made, starting with the customers’ needs translated to computer design, the various steps of manufacturing and implementation in a variety of settings. *16 mins.*

#### **ENERGY - UNDERSTANDING HYDROELECTRIC POWER**

Harnessing the energy produced by the Earth’s water systems accounts for a significant source of electricity generated by turbines. The search is on to find ways to capture ocean wave and ocean current energy. The field requires the expertise of a variety of scientists and engineers: from mechanical engineers specializing in fluid mechanics to hydro-mechanical and hydraulic-mechanical engineers. *15 mins.*

## **ENVIRONMENT – SCIENCE FOR A HEALTHY PLANET**

Testing and monitoring the health of the land, ocean and atmosphere requires multi-disciplinary and international scientific cooperation. This program explores the various technologies and some of the experiments that tell us about the human impact on the planet and in the atmosphere. *12 mins.*

## **ENERGY – TRANSFORMING RENEWABLE RESOURCES: PART 1**

Learning to incorporate a variety of eco-friendly energy sources into our businesses and homes will make Earth a better place to live. Part one of Transforming Energy explores photovoltaics, the design behind wind turbine technology, and the creative processes behind vehicles in the American Solar Car Race. Zero energy houses of the future will use many of these technologies to produce more energy than they consume. *18 mins.*

## **ENERGY – TRANSFORMING RENEWABLE RESOURCES: PART 2**

This program stresses the importance of caring for our environment and provides an overview of the multiple renewable energy sources such as biomass and solar energy. This second part of Transforming Energy documents how some states are trying to enact laws that require local power plants to increase their power provided by renewable energy. To preserve our planet's health, scientists explore green projects involving ecologically friendly architecture and sustainable communities with solar homes and green housing developments. *18 mins.*

## **SCIENCE SCREEN REPORT FOR KIDS® -- VOLUME 21.**

*Rate programs using this link:* <http://www.zoomerang.com/Survey/WEB22CUP27DUTB/>

## **AGRICULTURE – FARMING TODAY AND TOMORROW**

Research scientists throughout the world are helping farmers implement sustainable food production systems. Key concepts that underline this research are ecosystem, preservation and natural resource conservation. Food production systems touch nearly every aspect of life; from farms and industrial processing plants to markets, grocery stores and the dinner table. Students will learn about various sustainable 'food cycle' systems. *15 mins.*

## **SOLAR POWER – CLEAN ENERGY FROM THE SUN**

The Sun is our primary source of renewable energy and the driver behind all of Earth's terrestrial and oceanic organic processes. Scientists worldwide are exploring how businesses and individuals can reduce the human carbon footprint by incorporating solar power. From solar-powered radios, telephones, heating systems to automobiles and cargo ships, new inventions that work without the direct use of fossil fuel are implemented daily. *13 mins.*

## **SPACE SCIENCE – STUDYING DISTANT PLUTO**

Since its identification in 1930 by Clyde Tombaugh, astronomers have been debating the status of this tiny world at the farthest reaches of our solar system. In this program, students are given a firsthand look at the scientific process that initially classified Pluto as a planet and then reclassified it in 2006 as a dwarf planet. *10 mins.*

## **ENGINEERING – FUELING A GREENER PLANET**

An alphabet of new terminology has evolved over the past decade to describe the gasoline inventions fueling the next generation of land and ocean travel. DNGVs (dedicated natural gas vehicles) are already on the road, along with vehicles with Flexible-Fuel tank design for blended fuels. HEVs (hybrid electric vehicle) utilize two different energy sources for efficiency. The invention of the fuel cell, an electrochemical engine, has revolutionized our concept of how we can ecologically and economically travel in the near future. *14 mins.*

## **ECOLOGY – THE SCIENCE OF RECYCLING**

Waste-management systems are incorporating new recycling processes. Transforming waste into energy and new products is fuelling major research and inventions today. For example, inside the eponymous 'rotting boxes', organic waste is recycled into re-usable products by material-eating micro-organisms. Understanding the environmental necessity of recycling, and how it is changing the world in which we live, is the core of this program. *14 mins.*

### **ACID CAVES – A LIVING LABORATORY**

Deep in Southern Mexico's jungle, the Villa Luz limestone caves support an ecosystem that thrives in a highly acidic environment. This rare type of karst cave is found in few spots on Earth. Geologists and biologists wear gas masks, oxygen tanks and protective outerwear to explore sections of the caves. All life forms, from extremophilic microbial colonies to fish and bats, are interdependent upon the toxic soup of water, sulphur-oxide and hydrogen monoxide for survival. *17 mins.*

### **ZOOLOGY – RED CRAB MIGRATION**

Christmas Island, discovered December 25, 1643, is just a speck of land in the Indian Ocean. But the annual red crab migration, a wonder of the natural world, at the beginning of the rainy season is so massive it can be seen from the air. In this program students will follow the terrestrial arthropods from the rainforest, across dangerous terrain to the ocean to mate and then back into their forest underground burrows. *12 mins.*

### **COMET - VISITORS FROM SPACE**

Comets orbiting the Sun in the Kuiper Belt and the Oort Cloud, sometimes come a little too close to Earth's gravitational pull. In this program students learn about comets, objects of varying size that formed from the earliest galactic activity. *10 mins.*

### **WHO TO CALL IF YOU HAVE QUESTIONS:**

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### **ABOUT US**

SCIENCE SCREEN REPORT and SCIENCE SCREEN REPORT FOR KIDS are produced by Florida-based Allegro Productions, Inc. in association with the Accreditation Board for Engineering & Technology (ABET), the Junior Engineering Technical Society (JETS), and the National Museum of Education™(NMOE), and has served as a trusted resource of objective science news reporting for more than 40 years. The programs are designed to help students understand the vital role that science plays as an economic driver and to address some of the most critical issues facing our society today, as well as the myriad of opportunities in a science-based career. The programs are **provided to schools free of charge** through the support of local corporations who sponsor the DVD series on behalf of school districts in their plant communities as part of their education outreach initiatives. SCIENCE SCREEN REPORT® is endorsed as an exemplary resource by the Smithsonian Institute's Teacher Resource Center, the Eisenhower National Clearinghouse and MIT's prestigious Haystack Observatory. SCIENCE SCREEN REPORT programs are appropriate for grades 8 through 12; SCIENCE SCREEN REPORT FOR KIDS are for grades 4 through 7. They are actively used in about 7,000 schools districts nationwide and seen by more than seven million students in grades 3-12 annually. For program previews and to learn more visit: [www.ssrvideo.com](http://www.ssrvideo.com) or call toll free: 1-800-233-2133 ext 201.