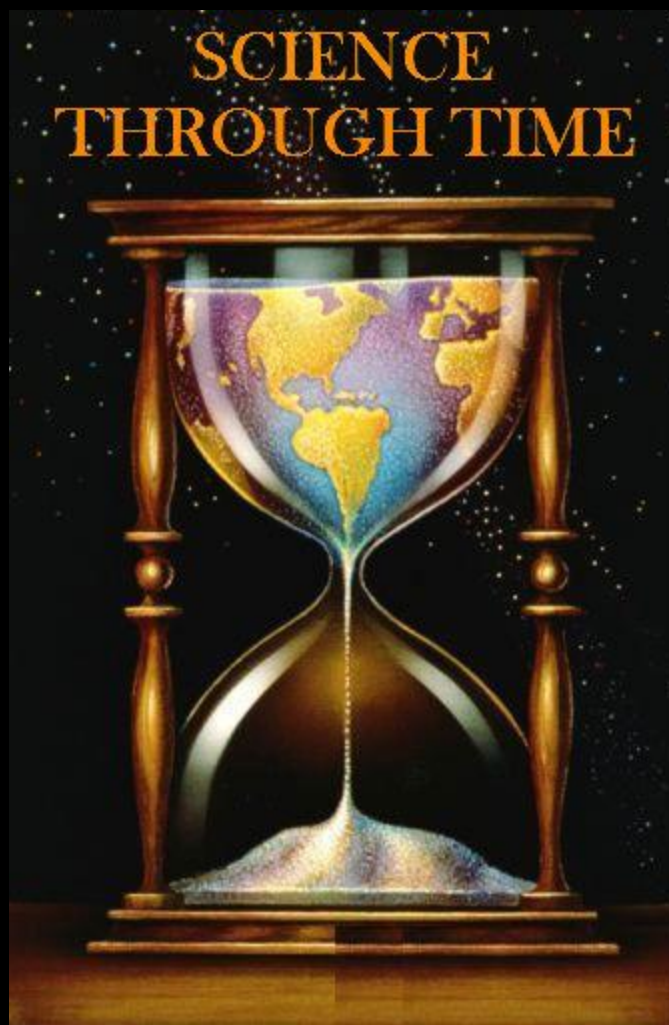


This summer,
students aged 11-14 will experience...



SENSING OUR WORLD 2011
June 20-24, 2011
at The University of Notre Dame

Sponsored by The Siemens Foundation

<http://www.nd.edu/~nismec/SOW.pdf>

PROGRAM ACTIVITIES

In previous years, students learned how devices such as sound and motion detectors work, and learned about polymers, cryogenics, and electrical generators. The 2008 program -- *Sensing Our World in Color* -- incorporated optics and art, while the ecological theme for the 2009 program was *Sensing Our World Go GreenND!* Last year, 2010, we focused on global health issues. Students learned about the potential for large-scale epidemics of infectious diseases, and the growing awareness and importance of addressing the healthcare needs of the whole developing world.

This year's **Sensing Our World: Science Through Time** program will explore themes from Earth's past, present, and future in biology, physics, chemistry, mathematics, and geology. Scientific processes occur on time scales from nanoseconds to eons. In the blink of an eye, cells can divide and a hummingbird can flap its wings almost 90 times! At much lengthier time scales, continents move and animals go extinct, like the dinosaurs. Scientists often look to the past to understand the world today. Also, by understanding current processes and trends, they make predictions about the future.

The week will involve hands-on science, including exploring the structure of skeletons at the Museum of Biodiversity, immersing ourselves in nature to understand the complexities of ecosystems, and tackling issues related to climate change -- such as, what should we do for polar bears if all the sea ice melts? We hope you'll join professors and graduate students during this exciting week on the campus of Notre Dame, so complete the application today!

Classes will be held at the Notre Dame campus Monday through Friday, from 9:00 a.m. to 4:00 p.m. Activities include meeting with ND scientists to learn about their research, and visits to several different academic departments and research labs on campus.

We expect a large response to the summer program, so please read through the instructions carefully. The deadline for applications is May 13, 2011. Applications are reviewed by a selection committee, and students will be admitted to the week's hands-on science exploration program. Selection notices will be e-mailed to students by June 1, 2011.

SPONSORS

Sensing Our World 2011: Science Through Time is supported and sponsored by

- **The Siemens Foundation**

- The Northern Indiana Science, Mathematics, and Engineering Consortium (NISMEC)
- The Joint Institute for Astrophysics (JINA) and the Nuclear Structure Laboratory
- The Department of Biological Sciences
- The Department of Physics
- The College of Science

INSTRUCTORS

Program instructors include faculty, staff, and graduate students from Physics, Chemistry, Mathematics, Biological Sciences, and Engineering departments at ND. Lead Instructor Peter Levi has taught ecology courses to students at all levels, from kindergarten through college undergraduates. This is his third year as Instructor for *Sensing Our World*, and Peter brings a passion for experiential education along with a wealth of classroom experience to program. His teaching experience includes being an assistant director and lead instructor at Ferry Beach Ecology School in Saco, Maine, and field instructor at Newfound Harbor Marine Institute on Big Pine Key, Florida. Peter's teaching philosophy involves hands-on immersion for each student and the use of multiple educational methods to suit all learning styles. He is currently finishing his doctorate degree in stream and river ecology at the University of Notre Dame.

APPLICATION DEADLINE: FRIDAY - MAY 13, 2011

***** DOWNLOAD APPLICATION MATERIALS*****

SEND TOGETHER: [Application Form](#) [Parent/Legal Guardian Permission](#) (+Student's Letter of Interest)

TO BE SENT SEPARATELY: [Teacher Recommendation Form](#)

The program fee is \$200.00. *Financial assistance is available for those who qualify.* To request financial aid, please write a letter supporting the student's need for assistance and include it with the application.

DO NOT SEND PAYMENT WITH THE APPLICATION FORM.

Selection is based upon a completed application that includes a brief statement (any format) submitted by the student describing the reasons for wanting to participate in the program, as well as a recommendation from a math or science teacher.

Grade point average is not used as a criterion.

GOALS

Sensing Our World is designed to expose middle-school students to the exciting world of science, mathematics, and technology in an intensive hands-on environment.

STRUCTURE

The program operates during five weekdays in summer from 9 a.m. to 4 p.m. with a one-hour lunch break. All interested students aged 11-14 are eligible to apply.

ACTIVITIES

The lessons of *Sensing Our World* are designed to align with the Federal Education Standards for the middle school-level student. Hands-on experiments and lecture demonstrations are employed.

EVALUATION

Each student will receive a manual containing explanations and supplementary background information about all labs and projects, as well as resource materials. A pre-test and post-test are administered for each session. The pre-test informs the instructors about each student's scientific background, which assists in tailoring the session content and level. The post-test gives a quantitative evaluation about the student's progress over the course of the week. A concluding open-ended questionnaire is used to assess the student's impressions about the program.

The program concludes with a science fair and student symposium to which family and friends, ND faculty, students, and staff are invited.

Links to photos of previous 'Sensing Our World' programs

- Sensing Our World [2010](#): Global Health Science Program
- [2009](#) Sensing Our World Go Green**ND**
- [2008](#) Sensing Our World in **Color**
- [2007](#) Sensing Our World