"Within the kaleidoscope, science enables the art to dance."

- Stephanie Pace Marshall, Ph.D.

About the cover: The kaleidoscope is an instrument of wonder and transformation. It is a symbol and metaphor of IMSA's vision, "liberating goodness and genius for the world" and mission, "transformation through connections within and among mathematics, science, the arts and the humanities."

To create a learning enterprise that liberates the genius and goodness of all children and inspires and inspires the power and creativity of the human spirit for the world.

The mission of the Illinois Mathematics and Science Academy, a pioneering educational community, is to transform mathematics and science teaching and learning by developing ethical leaders who know the joy of discovering and forging connections within and among mathematics, science, the arts, and the humanities by means of an exemplary laboratory environment characterized by research, innovative teaching, and service.
Dear IMSA Shareholders,

The new century calls us to invite learners of all ages into big questions of the human experience, questions that will shape our collective future. Who will generate and use knowledge for the world? Who will ask breakthrough questions that lead to global solutions? Today’s children in today’s schools will — if they are challenged to develop their full potential as thoughtful inquirers, ethical leaders and responsible stewards of the world’s resources.

This has been IMSA’s work since we opened in 1986. Now, in our 15th Anniversary year, we are ready to further expand our statewide programming and to more proactively share what we have learned about what works in the field of mathematics, science and technology teaching and learning. The time is right, the needs are great, and the stakes for public education have never been higher.

Recently, Illinois Governor George Ryan conducted a statewide Education Summit to address a growing crisis, the shortage of high quality teachers. This and Before It’s Too Late, a report to the nation from the National Commission on Mathematics and Science Teaching for the 21st Century [also known as the Glenn Commission Report], have furthered IMSA’s resolve to help develop and support well-qualified teachers.

The Glenn Commission concluded that “the most powerful instrument for change, and therefore the place to begin, lies at the very core of education — with teaching itself.” In this Annual Report, we highlight how IMSA serves as an instrument for change by providing exemplary professional development programs, including one in partnership with the American Association for the Advancement of Science, and a unique alternative teacher certification program in partnership with Benedictine University.

This Report also highlights two new programs for Illinois students: IMSA Excellence 2000+ for middle school students, launched at the request of the Illinois General Assembly; and the Illinois International Career Academy for high school students, commissioned by the Illinois Board of Higher Education to advance the recommendations of the Governor’s Joint Task Force on International Education and help build a workforce to compete in a global society.

As we strive to liberate the genius and goodness of tomorrow’s leaders through a new system of teaching and learning, we are mindful of the words of 1991 IMSA graduate Scott Gaudi, profiled in October 2000 by DISCOVER magazine as one of the “20 scientists to watch in the next 20 years.” He said: “IMSA taught me to see with new eyes and to become a trailblazer.” Our state, nation and world need trailblazers for the future. We can and we must find, challenge and support the Scott Gaudis of our state — wherever they live and learn.

Sincerely,

Sheila MB Griffin
Chairman

Stephanie Pace Marshall, Ph.D.
President
In 2000-01, IMSA continued to refine the Business Plan, focusing on students' development as ethical learners and leaders, and highly skilled inquirers and researchers. Strategic initiatives that expanded included Mathematical Investigations, Scientific Inquiries, Student Inquiry and Research and Student Leadership Development.

**Student Leadership Development Program**

Student Leadership Development (SLD) programs, developed in partnership with Northwestern University, Free the Children Foundation, Leaders Today and the National Coalition Building Institute, provides opportunities for students to become ethical leaders at IMSA, in the community and in the world. The IMSA SLD Committee defines “lead” as “to invite, inspire, mobilize, and guide ourselves and others to make positive differences in our homes, schools, communities and the world.”

**2000-01 Student Leadership Development Highlights**

- The Board of Trustees adopted the IMSA Residential Life Standards which set expectations for student learning and performance related to self, community and self-care.
- IMSA implemented its Leadership Education and Development (LEAD) program in partnership with Leaders Today, an international organization dedicated to promoting future leaders. Marc Kielburger of Leaders Today trained IMSA students on facilitation and leadership skills; IMSA seniors then led groups of sophomores in public speaking and advocacy.
- More than 300 students and staff attended the first Leadership Symposium which included an inaugural leadership lecture in memory of Bernard Hollister, a charter member of IMSA's social science faculty who died in November of 2000. The guest speaker was former Illinois Senator Paul Simon.
- Six students attended a national leadership conference and attained certification in leadership organization; 14 students attended a diversity leadership workshop and became National Coalition Building Institute certified facilitators; two students traveled to Kenya with Free the Children members for unique leadership development and service learning experiences.
- IMSA seniors enjoyed an inspiring talk by Helen Zia, an accomplished second generation Chinese-American journalist and guest speaker for the annual Richard L. Horwitz Lecture on Ethics.
IMSA Class of 2001 graduates Anitra Sumbray and Mathew Kuisley are greeted by children in Kenya during their trip sponsored in part by the IMSA Fund for Advancement of Education and organized by Free the Children and Leaders Today.

Scientific Inquiries Program

As an educational laboratory for Illinois, IMSA serves as an exemplar and catalyst to transform mathematics and science teaching and learning. In 2000-01, IMSA piloted Scientific Inquiries (SI), a new integrative one-year science core curriculum for IMSA sophomores. Scientific Inquires integrates concepts from chemistry, physics, biology, and earth and space science. It will provide a unique model for the design and delivery of science education in other Illinois schools.

What's Ahead for 2002

• The Scientific Inquiries curriculum will continue to be modified and refined in order to offer an introductory science experience that will serve IMSA students well in their continuing studies of science at IMSA.

• Instructional materials currently in use for Scientific Inquiries will be reviewed and additional program materials will be created that will assist IMSA teachers as well as other teachers in working with students.

• Research studies for Scientific Inquiries will be undertaken to provide information that will support decisions related to program improvement.

• The development of future online learning experiences for MI and SI will offer additional support for other Illinois students and teachers.

• IMSA is piloting its Leadership Education and Development (LEAD) curriculum for public speaking, advocacy, ethical decision-making, negotiation and media contact. This utilizes, adapts and extends the groundbreaking curriculum of Leaders Today.

2000-01 Scientific Inquiries Program Highlights

• Pilot year SI program components included inquiry journey excursions (units), essential questions (questions that guide learning), enduring understandings (what's most worth knowing), evidence of understanding, assessment tasks and learning experiences (in class and out-of-class activities).

• Connections among (concepts from) the physical sciences, earth and space sciences, life sciences, scientific inquiry and technology are taken advantage of (overlapped) to form a truly integrative experience for students.

• Students explored six essential questions which anchored the pilot SI curriculum.

• Performance assessments used by SI faculty included written papers, free responses to problem-centered situations, short writes and poster presentations. In addition, students were given a pre- and post test to determine their content knowledge before the course began and after it was completed.
IMSA Ecology students collect data on predator-prey relationships while examining a moose carcass.

**Student Inquiry and Research Program**

The Student Inquiry and Research (SIR) Program challenges students to engage in scholarly and scientific investigation as well as creative and artistic expression. SIR encourages students to become skeptical inquirers who work at increasingly higher levels of independence, guided by professionals knowledgeable in their fields. Students participate in SIR through Mentorship, Student Plans of Inquiry and IMSA Courses.

### 2000-01 Student Inquiry and Research Highlights

- Lisa Kelly of Libertyville, Eric Szczesniak of Buffalo Grove, and Christine Tsai and Margaret Wat of Naperville presented their research at Sakharov's Readings, a highly selective research conference in St. Petersburg, Russia.
- Kelly McArdle of Elmwood Park and Anson Tang of Quincy presented *Neonatal / Perinatal Factors in Predicting the Clinical Course of Triplet Births at 34 Weeks Gestation* at the annual meeting of the American Academy of Pediatrics in Chicago.
- Margaret Wat of Naperville was named one of 10 national finalists in the Neuroscience Research Prize competition sponsored by the American Society for Pharmacology and Experimental Therapeutics, Inc. She is the only high school student to win the award in the history of the competition.
- Eleven students attended and presented at the 2001 American Junior Academy of Science (AJAS)/American Association for the Advancement of Science (AAAS) Annual Meeting and Science Innovation Exposition.
- Students in Ecology investigated the nature of vocalizations of wolves and coyotes. This led to an analysis based on computer techniques of pre-recorded sounds. Students then worked with real coyotes in a field setting.
- Nan Sethakorn of Gibson City presented *A Modification of the Kirby-Bauer Disc Assay for Inquiry-Based Teaching in the Microbiology Classroom* at the American Society of Microbiology annual meeting.
- Pooja Agarwal of Chicago, Roy Droste of Grafton, and Cindy Xi and Margaret Wat of Naperville presented *Kids Institute Programs* at the National Association of Biology Teachers annual meeting.

### What's Ahead for 2002

- 150 students are working on approved Inquiry projects, a significant increase from 115 in 2000-01.
- Students are working on research projects in fields such as microbiology, forensics, biotechnology, cell biology, and biochemistry in the premier IMSA research facility, the Grainger Center for Imagination and Inquiry.
- 137 students are currently working on approved mentorships in interactive research partnerships at prominent institutions throughout Chicagoland.
### Student Testing Highlights

- Mean SAT I composite score for IMSA seniors was 1354, 354 points above the national average for college-bound seniors.
- Mean ACT composite score for IMSA seniors was 29.6, 8.6 points above the national average for college-bound seniors.
- Of IMSA juniors and seniors taking the Advanced Placement Examinations, 85% scored “3” or better and 64% scored “4” or better.
- Mean SAT II score for IMSA seniors taking the Mathematics-Level IIC Test was 744, 81 points above the national average for college-bound seniors. Mean IMSA score for the English Writing SAT II Test was 664, 69 points above the national average for college-bound seniors.

For more information regarding student testing, contact the College and Academic Counseling Office at (630) 907-5056 and request the IMSA Profile.

### 2000-01 Student Profile

<table>
<thead>
<tr>
<th>GENDER</th>
<th>GEOGRAPHY</th>
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<tbody>
<tr>
<td>50% Male</td>
<td>64% Chicagoland/Metropolitan area</td>
</tr>
<tr>
<td>50% Female</td>
<td>36% Other areas of Illinois</td>
</tr>
</tbody>
</table>

### ETHNICITY

- White: 49%
- Asian: 31%
- African American: 9%
- Latino: 4%
- Other/Non-Reporting: 3%
- Bi-Racial/Multi-Ethnic: 3%
- Native American less than 4%

### Mathematical Investigations Program

The Mathematical Investigations Program (MI) is the core pre-calculus sequence at IMSA. While a more traditional program would offer separate courses in algebra, trigonometry and analytic geometry, MI provides an integrated learning experience. Students in MI are introduced to concepts and skills from across the mathematics curriculum in a mathematically natural way. MI helps IMSA students to become skilled problem finders and problem solvers with a deep conceptual understanding of mathematics.

### 2000-01 Mathematical Investigations Highlights

- MI students explored units such as Linear Thinking and Functions which addressed different content ideas centered around a single mathematical concept. In doing this, students gained insight into how different areas of mathematics fit together.
- MI students investigated new ideas in class by working collaboratively on daily explorations that expose students to new aspects of the main idea of a unit.
- Weekly problem sets in MI challenged students to use all their mathematical tools (including using current knowledge and experimenting with unusual ideas).
In 2000-01, IMSR doubled the number of Business Plan strategic initiatives serving educators and students throughout Illinois. Strategic initiatives primarily serving Illinois students and educators that expanded or were introduced included the Problem-based Learning Network (PBLN@IMSA), Standards-based Education: IMSA 2061, Alternative Certification, IMSA Excellence 2000+, Illinois International Career Academy and the IMSA Kids Institute.

Illinois International Career Academy

The Illinois International Career Academy (ICA) prepares students for academic and professional pursuits in international business and helps build the workforce the state needs to compete successfully in a global economy. Administered by IMSA on behalf of the Illinois Board of Higher Education, the program engages Illinois high school students in problem-based learning to investigate a broad range of economic, political and cultural issues impacting the diverse global economy. The student experience, spanning three summers and two school years, includes an internship with an Illinois multinational company.

2000-01 Illinois International Career Academy Highlights

- Six teachers and 24 teens were selected to participate. They are from Bloomington High School, Carbondale Community High School, Glenbrook South High School in Glenview, Illinois Mathematics and Science Academy in Aurora, Jones Academic College Prep in Chicago, and University Laboratory High School in Urbana.
- For 10 days in June, the participants immersed themselves in the study of international issues. Topics included AIDS in Sub-Saharan Africa, the Economic Crisis in Indonesia, Arms Control in Southeast Asia, collapse of the Thai Baht and the Price of Oil, and others.
- Off-campus experiences included a visit to the Mercantile Exchange to learn about international currency markets, a lecture featuring Dr. Henry Kissinger and meeting NATO Secretary-General Lord Robertson following his presentation, NATO's Challenges: Illusions and Realities of the Alliance.
- The ICA includes an interactive web site linking students, teachers and partners. The site features an electronic magazine, news releases, a photo gallery, curriculum samples, chat rooms, and discussion boards.
Standards-based Education: IMSA 2061

IMSA 2061 provides professional development programs in standards-based education practices for mathematics and science teachers, education leaders and schools. Teachers learn to use the tools, research and experiences of education reform to improve student learning. IMSA 2061 Introductory Workshops help educators become aware of how to design standards-based lesson plans for individual teachers and revise entire K-12 science programs (i.e. better coherence and articulation of concepts across grade levels).

What's Ahead for 2002

• IMSA 2061 was selected by the Illinois State Board of Education (ISBE) to do a series of seven one-day workshops on mathematics and science standards for key leaders involved in the Building a Presence in Mathematics and Science national initiative.

• IMSA 2061 will begin facilitating the work of its new cohort group in Crete Monee C.O.D. 201U as they design a coherent K-12 science curriculum aimed at science literacy for all students.

• In January, IMSA 2061 began working with its newest cohort of five school districts within the West Suburban Consortium for Academic Excellence (WSCAE).

• In cooperation with the Lake County Regional Office of Education (ROE), IMSA will host an IMSA 2061 Introductory Workshop in the spring.

• In partnership with the Teachers Academy for Mathematics and Science (TAMS), IMSA developed research-based quality criteria for professional development programs in mathematics and science, professional development providers, and school readiness to benefit from systemic professional development. The criteria are being used in ISBE’s Scientific Literacy Professional Development Grant Program.

• Students are preparing white papers for the next International Career Academy (ICA) summit: a roundtable discussion of the economic development of Central Asia, tied to current events in Afghanistan.

• In the spring, ICA teams will collaborate with mentors from six Illinois businesses to address problems and opportunities created by the economic recession.

• The ICA program expands to eight high schools sites for 2002. Two new schools will join the ICA starting next summer bringing the total number of students enrolled in the ICA to 56.

2000-01 IMSA 2061 Highlights

• Twenty-nine educators from four school districts and two consortia attended the first IMSA 2061 Introductory Workshop at IMSA. Districts and consortia represented were Homewood Flossmoor C.H.S.D. 233, Oak Lawn-Hometown School District 123, Indian Prairie C.U.S.D. 204, Crete Monee C.U.S.D. 201U, the West Suburban Consortium for Academic Excellence (WSCAE), and MECCA (Metro East Consortium for Child Advocacy). Additionally a representative from the West 40 Intermediate Service Provider attended the workshop.

• Twenty-nine educators from 20 schools and nine districts within the WSCAE attended the second IMSA 2061 Workshop held at Riverside Brookfield Township High School. WSCAE represents 16 school districts in western Cook County.
The Kids Institute Program

The IMSA Kids Institute was launched in 1998 to stimulate curiosity and excitement about mathematics, science, and technology among young learners in Illinois. Guided by faculty, IMSA students create an array of hands-on enrichment programs that integrate the concepts of science, mathematics, and technology to solve real-world problems. They become instructors who share their love of learning with young people in Illinois. Students in grades 3-9 develop problem-solving skills and learn from positive young role models (IMSA students) who are teaching them.

2000-01 Kids Institute Highlights

- Kids Institute programs served 300 students last summer and more than 600 during the school year.
- Mars Online was a feature of the summer Science Explorers program in Aurora, Chicago, and Liberty. Students used a problem-centered approach to establish a colony on Mars in the year 2030. Using software, creativity, and resourcefulness, they researched and recommended how humans could establish prosperous communities despite the challenges of high temperatures, uneven surfaces and lack of water and vegetation.

What's Ahead for 2002

- A grant from the Harris Family Foundation will enable the Excellence 2000+ Program (E2K+) to expand to seven additional schools sites in Champaign, Chicago, Danville, Des Plaines, Kankakee, Marion, and Quincy.
- The E2K+ web site enables participating teachers to share their instructional experiences with IMSA professional development specialists and each other.
- The 2002 Kids Institute will feature a new summer program, Math + Science 4 Girls. The week-long program for middle school girls uses problem-based learning to integrate topics on math, science, and technology and exposes them to scientific and technology-related careers.
IMSA Excellence 2000+ Program

In January 2001, Illinois middle school students from seven schools became the first participants of IMSA Excellence 2000+, an exciting journey of mathematical and scientific exploration and discovery. IMSA Excellence 2000+ is an after-school enrichment program for Illinois middle students who are talented and interested in mathematics and science, with special emphasis on students historically underrepresented and underserved in mathematics and science. Students participate in the program for up to two years giving them a strong foundation for future study in mathematics and science and exposing them to scientific and technical career fields. The program also includes a professional development component for participating Illinois teachers. IMSA Excellence 2000+ started at the request of the General Assembly, with the strong support of House Speaker Michael Madigan and Governor George Ryan. It is modeled, in part, after the highly successful after-school Mitchell Excellence 2000 enrichment program in Israel for junior high school students “living in the Israeli periphery.”

2000-01 IMSA Excellence 2000+ Highlights

• The first year pilot was held at seven schools, two in Chicago, two in northern Illinois and three in central/southern Illinois. The sites were: Bell Elementary School, Chicago; Central Junior High School, Belleville; Grant Middle School, Springfield; Hillboro Junior High School, Hillboro; Michele Clark Middle School, Chicago; Thompson Junior High, Oswego; and West Middle School, Rockford.

• More than 200 students were served in the first year of the E2k+ program.

• The learning experiences emphasized logic, mathematical thinking, and experimental scientific thinking. Topics related to students’ lives so they would become motivated to learn math and science. For example, students launched bottle rockets using NASA specifications. They made and used altitude trackers to collect data and measure how high the rockets fly.

• More than 20 teachers from the seven sites completed the first year of professional development seminars at IMSA, forging new links with colleagues from around the state.

• New curriculum units were developed focusing on Chromotology, Patterns and Sequences, Networks, Learning Behavior, Rocketry, Outdoor Math, and the Solar System.

• With a grant from BP, an in-service day will be sponsored for teachers on integrating the Real Science CD-ROM into science curriculum. The BP grant also will support the Science Explorer program with a summer camp on energy solutions.

• Fifty IMSA students are tutoring East Aurora elementary school students as part of the Kids Institute newest program, Project READ.

• Real Science 2002 production is underway with a team of 25 students and five student editors. This year, Real Science will begin testing video streaming of articles from the Kids Institute web site.

• The City of Aurora contributed $30,000 to the IMSA Kids Institute.

A Science Explorers, Jr. participant examines pond organisms.
Programs Serving Educators and Students Throughout Illinois

IMSA students observe bison during a population study at Grand Teton National Park.

Problem-based Learning Network (PBLN@IMSA)

IMSA's Problem-based Learning (PBL) Network serves teachers in Illinois and beyond through professional development in regional and summer institutes, annual symposia, and online courses; research in their classrooms; and support in an interactive and online network of colleagues and PBL experts as teachers use PBL to improve student achievement.

2000-01 Problem-based Learning Highlights

- All 3rd, 4th and 5th grade teachers in the Aurora West School District 129 received extensive PBL professional development characterized by immersion over time, practice in context, and ongoing support during implementation. This model builds the support system necessary for new learning to become embedded in practice.
- IMSA conducted professional development institutes for the Tinley Park/Orland Park high school district, the Indian Prairie school district in Naperville/Aurora, Morgan Park Academy in Chicago, Crow Agency in Montana, and the Foothills school district in High River, Alberta, Canada.
- PBL staff collaborated in the design of the professional development component of the International Career Academy and in the curriculum development component of the Benedictine University-IMSA Alternative Teacher Certification program.
- Thirty-six educators attended the annual Neison and Bette Harris Institute for PBL Design; 24 educators and nine alternative certification teacher candidates attended the annual Summer Sleuths Institute for PBL Coaching, then facilitated PBL learning experiences for 119 Illinois students in grades seven through nine.
- IMSA led a PBLNet network forum at the Association for Supervision and Curriculum Development annual conference. The Problem Log, published three times a year by PBLNet, an ASCD member network, promotes sharing of information, methods and materials for PBL in K-16 classrooms. The newsletter's editor/facilitator is Debra Gerdes, IMSA's professional development leader for Problem-based Learning.

What's Ahead for 2002

- IMSA began a "train the trainers" program for teachers to enable them to provide in-district Problem-based Learning (PBL) staff development in fiscal year 2002.
- IMSA will provide professional development in PBL for IMSA's Excellence 2000+ (E2K+) teachers beginning their third and final year. IMSA will mentor the teachers as they collaboratively design a PBL unit for use with students in the E2K+ Program.
- IMSA will conduct PBL workshops for teachers in McLean County in collaboration with Illinois State University.
- The second edition of Problems as Possibilities by former IMSA staff members Linda Torp and Sara Sage will include a new chapter.
In an effort to help stem the impending Illinois teacher shortage, the Alternative Certification Program, developed in partnership with Benedictine University, offers a fast-track alternative certification program for persons interested in teaching middle or high school science. The program recruits, trains and certifies qualified science teachers for Illinois schools, drawing from a pool of science professionals with at least five years experience in their fields.

**Alternative Certification Program**

**Highlights**

- Candidates successfully completed the first eight-week problem-based intensive training program. The program included topics in content knowledge, curriculum and assessment, learning theory and effective instructional methods.

- At the end of the internship year, successful candidates can be awarded the IMSA Recognition.

- The Alternative Certification Program successfully placed teachers in science classrooms in schools in Bartlett, Clifton, Dundee, East Aurora, McHenry, Palos Heights, Roselle and Wauconda.

- At the invitation of Naperville CUSD #203, IMSA and BU made an Alternative Certification presentation to more than 170 employees of local industries.

- IMSA will begin planning for the expansion of the Alternative Certification Program to include middle and secondary mathematics teachers.

- IMSA will work to double the number of teacher candidates in the Alternative Certification Program to include two cohort groups.

- The book is available through www.ascd.org.

- At the end of the internship year, successful candidates can be awarded the IMSA Recognition.
Examples of IMSA Programs Serving Illinois Students and Educators

- Excellence 2000+
- Kids Institute
- STEP UP to the Future
- Problem-based Learning
- Standards-based Education: IMSA 2061
- Internet Toolkit
- Alternative Teacher Certification Program
- International Career Academy
- Illinois Virtual High School
- Great Minds Program
Beth Malecha ‘90 of Addison, is a U.S. Navy Lieutenant and pilot. A recent Top Gun school graduate, she is stationed in Virginia as a tactics instructor for fleet F-14 squadrons.

Professional Contributions of IMSA Staff and Alumni Benefit Illinois, the U.S. and the World

The following are examples of the significant contributions IMSA staff and alumni are making in their professional fields and in their communities, helping the state and nation to meet its needs in mathematics, science and technology. The information on IMSA alumni is, in part, taken from the 2001 IMSA publication, Reaching for the Stars, highlighting some of the many accomplishments of African-American and Latino IMSA alumni.

IMSA President Dr. Stephanie Pace Marshall presented If I Could Make a School to an international group of students at the International Society for Technology in Education Student Technology Leadership Symposium in Chicago. She also presented The Call for a New Story of Learning at the Executive Leadership Summer Institute in California.

Dr. Raymond Dagenais was elected to serve a two-year term as Vice-President of the Illinois Science Teachers Association.

Susan Eddins co-published the article NCTM’s Principles and Standards for School Mathematics: Implications for Administrators in the National Association of Secondary School Principals publication BULLETIN.

Dr. Susan Bisinger presented Quality Criteria for Professional Development to the Alliance for Illinois Education at Illinois State University in Bloomington.

Dr. Steven Rogg presented IMSA 2061 Partnership at the annual meeting of the Illinois Council of Teachers of Mathematics in Springfield.

Dr. David Barr presented Evaluating Web Resources at the Illinois Educational Technology Conference in Springfield.

Glenn Schwartzwalder moderated the session College Athletics and Institutional Values: Sending a Consistent Message during the College Board Midwest Regional Conference.

Joe Prieto published the article Applying to College in the State of Anxiety in Newsbrief, a publication of the Illinois Association for College Admission Counseling.

Diana Rios Liz ’89 of Aurora, is a pharmacist and certified diabetes specialist in Aurora.

Michael Rodriguez ’89 of South Holland, is a senior engineer at Motorola. He volunteers with the Les Turner ALS Foundation and the Muscular Dystrophy Foundation.

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Jill Howk Gengler ‘89 of Melvin, is the coordinator of the Distance Education program of the Graduate School of Library and Information Science at the University of Illinois at Champaign-Urbana. Active professionally, she presents at state and national library association conferences.

Scott Gaudi ’91 of Staunton, is an astronomer and Hubble Fellow at the Institute for Advanced Study in Princeton, New Jersey. He was named one of the "Twenty Scientists to Watch in the Next 20 Years" by Discover Magazine.

Asa Flanigan ’92 of Kankakee, is a M.D./Ph.D. student in the Department of Microbiology at the University of Illinois. He conducts research in infectious diseases, especially salmonella, an international problem in developing countries.

Katherine Ashford ‘93 of East St. Louis, is a systems engineer at TALX Corporation in St. Louis.

Gregory Veramendi ’94 of Evanston, works at Fermi National Accelerator Laboratory in Batavia as part of his studies toward a Ph.D. in Physics at the University of California at Berkeley.

Aimee Chong ‘94 of Carbondale, is a city planner and deputy project manager at Cambridge Systematics in Chicago.

Dorothy Pleas ’95 of La Grange Park, is a validation engineer at Abbott Laboratories in North Chicago.
Some initiatives at IMSA serve both the internal IMSA community and the external community beyond the walls of IMSA.

Strategic initiatives serving both the IMSA community and other Illinois teachers and students include the Great Minds Program, On-Line Learning and Minority Recruitment and Retention Programs.

The IMSA Great Minds Program

The IMSA Great Minds Program provides opportunities for Illinois educators, students and the general public to learn from, interact with and be inspired by “great minds” of our time. Dialogues, seminars and community lectures presented by the Great Minds Program have featured Nobel Laureates and other nationally and world-renowned leaders in mathematics, science, the arts and humanities. By reconnecting mathematics, science and the humanities to the human experience, the Great Minds Program helps to create conversations that matter to students and educators. Not surprisingly, some of the great minds include IMSA alums.

2000-01
Great Minds Highlights

• More than 1500 guests attended Great Minds Program events hosted on the IMSA campus and delivered to some via distance learning technologies.

• More than 700 Illinois teachers and students participated in Great Minds Program dialogues held at IMSA. Topics included Science, Law and Technology, Stories of a Scientist and Science Education in the 21st Century: Pushing the Envelope on Student Assessment.

• More than 700 people attended Great Minds Program community lectures held at IMSA for the general public. Some of the featured speakers included:
  - Dr. Leon Lederman, Nobel Laureate and IMSA resident scholar
  - Dr. Brian Spears, director of pharmacogenetics at Abbott Laboratories
  - Nicholas Pritzker, chairman and CEO of Hyatt Development Corp. and Hyatt Equities
  - Former U.S. Senator Paul Simon, director of the Public Policy Institute at Southern Illinois University
  - Sam Choi, IMSA alumnus, founder and COO of Visible Markets, Inc.
  - Dr. Lynn Margulis, microbiologist
  - Dr. Lawrence Krauss, theoretical physicist author of The Physics of Star Trek

• A group of 14 IMSA students, working under the supervision of Dr. Leon Lederman, wrote a book for middle school students profiling key scientists of the 20th Century. The book, Portraits of Great American Scientists, was published in Fall 2001.

• A series of white papers entitled: “Physics First? Redesigning the Science Curriculum for High Schools”, “Frontiers of Educational Technology” and “Science Education for the 21st Century: What Will It take to Deliver a Standards-Based Curriculum?” were created following the Great Minds Program dialogues with Illinois and national education experts. These white papers were distributed free of charge to approximately 600 people in Illinois and beyond.
What’s Ahead for 2002

The Great Minds Program will host two community lectures made possible in part by a grant from the Tellabs Foundation. They feature Admiral William Owens, CEO of Teledesic and senior military assistant to Secretaries of Defense Frank Carlucci and Dick Cheney; and Mr. Alfred Berkeley III, chairman of NASDAQ.

The Great Minds Program will host the dialogue, Frontiers of Educational Technology: Bridging the Digital Divides for middle and high school educators throughout Illinois. The event, made possible in part by a grant from the Tellabs Foundation, will feature presentations by world-renowned authorities such as Robert Tinker, president of The Concord Consortium, Marc Hamilton, director of technology for global education and research at Sun Microsystems Inc., and Tom Carroll, executive director of The National Commission on Teaching and America’s Future.

IMSA will host a pre-conference workshop on the IMSA Internet Toolkit for the Illinois Computing Educators (ICA) statewide conference.

IMSA will offer a full semester 3-credit online course in Digital Information Literacy.

On-line Learning Program

IMSA’s On-line Learning Program continued to expand throughout Illinois to include “anytime and anyplace” access to training in the use of IMSA’s Internet Toolkit. In addition, IMSA continued to play a key leadership role in the development of the Illinois Virtual High School, an initiative of Governor George H. Ryan administered by the Illinois State Board of Education.

2000-01 On-line Learning Highlights

• IMSA Director of Virtual Learning Mathew Wicks served as co-chair of the Illinois Virtual High School (IVHS). In its pilot semester, launched in January 2001, the IVHS offered 16 courses to students throughout Illinois in a wide variety of subjects, including an introductory Physics course taught by an IMSA instructor.

• The IMSA Internet Toolkit was named an official digital resource for the Illinois Virtual High School. The IMSA Internet Toolkit offers students and teachers software tools and learning materials to help them find, evaluate and use Internet information resources more effectively.

• IMSA began online training workshops in Digital Information Literacy for 50 Illinois educators, focusing on topics such as how to develop successful search strategies, how to apply copyright laws to web materials and how to incorporate multimedia resources into documents.

Minority Recruitment and Retention Programs

IMSA’s interconnected Minority Recruitment and Retention Programs seek to increase the number of talented underrepresented minority students who apply to, enroll in and complete the Academy’s program. IMSA offers a wide variety of pre-admissions enrichment programs for students in grades 7-9 and retention programs for students enrolled at the Academy. These programs are designed to nurture these populations so that they will be afforded an early opportunity for success and contributions to the community, state and world.

2000-01 Minority Recruitment and Retention Highlights

• 350 7th and 8th grade students from 10 Chicagoland schools visited IMSA for one-day field trip experiences that included hands-on science laboratories as part of Project School Visit.

• 54 IMSA sophomores (selected underrepresented minorities and others enrolled at IMSA) participated in the three-week summer and year long EXCEL Program.

• 33 Chicagoland 9th graders participated in the three-week SEAMS summer residential enrichment program.

• 20 Chicagoland 9th graders participated in the 12-week Saturday EIP Program at Loyola University.

• IMSA students were paired with minority professional mentors in the weekly Tutor Model Program.
Sources of Operating Resources

- State Appropriated General Funds: 84%
- Locally Generated - State Appropriated - "IMSA Income Fund": 4%
- Locally Generated - "IMSA Local Fund": 2%
- Private Grants and Contracts: 4%
- Governmental Grants and Contracts: 7%
- Total Operating Resources: $18,664,143

Expenditures

- Other Expenses: 1%
- Travel: 1%
- Equipment: 5%
- Commodities: 3%
- Telecommunication Services: 1%
- Contractual Services (includes health care services, food services, utilities, etc.): 24%
- Personal Services: 66%

To support and expand the Academy's research, innovative teaching and external service programs/initiatives, the Illinois General Assembly appropriated an operating budget of $16.3 million in 2000-01. IMSA's Office of Advancement and the IMSA Fund for Advancement of Education work to secure additional investments of various constituencies including individuals, corporations, foundations, educational institutions and governmental agencies to advance the Academy's mission. During 2000-01, $2,213,958 in private sector revenues, and governmental grants and contracts was secured.

IMSA parents paid a $950 fee in 2000-01 to offset some of the costs of cocurricular programs and residential services.

To receive a copy of the 2000-01 IMSA Fund Annual Report, contact the Office of Advancement at (630) 907-5040.
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IMSA ANNUAL REPORT

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