

INDIANA JUNIOR ACADEMY OF SCIENCE

Report for 2013

Over 100 students, teachers, and parents representing ten schools attended the annual fall meeting of the Indiana Junior Academy of Science held at Indiana University Bloomington on November 4, 2013.

Mr. Benjamin Seitzman, IU STARS Scholar gave a keynote address titled “*Cognitive Manipulation of Brain Electric Microstates*” that was very well received by the students and teachers. Five competitions and tours of Chemistry, Kirkwood Observatory, Speech & Hearing Sciences and 3D Printer Lab & Demo filled out the remainder of the day followed by the awards ceremony. A brief description and a list of winners for each are outlined below.

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 were awarded to the top two students and certificates were awarded to the 3rd & 4th place students.

This year’s winners were:

- 1st Place – Justin Skycak, Marian High School**
- 2nd Place – Christian Dennis, Marian High School
- 3rd Place – Jordan Cadle, Paoli Jr-Sr High School
- 4th Place – Drew Johnson, Noblesville 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 “*Should the world focus on exploring our oceans more than outer space?*” Each competitor gave a five minute presentation on the topic without the use of visual aids. The students were judged by a panel of peers in the morning session and judged by a panel of undergraduate students from the IU Science, Technology, and Research Scholars Program. Plaques were awarded to the top two students, all finalists received a certificate.

This year’s finalists were:

- Gabriella Lucchese, Marian High School
- Caitlin Chestnut, North Daviess High School
- Conner Miller, Northwestern High School
- Hannah Thill, Paoli Jr-Sr High School

1st Place – Caitlin Chestnut, North Daviess High School

- 2nd Place – Conner Miller, Northwestern High School

3. Science Olympiad Competition

This year we held one Science Olympiad competition called “Oceanography.” Two students from each school were allowed to participate. Students tested their knowledge and used process skills to complete tasks related to physical and geological oceanography. Certificates were given to the teams with the 2nd, 3rd, and 4th highest scores and plaques were awarded to the top scoring team.

This year’s winners are:

- 1st Place – Rishabh Kumar and Rushi Patel, Carmel High School**
- 2nd Place – Nathan Chou and Taylor McLain, Northwestern High school
- 3rd Place – Adam Bennett and Eric Buedel, Evansville Harrison High School
- 4th Place – Wyatt Shafer and Alex Stuffle, 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 to a panel of judges. Students who wish to compete in this event submit an abstract of their work to the IJAS Director in early October. Twenty-five abstracts were submitted for review and the top twelve finalists were selected by a panel of impartial abstract judges from IU Bloomington. The top twelve

finalists all received a \$25 cash award from the Indiana Academy of Science. At the IJAS meeting, the finalists 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 received a plaque. The first place winner received 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 – 369.5 points: Jordan Cadle, Paoli Jr-Sr High School**
- 2nd Place – 355.5 points: Josh Jarrett, Northwestern High School
- 3rd Place – 354.0 points: Asmaa Mahoui, Eman Schools
- 4th Place – 345.0 points: Pete Freeman, Noblesville High School
- 5th Place – 334.0 points: Bridget VerVaet, Marian High School
- 6th Place – 330.5 points: Rachel Johns, Northwestern High School
- 7th Place – 324.5 points: Nicole Woodruff, North Daviess High School
- 8th Place – 323.5 points: Rishabh Kumar, Carmel High School
- 9th Place – 322.5 points: Kristen Pimley, Noblesville High School
- 10th Place – 317.0 points: Justin Skycak, Marian High School
- 11th Place – 297.0 points: Taylor McLain, Northwestern High School
- 12th Place – 294.5 points: Alexander Yu, Carmel High School

5. 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 and Science Olympiad Competition. More credit was given to the top five winners.

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

- 1st Place – 40 points: Marian High School, Mr. Ken Andrzejewski**
- 2nd Place – 36 points: Northwestern High School, Mrs. Linda Wilson
- 3rd Place – 28 points: Carmel High School, Mrs. Jennifer Marlow

6. 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 top ten finalists received a \$25 cash award from the Indiana Academy of Science. The second and third place winners received plaques and the Most Outstanding Junior Scientist received 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 – 305.0 points: Jordan Cadle, Paoli Jr-Sr High School**
- 2nd Place – 295.1 points: Justin Skycak, Marian High School
- 3rd Place – 293.4 points: Pete Freeman, Noblesville High School
- 4th Place – 285.4 points: Sharmilla Paul, Carmel High School
- 5th Place – 270.6 points: Braden Lawyer, North Daviess High School
- 6th Place – 264.9 points: Lauren Ward, Northwestern High School
- 7th Place – 255.3 points: Bridget VerVaet, Marian High School
- 8th Place – 248.5 points: Caitlin Chestnut, North Daviess High School
- 9th Place – 229.2 points: Rachel Johns, Northwestern High School
- 10th Place – 225.7 points: Kamna Gupta, Carmel High School