

Sensing Our World 2012



Global & Public Health Summer Science Program for middle school students

July 9 through 13, 2012

www.nd.edu/~nismec/SOW.pdf

Sponsored by The Siemens Foundation and
The University of Notre Dame (NISMEC)

Sensing Our World is a week-long summer program that is designed to expose middle school students to the exciting world of science, mathematics, and technology. Participants meet with various scientists to learn about their research, visit different academic departments and research labs on campus, meet with various scientists to learn about their research, and learn through intensive hands-on activities. Program instructors include Notre Dame faculty, staff, and graduate students from Physics, Chemistry, Mathematics, Biological Sciences, and Engineering departments. Our Lead Instructor, Adam Lamm, is a Notre Dame graduate who is now an MD Candidate at Case Western Reserve University, School of Medicine.

PROGRAM ACTIVITIES

This 7th annual **Sensing Our World** program will explore Public Health, which is the science of protecting and improving the health of communities through education, promotion of healthy lifestyles, and research for disease and injury prevention. Public health professionals analyze the effect on health of genetics, personal choice and the environment in order to develop programs that protect the health of community members.

Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country. International health professionals address health concerns among different cultures in countries worldwide.

The week will involve hands-on science including computer simulations, robotics, and laboratory techniques such as studying metabolism using calorimetry to see how much energy common food items contain.

We hope you'll join us during this exciting week on the campus of Notre Dame, so complete the application today! Classes will be based at Jordan Science Hall, Monday through Friday, from 9:00 a.m. until 4:00 p.m. each day. The program concludes with a student symposium to which family and friends, ND faculty, students, and staff are invited.

We expect a large response to the summer program, so please read through the instructions carefully. The deadline for applications is May 15, 2012. Applications are reviewed by a selection committee, and twenty students will be admitted to the week's hands-on science exploration program. Selection notices will be e-mailed to students by June 1, 2012.

APPLICATION DEADLINE: FRIDAY - MAY 15, 2012

*****APPLICATION MATERIALS ARE AVAILABLE ONLINE*****

SEND TOGETHER: [Application Form](#)

Student's Letter of Interest (any format)

[Parent/Legal Guardian Permission Form](#)

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

The program fee is \$250.00. *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.

SPONSORS

Sensing Our World is supported and sponsored by **The Siemens Foundation**, along with Northern Indiana Science, Mathematics, and Engineering Consortium (NISMEC), and

- The College of Science
- The College of Engineering
- The Department of Biological Sciences
- The Department of Chemistry
- The Department of Physics