

# Journal of the Minnesota Academy of Science

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## Front Matter

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# Journal of the Minnesota Academy of Science

Spring 2004

Vol. 68

**Minnesota Academy of Science**

*Promoting Excellence in Science Since 1873*

[www.mnacadsci.org](http://www.mnacadsci.org)



The Minnesota Academy of Science, founded in 1873, is a statewide organization committed to promoting interest in and appreciation of science. We do this by encouraging and facilitating excellence in science and science education at all levels, sponsoring programs and activities for science students, science teachers, scientists, and other interested adults. Our programs are funded through Registration fees, Annual Membership dues, Corporate sponsors and grants, and donations from people like you. Our many programs consist of Team Competitions and individual paper and project competitions. Awards are given for all programs, and can include advancement to National competitions around the US.

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## MISSION STATEMENT

The Minnesota Academy of Science is committed to promoting interest in and appreciation of science among the citizens of Minnesota, encouraging and facilitating excellence in science and science education at all levels, and fostering active and integrated participation in scientific inquiry.

## ACTIVITIES PROMOTING SCIENCE . . .

### **ANNUAL MEETING**

The Annual Meeting of the Academy provides the opportunity for individuals involved in science in Minnesota to meet their colleagues and to hear or present the results of research with a regional emphasis. The meeting location is rotated throughout the state.

### **JOURNAL OF THE MINNESOTA ACADEMY OF SCIENCE**

Members receive this publication featuring research in all scientific disciplines and reports on statewide and regional academic and industry activities.

### **JUNIOR SCIENCE AND HUMANITIES SYMPOSIUM**

*Sponsored by U.S. Air Force, Army and Navy.*

At this Symposium, high school students from Minnesota and the Dakotas present the results of their scientific research in a formal presentation to over 250 students, teachers and judges. The five top research paper presenters receive an expense paid trip to the National Junior Science and Humanities Symposium.

### **RESEARCH AND ENGINEERING**

#### **APPRENTICESHIP**

The Minnesota Academy of Science coordinates the placement of two students in a college/university so that they may conduct scientific research. Both the student and at the host receive a stipend.

### **SCIENCE OLYMPIAD**

A great opportunity for school teams to compete in events which require team work, group planning, cooperation, process and thinking

skills, scientific applications and technology. Twenty-five events including egg drop, tower building, water quality and wheeled vehicles. The winning team represents Minnesota at the University of Chicago.

### **SCIENCE BOWL**

Four person teams from high schools in Minnesota, compete in a College Quiz Bowl format. The questions for this event are from all fields of science and math. The winning team receives an expense paid trip to compete at the National Science Bowl sponsored by the U.S. Department of Energy.

### **STATE SCIENCE FAIR**

*Sponsored by Seagate Technology*

The Academy coordinates the State Science Fairs in the nine regions of Minnesota. From approximately 2,500 participants (selected from 25,000 local competitors), 450 are selected to present their projects at the Minnesota Academy of Science State Fair, which is held in the Twin Cities each year. At the fair, more than 100 organizations and businesses present scholarships and awards to students with outstanding projects and research papers. Thirty-three students receive expense-paid trips to compete at the International Science and Engineering Fair in May of each year.

### **WINCHELL UNDERGRADUATE RESEARCH SYMPOSIUM**

Awards are given to the best undergraduate research papers presented at The Minnesota Academy of Science Annual meeting.

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