"A child is a person who is going to carry on what you have started. He is going to sit where you are sitting, and when you are gone, attend to those things which you think are important. You may adopt all the policies you please, but how they are carried out depends on him. He will assume control of your cities, states and nations. He is going to move in and take over your churches, schools, universities and corporations...the fate of humanity is in his hands."

Abraham Lincoln

The mission of the Illinois Mathematics and Science Academy, a community of scholars dedicated to intellectual exploration, is to develop leaders who know the joy of discovering and forging interconnections among mathematics, science, the arts and the humanities, and who, by example and by instruction, inspire others to live in harmony with themselves, other human beings and the physical world.

Belief Statements

We believe that:

- meaning is discovered, not prescribed.
- all individuals have equal intrinsic worth.
- all people have an innate desire to learn.
- the power of the human mind is the world's greatest resource.
- every individual is capable of both changing and bringing about change.
- trust is essential for any human relationship to prosper.
- the survival of global civilization depends primarily upon the quality of the education provided to all citizens.
- every person is responsible for his/her own choices and actions.
- belonging to a group implies subordination of self-interests to the common good.
- excellence is worth the effort, but not always worth the cost.
- achieving our vision of the future depends upon our willingness to sacrifice in the present.
- aversion to risk-taking stifles innovation and creativity.
- learning is an individual, life-long endeavor.
- valuable learning results from both failure and success.
- all adults share responsibility for the well-being of all children.
- the ability to discern and create connections is the essence of knowing.
- a good life is harmony among the emotions, the body, the intellect and the spirit.
- the process of education is more than merely the accumulation of facts.
Dear IMSA Shareholders,

On behalf of the board of trustees, faculty, staff, students, parents and alumni of this pioneering educational community, it is our privilege to share with you the sixth annual report of the Illinois Mathematics and Science Academy. The 1991-92 year was indeed a remarkable one for the Academy; we are pleased to report some of the highlights.

Externally, programs for other school systems, teachers and students in Illinois continued to expand. IMSA's impact on the state included helping 23 Illinois school districts restructure their mathematics and science programs, awarding teachers IMPACT II grants to exchange innovative classroom programs, and sponsoring enrichment programs in mathematics and science for hundreds of Illinois students in grades 7-10 (including several programs for minority students).

In addition, IMSA's Center for Problem-Based Learning began training teachers from Chicago and several other Illinois schools in the use of problem-based learning, a system of curriculum, instruction and assessment first developed and tested at IMSA in its award-winning Science, Society and the Future course. This is one example of how the R & D work at IMSA leads to products and services that benefit other schools throughout our state.

Internally, IMSA students continued to excel; faculty continued to pilot and refine innovative curriculum and assessment projects (again, some of these will be shared with other schools); and the school program received high praise from a team of state and national experts in curriculum, instruction, assessment, student development and organizational culture.

Private sector support of IMSA continued to increase, which was especially significant in light of the recessionary economy, and leaders throughout the nation pointed to IMSA as an “exemplar” and model for educational renewal.

As our journey continues, we are heartened by the ever-increasing support IMSA is receiving from leaders in government, education, the business/corporate world and members of the general public. As shareholders of the Illinois Mathematics and Science Academy, all of you play a critical role in our success. Thank you for your outstanding commitment.

Sincerely,

Stephanie Pace Marshall, Ph.D.
Executive Director

James D. Pearson
President, Board of Trustees
1991-92 At A Glance

Fall

▼ A team of national experts in curriculum, instruction, assessment, organizational culture and student development visited IMSA in a unique approach to accreditation approved for IMSA by the North Central Association of Schools and Colleges. The team’s report, released later in the year, praised IMSA for its vision and strategic plan accomplishments.

▼ World-renowned astrophysicist Dr. Carl Sagan gave the inaugural James R. Thompson Leadership Lecture. The lecture, entitled “Comets and the Origin of Life,” was attended by more than 1,500 guests from throughout Illinois.

▼ The National Merit Scholarship Corporation announced that 62 members of IMSA’s Class of 1992 (35%) qualified as semifinalists in its annual competition.

Winter

▼ IMSA hosted a visit by Dr. Elena Lenskaya and Dr. Victor Bolotov, senior officials from the Department of the Ministry of Education in Russia. IMSA was the only school in the nation selected to be part of this official state visit.

▼ IMSA and the Duke Ellington School of the Arts in Washington, D.C., were named co-beneficiaries of a $250,000 Congressional grant to the Smithsonian Institution to develop and test curriculum models that integrate mathematics, science, the arts and humanities.

▼ The Grainger Foundation of Skokie awarded IMSA a grant valued at $325,000 to construct and operate an inventors’ workshop for students to “tinker” and build equipment needed for their research.

▼ IMSA’s problem-based Science, Society and the Future course was named one of 25 national winners of The Executive Educator’s “Profiles in Excellence” award for innovative instruction.

Spring

▼ IMSA convened an invitational national conference on problem-based learning in May at the internationally-renowned Wingspread Conference Center in Racine, Wisconsin. Experts in problem-solving, ethics, assessment, teaching, curriculum, and science and mathematics attended.
Executive Director Dr. Stephanie Pace Marshall assumed the presidency of the Association for Supervision and Curriculum Development (ASCD) in April, the largest educational leadership organization. She was elected to this position by the international membership.

A team of 15 students won the 1992 Illinois Science Olympiad state championship in April. That same month, a group of 29 students won the 1992 Illinois Council of Teachers of Mathematics State Math Contest.

Seven students presented their research at the Sixth National Conference on Undergraduate Research at the University of Minnesota in Minneapolis. IMSA was the only high school in the country invited to participate.

IMSA held the inaugural Richard L. Horwitz Lecture on Ethics, named in memory of the Academy’s first legal counsel. Dr. Martin E. Marty of the University of Chicago’s Divinity School was guest speaker.

In June, IMSA held its annual Leadership Conference focusing on quality management in schools. The conference was attended by 240 members of 19 District Learning Leadership Teams involved in the IMSA/Motorola University systemic change initiative for school districts.

IMSA proudly graduated its fourth senior class, the Class of 1992. Dr. Florence Haseltine, director of the Center for Population Research at the National Institutes of Health, Bethesda, Maryland, gave the commencement address.

A total of 180 Illinois students in grades 7-10 attended the Academy’s Summer 'AD' Ventures in Mathematics, Science and Technology program.

IMSA held its first Summer Challenge program for 120 minority students from Chicago, East St. Louis and Joliet. The students spent a week at IMSA studying the thorium waste problem in West Chicago.

Students in IMSA’s award-winning Science, Society and the Future course explore the role science plays in criminal investigations.
As a research and development laboratory for Illinois education, IMSA designs and tests new academic programs and teaching methods that benefit its students and others throughout the state.

In 1991-92, IMSA continued to serve Illinois school systems, teachers and students in a variety of ways. The number and diversity of external programs expanded, strengthening IMSA's position as a state and national resource for mathematics and science education, problem-based learning and educational change. Examples of IMSA's external initiatives included:

**IMSA's Impact Felt Statewide**

**IMPACT II: Teacher-to-Teacher Network to Enhance Mathematics and Science Education in Illinois.** Another 252 Illinois teachers joined the IMSA-administered IMPACT II network as recipients of teaching grants that enabled them to share innovative classroom ideas.

**Summer ‘AD’Ventures in Mathematics, Science and Technology.** IMSA welcomed 180 Illinois students, grades 7-10, to its Summer ‘AD’Ventures program. Sessions were held at IMSA and on the campus of Eastern Illinois University in Charleston.

**District Learning Leadership Teams.** IMSA and Motorola University expanded their work with 23 Illinois school district teams involved in a systemic change initiative to restructure their mathematics and science programs. Examples of participating school districts include Joliet Township, Palatine, Alton, East Moline, Savanna, Mt. Vernon and Pekin.

**Center for Problem-Based Learning at IMSA.** The Center provided written materials and training activities in problem-based learning for educators in Illinois and throughout the nation.

**Minority Student Programs.** IMSA sponsored school-year and summer enrichment programs for black, Hispanic and economically disadvantaged students in grades 7-9 at three sites in Illinois: Chicago, East St. Louis and Joliet. In addition, IMSA held training sessions for teachers at the program sites.

**Junior Scholars.** A total of 61 seventh and eighth graders from throughout Illinois attended a one-day retreat at IMSA, participating in science and social science activities. Junior Scholars were nominated by the Educational Service Centers based on their outstanding performance on the SAT exam.

**Dr. Carl Sagan’s Lecture.** Teachers in IMSA’s IMPACT II and Summer ‘AD’Ventures programs, along with their principals and student representatives, attended the inaugural James R. Thompson Leadership Lecture at IMSA. In addition, IMSA provided videotapes of Dr. Sagan’s lectures to schools throughout Illinois.

**Project A.S.S.I.S.T. Extension.** IMSA held three training sessions on discovery-based physics and chemistry for 18 teachers from six Illinois high schools.
"As a result of my involvement with IMPACT II, I have gained confidence in my abilities to develop curriculum, thus improving my teaching skills."

Karen Miller, teacher
Dennis Elementary School
Decatur
IMPACT II

"I learned many different ways of approaching problems and solving them. Thanks to this program, problem-solving will be much easier in the years to come."

Krista Thomas, student
St. Thecla School
Chicago
Summer AD'Ventures

TIC Broadcast of Classes. IMSA broadcast several mathematics and science classes to students at several high schools in the Fox Valley.

National Diffusion Network. IMSA hosted six NDN training programs for 41 mathematics, science and technology teachers in grades 1-12.

Teacher Recognition Day. IMSA sophomores honored more than 100 Illinois teachers with the fifth annual "IMSA Award of Excellence," which recognized the special contributions they had made to supporting students' academic, social and personal growth.

Foreign Language Immersion Days. IMSA hosted three foreign language immersion days in French, German and Spanish for 200 students from throughout northern Illinois.

Professional Contributions of IMSA Staff. IMSA faculty and staff gave numerous presentations and workshops at teacher institute days and professional conferences throughout Illinois and the nation.

Classroom Observations. Many educators from throughout Illinois and the nation visited IMSA's campus to observe classes and talk with IMSA faculty about new ways of teaching and learning in mathematics, science and other areas.

"I have learned how to speak in front of a lot of people and how to use scientific materials."

Donald Dowell, student
Clark Junior High School
East St. Louis
IMSA Sloan Challenge
In 1991-92, IMSA moved closer toward its goal of creating an academic program aimed at fostering the development of integrative thinkers. Faculty developed new curriculum and refined existing programs, and piloted additional new ways of assessing student achievement. Examples of new courses focusing on integrative learning included Patterns of Biological Diversity, Mathematical Investigations and Utopia/Anti-Utopia. A total of 116 courses, including 29 in science alone, were offered in 1991-92. In addition, classroom instruction was enriched by field experiences and new technologies such as computer-controlled laser disc workstations.

**Instructional Program**

**Mathematical Investigations.** Students learned how to creatively solve problems by simultaneously using concepts from algebra, geometry and trigonometry. Extensive group work focused on solving complex problem sets in more than one way.

**Sophomore Chemistry.** A pond study project completed early in the year was integrated into other learning experiences throughout the year. Students completed lessons connecting the pond water analysis to history, medicine and invention.

**University Biology.** Building on concepts studied in sophomore physics and chemistry, the junior-level University Biology course was restructured to include more in-depth, discovery-based research. Students designed and conducted their own experiments to test concepts such as osmosis.

**Wellness.** A pilot course integrating health, physical education and life skills, was developed to help sophomores make a smooth transition to Academy life. Students conducted self-assessments including health risks, time management, sleeping patterns and locus of control, and developed personal plans for healthy living.

**Problem-Based Learning.** Following the success of IMSA's award-winning problem-based Science, Society and the Future (SSF) course, teachers piloted problem-based instruction in several other courses including biochemistry and psychology. Problem-based learning features the use of carefully-crafted “ill structured” problems to foster the development of students’ problem finding, problem solving, critical thinking and ethical decision making skills.

"You don't always know what the answer will be or can predict what will happen...it's how science really works."

Jim Young, IMSA student
Bourbonnais
University Biology
Enrichment Programs

**Mentorship.** A total of 90 students completed the mentorship program at 30 different sites, working with leading scientists and researchers in corporate, scientific and government laboratories in the Chicagoland area. Students conducted real world research in astrophysics, biochemistry, genetics, economics, aerospace engineering and neurology and presented their findings at the annual IMSA Research Presentation Day. In addition, several students presented their research at the National Conference on Undergraduate Research; IMSA was the only high school invited to participate.

**Exploration Days.** Exploration Days (every sixth school day) provided students with a variety of new experiences in 1991-92, many of which were interdisciplinary in nature. Students participated in study groups on such topics as “Chemistry and Art,” “Zen and the Art of Motorcycle Maintenance,” and “Musical Comedy as Social Commentary.”

**Saturday Seminar.** Saturday seminars such as *Visions for a Sustainable World* focused on examining the social implications of advancements in science and technology.

**Resident Scientist.** Students worked with IMSA’s resident scientist on research projects such as the digestive physiology of hyenas, and the study of new and rare species of South American animals.

**Technology**

**Video Production/Instructional Technology.** Faculty and students used new technologies including: an interactive video disc system to observe potentially dangerous chemistry experiments; an interactive foreign language software package; and the Musical Instrument Digital Interface (MIDI) to produce synthesized music.

**Library Resources.** The number of volumes/video tapes in collection grew to more than 32,000 and IMSA loaned more than 13,000 items to library users throughout Illinois. Library staff presented a hands-on introduction to information literacy as part of the sophomore chemistry and junior biology curricula; students simulated various chemical interactions by using computer-controlled laser disc workstations.

**Computer Resources.** To further enhance student research, all computers in the residence halls were connected to the campus computer network. In addition, faculty piloted the use of new software packages such as “Point of View,” which enabled students to browse and organize historical data from various points of view.

“We want students to think about problems in a creative way. The ability to approach situations with a variety of tools, not just using one method, is an invaluable skill for today’s mathematician.”

*Susan Eddins, IMSA teacher*

*Mathematical Investigations*
The admissions office piloted several new initiatives for prospective students in 1991-92 and made significant progress in recruiting more underrepresented minority students in the Class of 1995. These efforts further strengthened the diversity of the IMSA student body, thereby enriching the academic and residential experiences of all students.

VIP Days. IMSA held three Visitor Information Program Days for prospective students and their parents to visit the campus, learn about the academic and residential programs, and talk with current students and parents.

Informational Meetings. Admissions counselors held 49 informational meetings throughout the state.

SAT Testing. To make testing convenient for students and their families, IMSA administered the SAT at 36 sites throughout Illinois.

Pre-Selection Interviews (Pilot). The use of pre-selection interviews was piloted in 1991-92 to increase faculty involvement in the admissions process and to begin to assess whether such interviews should be used in the future as part of the selection process.

Student Ambassador Program. The admissions office initiated a new program in which current students took a more active part in meeting with prospective students and sharing their experiences as IMSA students.

### 1991-92 Student Demographics

<table>
<thead>
<tr>
<th>Class of 1992</th>
<th>Class of 1993</th>
<th>Class of 1994</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geographic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48%</td>
<td>44%</td>
<td>42%</td>
</tr>
<tr>
<td>52%</td>
<td>56%</td>
<td>58%</td>
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<tr>
<td><strong>Gender</strong></td>
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</tr>
<tr>
<td>Female</td>
<td>39%</td>
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</tr>
<tr>
<td>Male</td>
<td>61%</td>
<td>54%</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
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<td></td>
</tr>
<tr>
<td>65% White</td>
<td>62% White</td>
<td>58% White</td>
</tr>
<tr>
<td>1% Hispanic</td>
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<td>29% Asian</td>
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<td>5% Black</td>
<td>5% Black</td>
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<tr>
<td></td>
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<td>1% Other or</td>
</tr>
<tr>
<td></td>
<td>Not Reporting</td>
<td>Not Reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other areas of Illinois</td>
<td>Chicago and Suburbs</td>
<td>Other areas of Illinois</td>
</tr>
</tbody>
</table>
Michael Ombrello of East Moline presented his research on chaos and biological systems at the 1992 National Undergraduate Research Conference at the University of Minnesota.

Debbie Linksvayer of Springfield published an article entitled "The Debate on Douglas" in Illinois History: A Magazine for Young People.

John Turlais of Flora became IMSA's first student-athlete to be drafted or signed by a professional sports team (Pittsburgh Pirates.)

Sophia Williams of Chicago researched DNA sequencing and its relationship to Down Syndrome during a summer mentorship at Loyola University.

Stephen Wang of St. Charles was one of only 24 students nationwide to qualify for training for the USA Mathematical Olympiad Team.

Roy Thitipraserth of Marion was one of several students named to the IMEA All-State Chorus.

Leticia Setrini of Morris researched the changes in self-perception as a function in maturation during a summer mentorship in developmental psychology at Northern Illinois University.
IMSA Promotes Healthy Living

To provide a living and learning environment that supports students’ academic, social and personal development, IMSA expanded the number and diversity of recreational activities, service opportunities, and counseling and educational programs in 1991-92. Resident counselors teamed with other student services personnel to provide strong support systems for students. RCs and student resident assistants sponsored numerous small-group activities for their respective groups, and residential policies and procedures continued to be refined based on input from staff, students and parents. One of the highlights of the year was an improved sophomore orientation program.

Activities

International Day Celebration. IMSA’s first International Day Celebration showcased 18 nationalities and attracted 250 students to numerous activities including an international fashion show.

Senior Citizens Dance. IMSA’s new service organization, Key Club, hosted the first senior citizen’s dance on April 3. Approximately 100 Aurora-area seniors and 160 IMSA students danced the night away in the gymnasium.

Student Union. The Parents’ Council donated additional furniture and recreational equipment to the student union in 1991-92.

MDA Fundraiser. A Super Dance Lock-In was held overnight in the IMSA gym to benefit the Muscular Dystrophy Association.

Interscholastic Athletics. Approximately 60% of the student body participated in one or more of 18 interscholastic sports, while 67% participated in one or more of 49 cocurricular activities.

Fitness Center. An average of 160 students and 15 staff members per day used the on-campus Titan Fitness Center.

Campus and Community Service. As in previous years, students fulfilled on-campus work service obligations by tutoring, servicing computers, cleaning the building, working in offices, etc. In addition, students completed their community service graduation requirements by volunteering (10,000+ hours) throughout Illinois in senior citizens homes, day care centers, hospitals, public libraries, counseling agencies, park districts, etc.

Support Programs

EXCELL. Approximately 70 students participated in IMSA EXCELL, a program designed to enhance individual self-esteem, confidence, and cultural identity through academic, social and emotional learning.

Strategies for Success Center. A new Strategies for Success Center was established to help students strengthen their note-taking, test preparation, vocabulary and memorization skills, as well as their self-motivation.

Natural Helpers. Thirty-one students and seven staff members participated in the first Natural Helpers training program. This early intervention/peer counseling program identified students and staff who others most often turned to for help with personal problems, then provided training for these “natural helpers.”

College Counseling/Career Development. CC/CD counselors sponsored individual counseling sessions, visitation days and college fairs to help students plan their college and career paths. College admission decisions for the Class of 1992 were outstanding, and members of IMSA’s fourth graduating class received numerous scholarship and grant awards.
Cocurricular Excellence

Mathematics
ICTM State Math Contest
1st place, team
North Suburban Math League
1st place, team
Illinois Mathematics League
1st place in state, team
United States Mathematical Olympiad
Five students qualified to take the exam;
One student qualified to train for the team
American Computer Science League
1st place in state, intermediate and senior teams

Social Science
Swackhamer Student Essay Contest
1st place in nation, individual
Future Problem Solving Bowl
2nd in state, individual (written)
Illinois History Expo
Three projects advanced to national competition
Illinois History Symposium
One student presented paper; first high school student ever invited to present
Illinois Model UN
Five outstanding achievement awards
Harvard Model Congress
Three outstanding achievement awards

Music
Illinois Music Educators Association
11 All-State awards
Illinois High School Association State Solo and Ensemble Contest
47 superior ratings
19 excellent ratings
9 perfect scores

Interdisciplinary
Knowledge Master Open
1st place in state
9th place in nation
Scholastic Bowl
3rd place in state
Academic Decathlon
3rd place in state
Seven individual medals

Foreign Language
National French Contest
1st place award
American Association of Teachers of German National Exam
10 book awards
20 certificate of merit awards
National Latin Exam
Nine medals
Japanese Language Speech Contest
3rd place award
Russian Day at UIC
Six awards

IHSA Competition
5th place in state (girls long jump)
Four individual medals in sectionals
Media Recognition
(Chicago Tribune, Chicago Sun-Times, The Beacon-News)
One All-State award (boys baseball)
Five All-Area awards (boys baseball, girls softball, girls basketball)

IMSA student Gretchen Green admires a historic marker placed in Chicago as a result of her research on medical pioneer Dr. Bertha Van Hoosen.

IHSA Competition
5th place in state (girls long jump)
Four individual medals in sectionals
Media Recognition
(Chicago Tribune, Chicago Sun-Times, The Beacon-News)
One All-State award (boys baseball)
Five All-Area awards (boys baseball, girls softball, girls basketball)
# Testing Highlights

## American College Testing (ACT)

<table>
<thead>
<tr>
<th>Subscore</th>
<th>Female Mean N=57</th>
<th>Male Mean N=94</th>
<th>IMSA Mean</th>
<th>Illinois Mean</th>
<th>National Mean</th>
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<tbody>
<tr>
<td>English (1-36) Mean</td>
<td>29.9</td>
<td>29</td>
<td>29.3</td>
<td>20.4</td>
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<td>Mathematics (1-36) Mean</td>
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<tr>
<td>Reading (1-36) Mean</td>
<td>32.2</td>
<td>32</td>
<td>32.1</td>
<td>21.2</td>
<td>21.1</td>
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<tr>
<td>Science Reasoning (1-36) Mean</td>
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<td>31.4</td>
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<td>20.8</td>
<td>20.7</td>
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<tr>
<td>Composite (1-36) Mean</td>
<td>30.5</td>
<td>31.1</td>
<td>30.9</td>
<td>20.9</td>
<td>20.6</td>
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## Preliminary Scholastic Aptitude Test (PSAT)

<table>
<thead>
<tr>
<th></th>
<th>FEMALE Mean N=100</th>
<th>MALE Mean N=122</th>
<th>IMSA Mean</th>
<th>Illinois Mean</th>
<th>National Mean</th>
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<tr>
<td>Verbal</td>
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## Achievement Tests for the Class of 1992

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<tr>
<th>Test</th>
<th>Total IMSA Scores Reported</th>
<th>IMSA Mean</th>
<th>Illinois Mean</th>
<th>National Mean</th>
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<tr>
<td>English Composition</td>
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<tr>
<td>Comp w/ Essay</td>
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<td>NA*</td>
<td>NA*</td>
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<td>Literature</td>
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<tr>
<td>Mathematics Level I</td>
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<tr>
<td>Mathematics Level II</td>
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<td>700</td>
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<td>Sciences Biology</td>
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<tr>
<td>Chemistry</td>
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<td>German</td>
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<tr>
<td>Spanish</td>
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<td>564</td>
<td>555</td>
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## Scholastic Aptitude Test (SAT) for the Class of 1992

<table>
<thead>
<tr>
<th>CLASS OF 1992</th>
<th>FEMALE (N=87)</th>
<th>MALE (N=102)</th>
<th>TOTAL (N=189)</th>
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<tbody>
<tr>
<td>IMSA Mean</td>
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<td>611</td>
<td>604</td>
</tr>
<tr>
<td>IL Col Bound Sr. Mean</td>
<td>470</td>
<td>517</td>
<td>537</td>
</tr>
<tr>
<td>All Col Bound Sr. Mean</td>
<td>419</td>
<td>456</td>
<td>443</td>
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## Advanced Placement (AP) Examinations for IMSA Students: 1992

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<th></th>
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<td>3.29</td>
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<td>3.60</td>
<td>3.78</td>
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<td>4.05</td>
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<td>2.96</td>
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<td>3.62</td>
<td>2.83</td>
<td>3.32</td>
<td>3.38</td>
<td>3.01</td>
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To support and expand the Academy's innovative on-campus and statewide programs, the Illinois General Assembly appropriated an operating budget of $11.4 million in 1991-92 (this was reduced to $11.1 in statewide budget cuts). Expenditures, allocated according to the state comptroller's guidelines, included:

In addition, the Academy was awarded two State of Illinois scientific literacy grants of $282,143 for IMPACT II and $192,500 for District Learning Leadership Teams. In collaboration with Aurora University, IMSA was the beneficiary of two Dwight D. Eisenhower Title II grants totaling $247,000 for Summer 'AD'Ventures and IMSA Challenge. All of these grants supported statewide initiatives to improve teaching and learning in mathematics, science and technology.

IMSA parents paid a $695 fee in 1991-92 to offset some of the costs of cocurricular programs and residential services.

The most significant capital projects in 1991-92 were the kitchen renovation and the beginning of the acoustical project.
The Illinois Mathematics and Science Academy Fund for Advancement of Education raised a record $963,245 from the private sector in 1991-92. This puts the Fund over the $3.6 million mark in fundraising since its inception in 1986. The 1991-92 figure represents a 10% increase over last year’s total with a 21% increase in the number of donors. Other 1991-92 IMSA Fund highlights included:

- Largest grant to date: $325,000, The Grainger Foundation
- Gifts of $111,250 from IMSA Fund directors (100% board participation)
- Parent contributions of $41,978
- IMSA/Illinois Bell holiday greeting card
- Mini-grants totaling more than $8,000 for employees to implement creative ideas that support IMSA's mission
- Inaugural James R. Thompson Leadership Lecture: Dr. Carl Sagan
- Inaugural Richard L. Horwitz Lecture on Ethics: Dr. Martin E. Marty
- Wingspread Conference on Problem-Based Learning
- Enrichment programs for black, Hispanic and economically disadvantaged students in Chicago, East St. Louis and Joliet
- Corporate gifts of $6,800 for IMPACT II mini-grants to teachers in their service areas
- Informational luncheons for business and community leaders at Illinois Power in Decatur, Illinois Bell in Chicago, and Sundstrand Corporation in Rockford.
- Miss Saigon benefit designee (Fall 1992)

A list of 1991-92 donors to the IMSA Fund for Advancement of Education is published in the IMSA Fund's annual report. To receive a copy, contact the office of institutional advancement at (708) 801-6040.
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The 1991-92 school year, which represented the beginning of the second half of IMSA's first decade, was a time for thoughtful reflection on past accomplishments, in-depth critique of current programs, and focused planning for the future. The Academy was widely recognized as a national leader in mathematics and science education, problem-based learning and educational change. Some highlights included:

**Longitudinal Study.** A survey of the Class of 1990 showed the Academy is achieving its goal of developing "decidedly different learners"—students who can think critically, conduct research, and identify and solve problems.

**Best Schools Award.** IMSA was featured in the April issue of Redbook magazine as one of "America's Best Schools." IMSA was one of 16 national winners in the academic achievement category.

**USA Today Feature.** In May, USA Today cited IMSA as one of several examples of "schools that shine...bring credit to the U.S. education system...(and) offer insights into excellence."

**National Instructional Innovation Award.** IMSA was one of 25 national winners of The Executive Educator's "Profiles in Excellence" award for innovative instruction. IMSA was honored for its problem-based Science, Society and the Future course.

**Smithsonian Institution Grant.** IMSA and the Duke Ellington School of the Arts in Washington, D.C., were named co-beneficiaries of a $250,000 Congressional grant to the Smithsonian Institution to develop curriculum models that integrate instruction in mathematics, science and the arts.

Real changes in education come from need and leadership. America has lots of the former and little of the latter....Occasionally there is an opportunity to build an exemplar, one that is so powerful that it shows clearly what can be done by showing what is being done. IMSA is becoming that exemplar. When it is fully realized, it will be a blueprint for how to reconstruct education.

**North Central Accreditation Report**
The need to understand how the universe works is fundamental to human nature. It is also essential for safely managing the human future; but foolishly, we have designed a society based on science and technology in which hardly anyone understands science and technology. This is a clear prescription for disaster.

Our future depends on producing and encouraging highly competent, ethically responsible young scientists, as well as a much greater scientific literacy in the general public.

The Illinois Mathematics and Science Academy in Aurora, Illinois, is dedicated to meeting this challenge...

It is a gift from the people of Illinois to the human future.”

Dr. Carl Sagan
Laboratory for Planetary Studies
Cornell University
Member, IMSA National Advisory Board