

# INDIANA JUNIOR ACADEMY OF SCIENCE

Report for 2004  
Submitted November 14, 2004

Over 180 students and teachers representing 12 schools attended the annual fall meeting of the Indiana Junior Academy of Science held at Indiana University Bloomington on November 8, 2004.

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. A plaque are awarded to the top individual winner and certificates are given to the students who placed 2<sup>nd</sup> -5<sup>th</sup>.

This year's winners were:

### Individual Students

- 1<sup>st</sup> Place – Mason Smith, Indiana Academy of Science
- 2<sup>nd</sup> Place – Fernando Sha, Indiana Academy of Science
- 3<sup>rd</sup> Place (tie) - Peter Koerner, East Noble High School
- 3<sup>rd</sup> Place (tie) –Deanna Linda, Marian High School
- 4<sup>th</sup> Place (tie) – Clayton Ahlemeyer, North Davies High School
- 4<sup>th</sup> Place (tie) – Bryan Foster, East Noble High School
- 5<sup>th</sup> Place (tie) – Caleb Laux, Marian High School
- 5<sup>th</sup> Pleace (tie) – Caaminee Pandit, Noblesville High School

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

- 1<sup>st</sup> Place – Indiana Academy of Science
- 2<sup>nd</sup> Place – East Noble High School
- 3<sup>rd</sup> Place – Marian High School
- 4<sup>th</sup> Place (3-way tie)– North Daviess High School
- 4<sup>th</sup> Place – (3-way tie) --Noblesville High School
- 4<sup>th</sup> Place – (3-way tie) --Warren Central 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 "Drug companies, now more than ever, are advertising drugs on television to increase their sales by encouraging patients to "ask their doctor" if "DRUG X" is right for them. So, when it comes to ailments ranging from sore throats, heart disease, to cancer, the prescription of certain drugs has become common practice with both positive and negative effects. Who is responsible for monitoring the proper use of, or drawing the line for the prescription of, these drugs? The patients, the doctors, or the drug companies??" 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 winning student.

This year's winners were:

- 1<sup>st</sup> – Emily Drabek, Eastern High School
- 2<sup>nd</sup> – Andrea Melcher, Northwestern High School

3<sup>rd</sup> – Sondra Lynn, North Daviess High School

4<sup>th</sup> – Paul Baranay, Marian High School

### **3. Science Olympiad Competitions**

This year we held two Science Olympiad competitions. In the morning session, the students competed in the "Write It, Do It" event and were tested on their communication skills. In the afternoon session, the students competed in the "Genetics Ethics" event.

Write It, Do It winners were:

1<sup>st</sup> Place – Northwestern High School

2<sup>nd</sup> Place – Warren Central High School

Genetics winners were:

1<sup>st</sup> Place – Marian High School

2<sup>nd</sup> Place – North Daviess 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:

1 <sup>st</sup> Place	Benjamin Brewer, Eastern High School
2 <sup>nd</sup> Place	Angie Sells, Eastern High School
3 <sup>rd</sup> Place	Tiffany Ko, Terre Haute South Vigo High School
4 <sup>th</sup> Place	Patrick Kibbe, Marian High School
5 <sup>th</sup> Place	Jessica Walter, Noblesville High School
6 <sup>th</sup> Place	Blake Merrell, Northwestern High School
7 <sup>th</sup> Place	Caaminee Pandit, Noblesville High School
8 <sup>th</sup> Place	Andrea Melcher, Northwestern High School
9 <sup>th</sup> Place	Cassie Palmer, Marian High School
10 <sup>th</sup> Place (tie)	Stephen Baranay, Marian High School
10 <sup>th</sup> Place (tie)	Ester Volmer, Christian Academy of Indiana
11 <sup>th</sup> Place	Michael Vas, Northwestern High School
12 <sup>th</sup> Place	Clayton Carr, Christian Academy of Indiana

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### **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 <sup>st</sup> Place	138.9	Kaleb Naegeli, Northwestern High School
2 <sup>nd</sup> Place	131.3	Emily Drabek, Eastern High School
3 <sup>rd</sup> Place	130.8	Benjamin Brewer, Eastern High School
4 <sup>th</sup> Place	129.2	Tiffany Ko, Terre Haute South Vigo
5 <sup>th</sup> Place	125.0	Melissa Hartman, Northwestern High School
6 <sup>th</sup> Place	124.2	Patrick Kibbe, Marian High School
7 <sup>th</sup> Place	114.8	Rebecca Holland, Marian High School
8 <sup>th</sup> Place	114.5	Tanya Van Skyock, Warren Central High School
9 <sup>th</sup> Place	108.2	Kent Ballard, Christian Academy of Indiana
10 <sup>th</sup> Place	105.8	William Callahan, North Daviess 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:

1 <sup>st</sup> Place	Eastern High School
2 <sup>nd</sup> Place	Northwestern High School
3 <sup>rd</sup> Place	Marian High School

### 7. *Educational Tours*

Educational tours of the *Axoltil Colony, Chemistry NMR, Molecular Structure Center, & Glass Blowing Shop, IU Seismology Station, Greenhouse, Telecommunications/Radio & TV, Speech & Hearing Sciences* were given twice during the day 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.

Many thanks to the following people for their assistance in making this annual meeting go so smoothly:

***Ms. Jocelyn Bowie, Director***

Office of Recruiting  
College of Arts & Sciences  
Writing the Problem Solving Exam

***Dr. Allan Gutstadt, Professor Emeritus***

California State University  
Geology  
OJS Judge

***Dr. Diane Henshel, Faculty***

IU School of Public and Environmental Affairs  
Research Judge

***Dr. Katy Pilachowski, Faculty***

IU Astronomy Department  
OJS Competition

***Dr. Joseph Near***

IU Medical Sciences  
Abstract Judge

***Dr. David Kehoe***

IU Biology Department  
Abstract Judge

***Dr. Jill Robinson***

IU Chemistry Department  
Abstract Judge

***Dr. Randy Arnold***

IU Chemistry Department  
OJS Competition

**Dr. Roger Innes**  
IU Department of Biology  
Abstract Judge

**Dr. Steve Wietstock**  
IU Department of Chemistry  
Research Judge

**Dr. Billy Rhoades, Faculty Emeritus**  
IU Department of Mathematics  
OJS Judge

**Dr. Joe Farley**  
IU Department of Psychology  
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Issues Judge

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**Dr. Lee Swem**  
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**Dr. Viola Ellison**  
IU Biology Department  
OJS Judge

**Mr. Michael Ischay**  
IU STARS Program  
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**Mr. Alejandro Miranda**  
IU STARS Program  
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**Mr. Anshuman Das**  
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**Mr. John Quasebarth**  
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