

INDIANA JUNIOR ACADEMY OF SCIENCE

Report for 2008
Submitted November 14, 2008

Approximately 140 students and teachers representing 11 schools attended the annual fall meeting of the Indiana Junior Academy of Science held at Indiana University Bloomington on November 7, 2008.

The day started with an Opening Ceremony where Mr. Kaleb Naegeli, an undergraduate student in the IU Science, Technology, and Research Scholars Program gave a research talk on "Divergent Changes in microRNA Expression in Ovarian Cancer Cells by Two Different Histone Deacetylase Inhibitors".

Just after lunch, Mr. James Clark captured the attention of all in the audience at the Chemistry Magic Show.

The following seven activities comprise the major portion of the Junior Academy meeting:

1. *The Problem Solving Exam*

This exam provides students with a fun and meaningful exercise in scientific knowledge and problem-solving skills. Two students from each school who are selected by their sponsoring teacher take the exam. Plaques are awarded to the top two individual winners and certificates are given to the students who placed 3rd & 4th.

This year's winners were:

Individual Students

- 1st Place – Samuel Leung, Marian High School (72)
- 2nd Place – Blane Lawyer, North Davies High School (69)
- 3rd Place – Zachary Schmidt, Northwestern High School (68)
- 4th Place – Ashley Nagel, Indiana Academy (65)
- 5th Place – Derek Springer, Indiana Academy (64)

Top Schools – From each school, their two students' scores are combined and the top school is recognized.

- 1st Place – 135 Points: Marian High School
- 2nd Place – 132 Points: North DaviessHigh School
- 3rd Place – 129 Points: Indiana Academy

2. *The Issues Presentation Competition*

This competition encourages students to learn about the political, social, and scientific issues surrounding the selected topic. This year, the topic was "**Global Warming: Real or Not?.**"

Each competitor gives a five minute presentation on the topic without the use of visual aids. The students are judged by a panel of peers, and the finalists are then judged by a panel of undergraduate students. A plaque is awarded to the top two students, all finalists receive a certificate.

This year's finalists were:

Rachel Dalton, Eastern High School
Nicholas Heshelman, North Daviess High School
Chase Kootz, Indiana Academy
Emily Schubert, Northwestern High School

This year's winner was:

Rachel Dalton, Eastern High School

3. *Science Olympiad Competition*

This year we held one Science Olympiad competition called "Science Word." Team members took turns giving verbal clues to scientific terms and concepts from all across science disciplines while their partner tried to identify them. The most successful Science Word teams were:

Winners were:

1st Place – Andrew Townsend & Siyun Xie, Indiana Academy
2nd Place – Grant Manon & Gabe Stephens, East Noble High School
3rd Place – Matt Miller & Stephen Chou, Northwestern High School
4th Place – Hillary Kaub & Jenn Weinschenk, Noblesville High School
5th Place – Shannon Sacksteder & Paige Kirkland, Eastern High School

4. *The Research Paper Competition*

This competition allows students who have carried out an original scientific investigation the opportunity to present their work publicly. Students who wish to compete in this event submit an abstract of their work to the IJAS Director in early October. The abstracts are reviewed by a panel of impartial judges, and twelve student finalists are selected. At the IJAS meeting, these students give a 10-minute poster presentation to a panel of judges who evaluate them on originality, research procedures, and presentation skill. The second and third place winners receive a plaque. The first place winner receives a plaque and a \$1,000 scholarship from the Hoosier Association of Science Teachers to attend any Indiana College or University.

This year's winners were:

1st Place – 477.5 points: Kyla Garrett, Noblesville High School
2nd Place – 466.0 points: Janelle Thixton, Eastern High School
3rd Place – 457.5 points: Karson Merrell, Northwestern High School
4th Place – 444.5 points: Emily Schubert, Northwestern High School
5th Place – 433.5 points: Ryan Newlon, Northwestern High School
6th Place – 415.5 points: Paige Kirkland, Eastern High School
7th Place – 410.0 points: Kathryn Merkling, East Noble High School
8th Place – 404.5 points: Brianna Morris, Eastern High School
9th Place – 379.5 points: Kelsey Ploof, Noblesville High School
10th Place – 358.5 points: Robert Wilson, North Daviess High School
11th Place – 329.0 points: Stephanie Simpson, Noblesville High School
12th Place – 284.5 points: Michael Hunckler, Marian High School

5. ***The Outstanding Junior Scientist Competition***

This event recognizes those students who are exemplary in overall scholarship as well as scientific ability and achievement. Each school may nominate two students for this competition. The top ten nominees are then selected to compete at the IJAS meeting, where they are interviewed by a panel of judges. The Outstanding Junior Scientist is selected based upon his/her academic record, involvement in original research and extracurricular scientific activities, and the interview. The second and third place winners receive plaques and the Most Outstanding Junior Scientist receives a plaque and a \$1,000 scholarship from the Indiana Academy of Science to attend any Indiana College or University.

This year's winners were:

- 1st Place – 166.50 points: Janelle Thixton, Eastern High School
- 2nd Place – 128.45 points: Emily Schubert, Northwestern High School
- 3rd Place – 120.72 points: Sean Hendricks, Marian High School
- 4th Place – 117.65 points: Brianna Morris, Eastern High School
- 5th Place – 112.87 points: Meelyn Pandit, Noblesville High School
- 6th Place – 109.00 points: Lauren Jessup, Marian High School
- 7th Place – 107.92 points: Kyla Garrett, Noblesville High School
- 8th Place – 106.45 points: Blane Lawyer, North Daviess High School
- 9th Place – 92.95 points: Ryan Newlon, Northwestern High School

6. ***The Outstanding School Award***

The Outstanding School Award is given to the school with the most participation points. To calculate this score, credit is given for every abstract submitted, more credit for those abstracts accepted for the Research and for Outstanding Junior Scientist competitions, and finally for rank scores for the top presentations. Each school received credit for entering students in the Issues Competition, for having a judge at the Issues presentations, and for entering students in the Problem Solving Exam. More credit was given to the winners.

The top three schools and the teachers representing them today are:

- 1st Place – 47 points: Northwestern High School
- 2nd Place – 44 points: Eastern High School
- 3rd Place – 33 points: Noblesville High School
- 4th Place – 29 points: Marian High School
- 5th Place – 24 points: North Daviess High School

7. ***Educational Tours***

Educational tours of the ***Chemistry, Kirkwood Observatory, Flow Cytometry Sorter, Greenhouse, Light Microscopy Imaging, and the IU Art Museum*** were given in the morning to give all students attending an opportunity to get an up-close and personal look at some of the great research and other opportunities the IU Bloomington campus has to offer.