



For Immediate Release

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**WORLD'S LARGEST STUDENT SCIENCE COMPETITION
ANNOUNCES 2009 NATIONAL WINNERS**

-- ExploraVision Winners Envision Innovative Energy Solutions, New Lifesaving Medical Treatments and More—Even a Possible Solution to the Current Sports Steroids Scandal --

ARLINGTON, VA, May 4, 2009 – A group of young inventors from Kindergarten to 12th grade have envisioned a future in which a tiny portable device would help solve the problem of illegal steroids in sports; asphalt roads would generate electricity from the sun's rays; a new type of "paint" would help keep people safe; and a special music stand could even help musicians learn to play their instruments better! These are just a few of the winning student projects announced today by the 17th annual Toshiba/National Science Teachers Association ExploraVision Awards Program. The program's eight National Winners for 2009, including four First Place and four Second Place student teams, looked to the world around them to envision ideas for new technologies that could make the future better, healthier and more eco-friendly. The students' winning projects reflected ongoing research in the fields of advanced genetic and medical research, nanotechnology, cell phone and GPS technologies, energy-harnessing techniques and more. **(See enclosed document for complete list of winning entries.)**

The annual ExploraVision Awards Program, the world's largest K-12 student science and technology competition, is sponsored by Toshiba and administered by the National Science Teachers Association (NSTA). This year, the program received 4,388 team entries representing the participation of 13,774 students from across the US and Canada, including those from public, private and parochial institutions, as well as home-schooled students. Members of each of the four First Place ExploraVision teams will

each receive a US 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 US Savings Bond valued at \$5,000 at maturity.

Combining Real-Life Scientific Research with Imagination

ExploraVision challenges students to research scientific principles and current technologies as the basis for designing technologies that could exist in 20 years. In light of President Obama's recent speech before the National Academy of Sciences and his promise to devote more energy and funds to scientific research and development, the ExploraVision program is a great example of how an educational program can contribute to our nationwide effort toward scientific and technological progress. With its multi-level, imaginative and fun approach to learning, ExploraVision appeals to a broad range of students of all interest, skill and ability levels, encouraging education in vital STEM (science, technology, engineering and math) fields. The program has become so popular as a learning and motivational tool that many teachers now use it as part of their regular science and technology curriculum. In addition, many ExploraVision coaches have formed after-school clubs, which provide further opportunities for students to become involved in this worthwhile program.

Noted Masa Fukakushi, Chairman and CEO of Toshiba America, Inc.: "For more than 130 years, Toshiba has looked to scientific and technological innovation as our primary inspiration, and ExploraVision is a way for us to share that passion with young people. During his recent address to the National Academy of Sciences and elsewhere, President Obama made it clear that a new burst of advances in energy technology, medicine and other important arenas would not come from funding alone, but would require scientists to find ways to inspire young people 'to create, build and invent – to be makers of things, not just consumers of things.' Toshiba is proud to sponsor a program that reflects this sentiment and encourages tomorrow's generation of scientists and inventors."

Student Projects Reflect Real-Life Concerns of Today's Young People

The entries in this year's competition addressed a wide variety of issues, providing a glimpse into the diverse concerns and interests of today's young people. Many entries, including several top winners this year, addressed key global environmental concerns and offered novel solutions to pressing energy and pollution problems. A team of K-3 grade students from Irvine, CA, for instance, won First Place in their grade category for **Project CTRIC Pathways**, a system that would provide wireless power for electric automobiles using a system of lamp posts on freeways and roads, thereby reducing our energy

dependency on pollution-causing petroleum sources. In Project CTRIC, system grids with vibrating magnetic coils would be mounted on existing roadway structures, transmitting electricity to oncoming vehicles containing “matching” vibrating coil electricity receivers. In the 4-6 grade category, a student team from the Guy B. Phillips Middle School in Chapel Hill, NC won First Place for their proposal of **Enerbahn**, a solar energy technology that would generate electricity from asphalt on paved roadways that had been warmed by the sun, thereby also lowering greenhouse gases and dependency on fossil fuels.

A team from West Salem High School in Salem, OR, won first place in the 7-9 grade category for combining an appreciation for aesthetics and sports with their desire to help keep people safe with their project, **S.M.A.R.T. Paint**. The intelligent decorative and safety coating would have special properties that, when applied to buildings, roads, Astroturf, and mechanical equipment, would be able to warn of black ice on roads, increase fuel efficiency, sense fires, and prevent pressure tank explosions.

Envisioning the Future of Medical Science

ExploraVision has always sparked tremendous interest among young people in finding solutions to health and medical problems, and this year was no exception. A team of 10th-12th grade students from Englishtown, NJ, for instance, won Second Place in their grade category for **CHANGE (Counteracting HIV/AIDS Through New Gene Enhancement)**, a new type of synthetic gene therapy for AIDS sufferers. **The EpiWatch**, which won Second Place in the K-3 grade category for a home-schooled team from Wesley Chapel, FL, would immediately and painlessly administer the needed medication to counteract dangerous food allergies in time to save lives. A team of 10th-12th grade students from Urbana, IL won First Place in their grade category for **HEARTt: sHDL Enabled Atheroma Reverse Transport Technology**, a novel treatment idea for coronary heart disease.

The widely reported use of illegal steroids in sports clearly inspired a team of 7th-9th grade students from Great Neck, NY who won Second Place in their grade category for **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. Lastly, perhaps dreaming of a device that could help them get to Carnegie Hall faster and easier, a team of 4th-6th grade students from Northside Elementary in Palmyra, PA won Second Place in their category for composing the idea for a portable **J.E.T. Music Stand**. The device could improve the success of practice by organizing music lesson plans and notes, teaching music theory through musical games, recording practice sessions and offering feedback to improve the musician’s performance.

ExploraVision Prizes

In addition to the US Savings Bonds, the eight teams will also receive an expenses-paid trip with their families, mentor and coach to Washington, DC for a gala awards weekend June 3-7, 2009. Activities will include a visit to Capitol Hill to meet with members of Congress and a Science Showcase during which the students will present their winning ideas. The highlight of ExploraVision Awards weekend will be a gala awards banquet and ceremony 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 six 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 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 more than 60,000 science teachers, science supervisors, administrators, scientists, business and industry representatives, and others involved in science education.

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