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For Immediate Release

**WINNERS IN EXPLORAVISION, WORLD'S LARGEST K-12 SCIENCE AND TECHNOLOGY
COMPETITION, TO PRESENT FUTURE TECHNOLOGIES IN WASHINGTON, DC**

--Winners Envision Technologies for a Better Future; Will Present at Congressional Hearing on STEM Education and Science Fair on Capitol Hill; DC Mayor Vincent Gray Proclaims June 17, 2011 "ExploraVision Science and Technology Day" --

WASHINGTON, DC, June 16, 2011 – Today the national winning student teams in the 19th annual Toshiba/National Science Teachers Association ExploraVision Awards, the world's largest K-12 student science and technology competition, will present their innovative ideas for future technologies at a Congressional Science Fair, hosted in collaboration with the House Science, Space and Technology Committee. The Science Fair will immediately follow a Congressional [hearing on STEM education](#), where winning teams will testify before Congress. The following day, the students will present their projects again in a special Science Showcase at the National Press Club. In honor of the ExploraVision Awards ceremony, District of Columbia Mayor Vincent Gray has declared June 17, 2011 "ExploraVision Science and Technology Day." The program's eight National Winners for 2011, including four First Place and four Second Place student teams, looked to the world around them to propose ideas for technologies that could make the future better, healthier, and more eco-friendly. **(See enclosed document for complete list of winning entries.)**

The June 16th Congressional Science Fair, following the hearing on STEM education, will be open to members of Congress and their staff to meet with the eight National ExploraVision winning teams. The event will reinforce the importance of STEM education, maintaining student interest in the sciences, and the significant role that mentors, teachers and parents play in

motivating students. The hearing will take place from 10:00 am to Noon in 2318 Rayburn House Office Building and the Science Fair will take place from 12:30 to 2:30 PM on the Rayburn foyer. Both the hearing and science fair are open to the public and media.

At the Science Showcase on Friday, June 17th, the students will present to members of the press, their peers, parents, educators, National Science Teachers Association (NSTA) executives and members and high-level Toshiba executives including **Masao Namiki**, Corporate Senior Executive Vice President, Toshiba Corporation and **Yoshihide Fujii**, Chairman and CEO of Toshiba America, Inc.

The Media Open House is scheduled to begin at 10:30 AM and the formal program at 12:30 PM. Speakers will include **Steve Robinson**, Special Advisor, Office of Elementary and Secondary Education, U.S. Department of Education; **Dr. Arthur Eisenkraft**, Co-Creator, ExploraVision; **John Anderson**, President, Toshiba America Foundation; and **Dr. Francis Eberle**, Executive Director, NSTA.

At the Gala Awards Banquet scheduled for 6:45 PM on Friday night, speakers will include Emmy Award-winner **Bill Nye the Science Guy**; **Mario Armstrong**, Digital Lifestyle Expert, CNN, NPR and Sirius/XM; **Masao Namiki**, Corporate Senior Executive Vice President, Toshiba Corporation; **Dr. Patricia Simmons**, President, NSTA; **Dr. Arthur Eisenkraft**, Co-Creator, ExploraVision; and **Eleanor T. Ross**, Past ExploraVision Winner from 1995.

Bright Ideas for a Better 2031!

In the Toshiba/NSTA [ExploraVision](#) Awards Program, students select an existing technology and envision what it might be like 20 years in the future. This year's winning students envisioned a wide range of innovative technologies that could make the world a better place in 2031, from environmentally friendly ways to equip homes with solar power from artificial leaves to medical breakthroughs that could cure deafness. The 26 ExploraVision national winning students on the eight winning teams were selected from 4,346 team entries, representing the participation of 13,387 students from the U.S. and Canada who submitted entries to this year's competition. Members of each of the four First Place ExploraVision teams will each receive a U.S. Series EE Savings Bond valued at \$10,000 at maturity that may be used to offset increasing education costs. Students on Second Place teams will each receive a U.S. Savings Bond valued at \$5,000 at maturity.

The Toshiba/NSTA ExploraVision Awards program, funded by the Toshiba Corporation, the Toshiba America Companies, Toshiba of Canada, Ltd., and the Toshiba America Foundation and administered by the National Science Teachers Association, is open to all K-12 U.S. and Canadian students who are citizens or legal residents.

For more information or an application for 2012, visit www.exploravision.org or e-mail exploravision@nsta.org. Follow ExploraVision on Twitter at [@ToshibaInnovate](https://twitter.com/ToshibaInnovate) or join the ExploraVision Facebook Fan Page at www.Facebook.com/ToshibaInnovation.

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About Toshiba

The Tokyo-based Toshiba Corporation is a leading innovator and diversified manufacturer and marketer of advanced electronic and electrical products, spanning information and communications equipment and systems, Internet-based solutions and services, electronic components and materials, power systems, industrial and social infrastructure systems, and household appliances. Toshiba employs over 14,000 people in North America and Toshiba America, Inc., is the holding company for five Toshiba operating companies in the United States.

Toshiba's U.S.-based companies and some of their chief products are as follows: Toshiba America Electronic Components, Inc. (Semiconductors, Flash Memory-Based Storage Solutions, LCD, and custom chips); Toshiba America Information Systems, Inc. (Laptop Computers, Hard Disk Drives, Telephony Products, Flat Panel LCD TVs, and portable products); Toshiba America Business Solutions, Inc. (Copiers, Facsimiles, Printers); Toshiba International Corporation (Motors, Motor Controls, Power Electronics, Power Generation Equipment, Automation); Toshiba America Medical Systems, Inc. (Computed Tomography, Magnetic Resonance, X-ray and Ultrasound); Toshiba America Nuclear Energy Corporation (Advanced Boiling Water Nuclear Reactors); Toshiba America Foundation (Supports science and mathematics education across the United States) and Toshiba of Canada, Ltd. (Made up of four operating divisions).

About NSTA

The Arlington, VA-based National Science Teachers Association (NSTA) is the largest professional organization in the world promoting excellence and innovation in science teaching and learning for all. NSTA's current membership includes approximately 60,000 science teachers, science supervisors, administrators, scientists, business and industry representatives, and others involved in science education.

ExploraVision 2011 National Winners

2011 First Place Winners

Grade K-3

Discovery Montessori School, Edinburg, TX

Intelligent Streets (i.streets)

Intelligent Streets (i.streets) reduce intersection accidents by using smart translucent film installed in windshields that receive signals from either traffic lights or satellites. These signals will rearrange molecules in the film to produce the correct traffic command (go, caution, or stop) regardless of hazardous weather conditions, distractions, or power outages.

Website: <http://dev.nsta.org/evwebs/2112h/>

Grade 4-6

Virginia Virtual Academy, Herndon, VA

The HEADS UP! Helmet

The Heads Up! Helmet is a military helmet that is designed to protect soldiers from traumatic brain injury on the battlefield due to an improvised explosive device. The helmet will be formed from micro layers of impact-resistant, ultra-high molecular weight polyethylene sheets spun and covered with highly sensitive temperature and air pressure sensors to detect concussive force.

Website: <http://dev.nsta.org/evwebs/30n/>

Grade 7-9

Horace Mann School, Bronx, NY

Subway Smart System

The Subway Smart System captures wasted wind in the NYC Subway using Smart Rails and Smart Grass. Smart Rails, placed across the track ties and on the wall of the tunnel, will extract energy when trains move down the track. Smart Grass will use piezoelectricity to harness the power of subway wind by pushing on piezoelectric crystals that convert wasted wind into usable electric current.

Website: <http://dev.nsta.org/evwebs/3259r/>

Grade 10-12

Hopewell Valley Central High School, Pennington, NJ

Bionic Auditory Prosthesis

The Bionic Auditory Prosthetic (BAP) is a prosthetic inner ear designed to cure deafness by allowing the human brain to process sound while bypassing the entire inner ear and vestibule-cochlear (auditory) nerve. Unlike cochlear implants or hearing aids, BAP addresses both conductive and sensorineural hearing loss, offering a more universal approach to curing deafness.

Website: <http://dev.nsta.org/evwebs/1719h/>

2011 Second Place Winners

Grade K-3

Countryside Montessori Charter, Land o Lakes, FL

The Solar T.R.E.E.

The Solar T.R.E.E. will equip every home with safe, inexpensive solar and wind power by mimicking photosynthesis found in natural trees. By using artificial leaves that capture and store solar and wind energy, the Solar T.R.E.E. will reduce our dependency on fossil fuels.

Website: <http://dev.nsta.org/evwebs/4308k/>

Grade 4-6

Plainview Old Bethpage Middle School, Plainview, NY

BlindSight

BlindSight is a contact lens with a built-in nano-camera that sends streaming video to a computer chip implanted in the occipital lobe of a blind person. The camera moves as the body moves or as the eye roves side-to-side. BlindSight will also retrieve memories and pictures that are stored in the frontal lobes of those who lost sight.

Website: http://dev.nsta.org/evwebs/2260y/toshibaSite_Final.swf

Grade 7-9

West Hills Middle School, West Bloomfield, MI

I-TBS: Intra-trachea Breathing System

The Intra-Trachea Breathing System (I-TBS) exhibits both osmosis/diffusion and transduction principles as it enhances inhalation for patients with breathing disorders or diseases of the airway using Zeolite Towers, chambers containing aluminum silicate granules that bond with nitrogen molecules. Surgically placed in the upper respiratory tract, the I-TBS detects the resultant percentage of oxygen in the bloodstream and remotely sends this to a doctor's computerized system.

Website: <http://dev.nsta.org/evwebs/2365k/>

Grade 10-12

Stuyvesant High School, New York, NY

3Drenal: Kidney Bio-Printer

The 3Drenal: Kidney Bio-Printer offers an alternative and a solution to the challenges of costly kidney transplants. Using a 3D bio-printer, 3Drenal replicates the functionality of the kidney through mechanisms of cell fusion and organogenesis. It uses a structured scaffold to establish the architecture of the kidney and then layers this structure using print heads containing proteins, organic fillers, and stem cells, constructing a transplantable kidney that will be compatible to the individual.

Website: <http://dev.nsta.org/evwebs/2839q/>