

INDIANA JUNIOR ACADEMY OF SCIENCE

Report for 2006
Submitted November 14, 2006

Approximately 152 students and teachers representing 13 schools attended the annual fall meeting of the Indiana Junior Academy of Science held at Indiana University Bloomington on November 13, 2006.

The day started with an Opening Ceremony where an undergraduate student in the IU Science, Technology, and Research Scholars Program gave a research talk on the "Abnormal Basal Ganglia Output in a Mouse Model of Huntington's Disease".

Biotechnology was the focus of our keynote speaker, Dr. Nancy Magill who addressed the students just after lunch.

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 – Bryan Foster, East Noble High School
- 2nd Place – David Yang, Brebeuf Jesuit High School
- 3rd Place – Jonathan Bell, Snider High School
- 4th Place – Matthew Lash, East Noble High School
- 5th Place – John Parish, Brebeuf Jesuit High School
- 6th Place – Emily Cook, Marian High School
- 7th Place – Nicholas Buesking, Northwestern High School
- 8th Place – Tyler Newton, Seymour High School
- 9th Place – Matthew Burkhardt, Lewis Cass High School
- 10th Place – Brittany Gookins, Noblesville High School

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

- 1st Place – East Noble High School

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 "**Coal-fired or Nuclear? Discuss the environmental ramifications of each type of power plant and identify which you would consider a safer neighbor.**" 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 winners were:

- 1st – Emily Schubert, Northwestern High School
- 2nd – Esther Volmer, Christian Academy of Indiana
- 3rd – Paul Baranay, Marian High School
- 4th – Blane Lawyer, North Daviess High School
- 5th – Jessica Jackson, Eastern High School

3. *Science Olympiad Competition*

This year we held one Science Olympiad competition called "Road Scholar" where students were tested on their knowledge of map reading.

Winners were:

- 1st Place – Andi Judt & John Lash, East Noble High School
- 2nd Place – Michael Vas & Blake Merrell, Northwestern High School
- 3rd Place – Melissa Baranay & Mark Fraser, Marian High School
- 4th Place – Thomas Curtis & Andrew Bergman, Noblesville High School
- 5th Place – David Yang & John Parish, Brebeuf Jesuit 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 thirteen 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:

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| 1 st Place | Sara Niedbalski, Marian High School |
| 2 nd Place | Jonathan Bell, Snider High School |
| 3 rd Place | Nyssa Boyd, Eastern High School |
| 4 th Place | (tie) Paul Baranay, Marian High School
Jessica Jackson, Eastern High School |
| 5 th Place | Janelle Thixton, Eastern High School |
| 6 th Place | Colleen Courtney, Paoli High School |
| 7 th Place | Allison Lange, Noblesville High School |
| 8 th Place | Melissa Baranay, Marian High School |
| 9 th Place | Shawna Doty, Christian Academy of Indiana |
| 10 th Place | Aaron Martinson, Northwestern High School |
| 11 th Place | Edie Uyesugi, Paoli 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:

1 st Place	152.3 pts	Sara Niedbalski, Marian High School
2 nd Place	137.46 pts	Jonathan Bell, R. Nelson Snider High School
3 rd Place	137.06 pts	Paul Baranay, Marian High School
4 th Place	117.53 pts	Allison Lange, Noblesville High School
5 th Place	109.56 pts	Colleen Courtney, Paoli High School
6 th Place	107.90 pts	Stacy Vosters, North Daviess High School
7 th Place	107.86 pts	Nyssa Boyd, Eastern High School
8 th Place	102.53 pts	Edie Uyesugi, Paoli High School
9 th Place	87.16 pts	Jessica Jackson, Eastern High School
10 th Place	82.7 pts	Shawna Doty, Christian Academy of Indiana

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:

1 st Place	48 pts.	Marian High School
2 nd Place	33 pts.	Eastern High School
3 rd Place	24 pts.	Northwestern High School

7. *Educational Tours*

Educational tours of the *Psychological and Brain Sciences, Molecular Structure Center, Lilly Library, Electron Microscope, Greenhouse, Kinesiology, and Applied Physics* 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 opportunities the IU Bloomington campus has to offer.