

How Can You Get Involved?

"If you are a college student..."

InnoWorks is a national organization run by college students at the grass roots level. You have the opportunity to make significant contributions in mentoring, managing finances, developing curricula, organizing community engagements, conducting programs and a whole host of other interesting areas. Join us and we will work together to achieve great things.

"If you are a school or public official..."

InnoWorks chapters are based at university campuses across the nation to benefit the local communities. Organizing and maintaining an InnoWorks program involves plenty of logistical work, which requires participation from both schools and communities. We would greatly appreciate any help you can give us, especially in identifying students who can benefit most from our program.

"If you are a business leader or philanthropist..."

InnoWorks is a non-profit organization with 501(c)(3) status. Maintaining our "100% free for students" policy and funding the development and implementation of InnoWorks programs requires significant partnerships. Our vision for InnoWorks is to become a dynamic international program that will be able to reach out and touch the lives of thousands of students year after year. We invite you to join us in our mission to provide exciting educational opportunities to youth without access. Your generous contributions will be gratefully acknowledged with a tax deduction receipt. Together we can redefine the realm of the possible. The participating acknowledged donation levels are (all levels are welcome):

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- Graphite Sponsors (< \$500)

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International Media Coverage

NBC, ABC, CBS, Featured on Doritos Bags, Br!ck Awards on CWTV Channel, Bahamas@Sunrise, Herald Sun, Arizona News, Maryland Gazette, Duke Chronicle, Lucent Times Today, . . .

Books and Publications

InnoWorks: The Eureka Effect (2009)

(ISBN 0-9771380-5-4, Student Edition: ISBN 0-9771380-6-2)

InnoWorks: Explorations (2006, Expanded 2007, 2008)

(ISBN 0-9771380-3-8, Student Edition: ISBN 0-9771380-4-6)

InnoWorks: Making Sense of Senses (2005, Expanded 2006 - 2008)

(ISBN 0-9771380-0-3, Student Edition: ISBN 0-9771380-1-1)

UNITED INNOWORKS ACADEMY

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INNOWORKS



A FUN (FREE) SCIENCE,
ENGINEERING & MEDICINE
SUMMER PROGRAM
BY STUDENTS
FOR STUDENTS



Ages 11-14



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What Is InnoWorks?

InnoWorks is the flagship program of the United InnoWorks Academy, a 501(c)(3) non-profit organization devoted to bringing educational opportunities to underserved grade school children. For many students from economically disadvantaged backgrounds, exposure to science and technology is limited to the theoretical concepts taught in school. This narrow experience is compounded by



A team and their mentors work on the Radioactive Waste Disposal Robot Mission.

the common youthful sentiment that science is not stimulating. In middle-school / early high school curricula, teachers are often obligated to concentrate on producing building blocks for increasingly complicated future topics. The response

to the questions, "What does this have to do with anything?" or "Why should I care about this?", are too often followed by the response, "You'll understand when you learn more later." In the absence of interesting science related experiences, many students never pursue their nascent interests.

We believe that InnoWorks can assist our teachers to increase enthusiasm, confidence and teamwork in learning science, engineering and medicine for youth who otherwise lack access to exciting educational opportunities outside of the classroom. These experiences can stimulate young students with awareness and appreciation of these fields and consider them as potential career paths.

InnoWorks aims to help remedy the shortfall in future STEM²-educated (science, technology, engineering, mathematics and medicine) individuals to accelerate the creation of science, engineering and medical innovations to benefit our global society.

"They're [staff] amazing. We can relate to them because they're going to school and we're going to school- we're all working towards the same goals. They talk to us about college and what we can do in science."

Brianne E., Age 13 InnoWorks 2004

The InnoWorks Mission

- ⇒ Introduce students to various science, engineering and medical disciplines ranging from robotics to human physiology through a series of activities and missions, and connect these science concepts to their everyday lives.
- ⇒ Develop teamwork skills, build self-confidence, and cultivate enthusiasm for learning that will help students throughout their lives.
- ⇒ Apply cutting-edge neuroscience and educational research to improve mentoring and teaching methods used in the InnoWorks program.
- ⇒ Have fun while learning!

Program Structure

Each interdisciplinary InnoWorks program is centered around a central theme. For example, one of our programs is based on the human senses and is entitled "Making Sense of Senses". Programs run for one to two weeks and are divided into sensory themes: Vision, Hearing, Touch, Taste, Smell, and Prediction & Estimation. We use concrete sensory experiences as the impetus for learning sessions modeled on David Kolb's experiential learning cycle. Each theme begins with group activities as the primary learning experiences, followed by competitive missions in teams of four students, each with one undergraduate mentor. All missions are designed to inspire students to use and extend the knowledge gained from the group-learning activities. Mission topics include robotics, rockets, electronic filters, microscopy, fiber-optics, and crime scene investigation.

Other themes include exploration of different environments, from the ocean to outer space, as well as recreations of great scientific discoveries, incredible engineering feats, and amazing medical miracles in history.



Blastoff! Student designed their own rockets.

The People of InnoWorks

Students (InnoWorkers)

Although we believe that all students could benefit from the innovative teaching and mentoring methods of our program, we specifically target students that have an interest in learning more about science, engineering, and medicine but do not have access to resources for socioeconomic reasons. Research suggests this is the population that stands to benefit most from programs like InnoWorks. We work with middle-school students because we believe that youth of this age have enough maturity and experience to be able to successfully participate in InnoWorks; yet still are receptive to new possible prospects for their futures.

Everything from books, equipment, lunches, snacks to transportation are provided by InnoWorks for free thanks to our sponsors. No financial constraint will keep a student from participating if they have a desire. All we ask of the students is to be ready to open and expand their minds. We hope that students will emerge from InnoWorks with a greater appreciation for science engineering, and medicine and better equipped with effective learning skills and confidence for life.

Mentors and Staff

The InnoWorks executives, mentors, and staff are all college students who volunteer their time for this program. Our mentors are from diverse backgrounds and undergo extensive training (National Training Summit) in preparation to mentor our InnoWorkers. All volunteers gain valuable interpersonal, teaching, leadership and entrepreneurial skills through opportunities with InnoWorks. The "students teaching students" idea is a unique characteristic of InnoWorks as it redefines the teacher-student relationship. College students are ideal mentors - the InnoWorkers can relate to them on a very personal level through common goals of learning. We are all explorers of the wonderful world of science, engineering and medicine.



Chris T. of Durham, NC proudly displays a trophy he earned. Trophies are awarded to all participants that complete the program, with top teams and individuals receiving special prizes for performance on competitive missions, group presentations, and reflective questions. We encourage all students to reach and redefine their highest potential.