



For Immediate Release

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**2009 REGIONAL WINNERS ANNOUNCED IN WORLD'S LARGEST
STUDENT SCIENCE COMPETITION**

-- ExploraVision Winners Draw Inspiration from Issues Including the World Environmental Crisis, Military Conflicts, Urgent Medical and Health Topics, and Even the Current Sports Steroids Scandal --

ARLINGTON, VA, March 4, 2009 – The 17th annual Toshiba/National Science Teachers Association ExploraVision Awards Program today announced its 2009 Regional Winners, honoring students for their creative ideas for beneficial future technologies. Sponsored by Toshiba and administered by the National Science Teachers Association (NSTA), the ExploraVision program is one of the world's largest K –12 science and technology competitions. This year, the program received 4,388 team entries representing the participation of 13,774 students from across the US and Canada.

A Host of Potential Future Breakthroughs

This year, winning ideas in ExploraVision's Regional competition included a host of potential future breakthroughs that could help make the world a better, safer and more environmentally-friendly place. Ideas range from energy-saving technologies such as asphalt roads that collect solar energy to innovative medical and health treatments, breakthroughs that could enhance the quality of life and even a potential solution for the steroid abuse problem in professional sports! The students' winning projects reflected ongoing research in the fields of nanotechnology, gene research, energy-harnessing techniques and more. **(See enclosed document for complete list of winning entries.)**

Inspiring Students in STEM (Science, Technology, Engineering and Math)

STEM (Science, Technology, Engineering and Math) education is a hot-button topic among politicians and educators today, particularly in light of the fact that many studies show American students often trailing behind other countries in these crucial areas. In his recent address to Congress, President Obama made note of America's responsibility to reform education and encouraged American innovation through science and technology. Since the program's inception, more than 250,000 students have gotten a jump-start on this initiative by immersing themselves in STEM through ExploraVision.

The program selects winners based on how they combine imagination with the tools of real scientific research to envision future technologies that could realistically exist in 20 years. Most importantly, students learn by presenting their project ideas in ways that reflect modern scientific methods, examining problems and deriving solutions much the same way scientists do in the field. At the Regional judging level, a panel of 68 judges—including science educators, scientists and engineers—evaluates the written entries and chooses the 24 Regional Winners.

Noted Masa Fukakushi, Chairman and CEO of Toshiba America, Inc.: “At Toshiba, innovation has always been our company's primary directive, and ExploraVision provides us with an extraordinary tool for helping inspire and motivate young people. What is most gratifying for us is how so many of the wonderful ideas presented by our student entrants inspires and invigorates us as well. The pursuit of progress in science and technology has always been one of the most important endeavors of humankind, and we at Toshiba feel privileged to be able to share our passion for innovation in a program that so aptly reflects our own ideals and aspirations.”

Finding Inspiration in Issues Affecting the World Around Them

This year's winning ExploraVision students looked closely at problems and issues in the world around them for inspiration. The widely reported use of illegal steroids in sports, for instance, clearly inspired a team of 7th-9th grade students from Great Neck, NY, who envisioned **A Better Method of Testing for Performance Enhancing Drugs in Sports: Nanobiosensors—A Lab on a Chip**, a system to automatically sense and detect unauthorized drug use among athletes.

A team of 7th-9th grade students from Nashville, TN came up with the idea for a better type of camouflage/body armor called **S.I.C. (Screen Immigrated Camouflage)**, which would use computer imaging and a full body protective suit to protect soldiers in combat. To help prevent automobile

accidents, a team of K-3 grade students from Edmond, OK came up with the idea for the **N.T.C. No Texting Chip**, which would automatically shut down a cellphone's text messaging capabilities when in the presence of a running car engine. In addition, a team of 10th-12th grade students from Jericho, NY literally looked to Nature for their inspiration. Their proposed space-age adhesive compound, **Carbon Nanotube Gecko Adhesives**, would utilize advanced nanotechnology to create a sticky substance resembling "synthetic gecko feet."

Energy-Saving Environmentally Friendly Solutions

Several of this year's ExploraVision students envisioned technologies that could help preserve the environment and generate clean energy. **Project CTRIC Pathways**, proposed by a team of students in Kindergarten through third grade from Irvine, CA would provide wireless power for electric automobiles using a system of lamp posts on freeways and roads, thereby reducing our energy dependency on petroleum sources. From Austin, TX, a team of 4th-6th grade students proposed **W.A.T.E.R. – We All Transform Environmental Refuse**, a device that would use nanotechnology to help stave off global climate change by eliminating greenhouse gases such as carbon dioxide.

Envisioning the Future of Medical Science

The ExploraVision program has always sparked tremendous interest among young people in finding solutions to health problems, and this year was no exception with almost half of Regional winning projects focused on medical innovations. A team of 10th-12th grade students from Englishtown, NJ, for instance, plumbed the depths of advanced genetic research to create their project **CHANGE (Counteracting HIV/AIDS Through New Gene Enhancement)**, a new type of synthetic gene therapy for AIDS sufferers. **The EpiWatch**, envisioned by a team of Kindergarten through third grade students from Wesley Chapel, FL, would immediately and painlessly administer the needed medication to counteract dangerous food allergies in time to save lives. From Urbana, IL, a team of 10th-12th grade students imagined an idea called **HEARTt: sHDL Enabled Atheroma Reverse Transport Technology**, a novel treatment idea for coronary heart disease.

"The ExploraVision competition is an exciting and unique opportunity to involve all students in science," said Francis Eberle, executive director, NSTA. "The program asks students to develop solutions to how our society can do things better and more efficiently through science and technology. That's the essence of science—coming up with good questions and exploring possible answers through creativity and hard work."

About the ExploraVision Program...

The ExploraVision program challenges students, working in teams of two to four, to research scientific principles and current technologies as the basis for designing innovative technologies that could exist in 20 years. With its multi-level, imaginative and fun approach to learning, the ExploraVision program is designed to appeal to a broad range of students of all interest, skill and ability levels. As a testament to the program's value as an educational tool, many teachers across the country now incorporate ExploraVision into their regular science curriculum, and for many former ExploraVision winners, the program has served as encouragement to pursue further science-related careers.

Students on the four first-place ExploraVision national winner teams will each receive a \$10,000 US Series EE Savings Bond. Students on second-place teams will each receive a \$5,000 Savings Bond. (Canadian winners receive Canada Bonds purchased for the equivalent issue price in Canadian dollars.) The eight teams will also receive an expenses-paid trip with their families, mentor, and coach to Washington, DC for a gala awards weekend in June 2009. Activities will include a visit to Capitol Hill to meet with members of Congress, a Science Showcase during which the students will display and demonstrate their winning ideas, and sightseeing around the nation's capital. The highlight of ExploraVision weekend will be a gala awards banquet and ceremony at the Grant Hyatt where students will be formally recognized for their creativity and accomplishments.

For more information or an application for 2010, visit www.exploravision.org or e-mail exploravision@nsta.org.

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, Projectors, and Hard Disk Drives, Telephony 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 Consumer Products, L.L.C. (Flat Panel LCD TVs, and portable products); 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 more than 57,000 science teachers, science supervisors, administrators, scientists, business and industry representatives, and others involved in science education.

ExploraVision 2009 Regional Winners

REGION 1: New York, Connecticut, Massachusetts, Rhode Island, Maine, New Hampshire and Vermont.

Grade K-3: *Hips For Life (HFL)*
Batchelder School; North Reading, MA

Grade 4-6: *Flexibone*
Plainview Old Bethpage Middle School; Plainview, NY

Grade 7-9: *A Better Method of Testing for Performance Enhancing Drugs in Sports: Nanobiosensors - A Lab on a Chip*
North Shore Hebrew Academy High School; Great Neck, NY

Grade 10-12: *Carbon Nanotube Gecko Adhesives*
Jericho High School; Jericho, NY

REGION 2: Maryland, Delaware, New Jersey, Pennsylvania, Virginia and West Virginia, as well as Washington, D.C, Armed Forces America, Armed Forces Europe and Armed Forces Pacific.

Grade K-3: *HoloSmart Paper (Portable Smartboard)*
Redeemer Lutheran; Oakmont, PA

Grade 4-6: *J.E.T. Stand*
Northside Elementary; Palmyra, PA

Grade 7-9: *OPEGS -- Oscillation Powered Energy Generation System*
Merion Mercy Academy; Merion Station, PA

Grade 10-12: *CHANGE: Counteracting HIV/AIDS through New Gene Enhancement*
Manalapan High School; Englishtown, NJ

REGION 3: North Carolina, South Carolina, Florida, Georgia and Puerto Rico and the Virgin Islands

Grade K-3: *The EpiWatch*

Home School; Land O Lakes, FL

Grade 4-6: *Ener-bahn*

Guy B. Phillips Middle School; Chapel Hill, NC

Grade 7-9: *The ReTree*

Thomasville High Scholars Academy; Thomasville, GA

Grade 10-12: *Lumos*

Green Hope High School; Cary, NC

REGION 4: Iowa, Michigan, Indiana, Illinois, Minnesota, Ohio, Wisconsin, South Dakota and North Dakota, as well as Canada.

Grade K-3: *Plastron 5000*

Western Row Elementary; Mason, OH

Grade 4-6: *A.L.B.E.R.T.*

Burnside Scholastic Academy; Chicago, IL

Grade 7-9: *SIHINS: Self Implanting Hemostasis Inducing Nano System*

W.H. Morden P.S.; Oakville, Ontario

Grade 10-12: *HEARTt: sHDL Enabled Atheroma Reverse Transport Technology*

University Laboratory High School; Urbana, IL

REGION 5: Alabama, Arkansas, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Nebraska, Oklahoma, Tennessee and Texas, as well as the Northern Mariana Islands, the Marshall Islands, Palau and Micronesia. (American Samoa and Guam are included.)

Grade K-3: *N.T.C. -- No Texting Chip*

John Ross Elementary; Edmond, OK

Grade 4-6: *W.A.T.E.R. -- We All Transform Environmental Refuse*

Joe Dan Mills Elementary; Austin, TX

Grade 7-9: *S.I.C.*

Saint Henry School; Nashville, TN

Grade 10-12: *ECO (Emissions Control Options)*

Bartlesville High School; Bartlesville, OK

REGION 6: California, Washington, Oregon, Arizona, New Mexico, Colorado, Idaho, Nevada, Hawaii, Utah, Wyoming, Montana and Utah.

Grade K-3: *Project CTRIC Pathways*

Westwood Basics Plus; Irvine, CA

Grade 4-6: *The Smart Cane*

Fairmont Private Schools; Anaheim, CA

Grade 7-9: *S.M.A.R.T. Paint*

West Salem High School; Salem, OR

Grade 10-12: *Vesicular Stomatitis Virus (VSV) Therapy*

Crystal Springs Upland School; Hillsborough, CA