

SENATE APPROPRIATIONS II
ACADEMY STATUS REPORT
APRIL 7, 1989

I. BRIEF STATUS REPORT ON ACADEMY

- A. 1988-1989 SCHOOL YEAR MARKED FIRST YEAR THAT THE ACADEMY WAS A COMPLETE 3-YEAR INSTITUTION WITH 3 CLASSES OF STUDENTS IN GRADES 10-12.
- B. OF THE 6 STATE RESIDENTIAL SCHOOLS IN THE NATION, THE ILLINOIS ACADEMY IS THE ONLY 3-YEAR PROGRAM; ALL OTHER INSTITUTIONS ARE 2-YEAR PROGRAMS.
- C. BEGIN YEAR WITH 500 STUDENTS, AND 41 FULL-TIME FACULTY; 29 PERCENT OF WHOM HAVE THEIR PH.D--ALL OTHERS HAVE MASTERS DEGREE.
- D. STUDENT DEMOGRAPHICS OF THE CLASS OF 1991 VERY SIMILAR TO THE PROFILE OF THE PREVIOUS 2 CLASSES.

PRESENTLY, ENTIRE STUDENT BODY:

WHITE 69 PERCENT

ASIAN 18 PERCENT
BLACK 8 PERCENT
HISPANIC 3 PERCENT
OTHER 2 PERCENT

MALE 57 PERCENT
FEMALE 43 PERCENT
CHICAGO 55 PERCENT (METRO AREA)
REST OF
ILLINOIS 45 PERCENT

* INCREASED STUDENTS FROM CHICAGO FROM:

3	1986
9	1987
21	1988

* REFLECT EFFORTS OF CAAC AND CHICAGO
OFFICE

* ADMISSIONS STATISTICS ARE ALSO
RELATIVELY STABLE, ALTHOUGH SAT SCORES
OF ENTERING STUDENTS HAVE BEEN
INCREASING

AVERAGE SAT FROM CLASS OF 1991 WAS:

641	MATH
535	VERBAL

(460 IN MATH AND 425 IN VERBAL IS
NATIONAL AVERAGE)

E. PROGRAM INITIATIVES

- 1. EXPANDED CURRICULUM - APPRENTICE
INVESTIGATION EMPHASIS FROM 24 COURSES
OUR FIRST YEAR TO 122 COURSE OFFERINGS
PROJECTED FOR 1989-1990.**

*** MATHEMATICS 21**

**MULTIVARIABLE CALCULUS
DIFFERENTIAL EQUATIONS
DISCRETE MATHEMATICS**

*** SCIENCE 27**

**ASTROPHYSICS
MICROBIOLOGY
ASTRONOMY
GENETICS
ELECTRONICS
ORGANIC CHEMISTRY
MEDICAL BIOLOGY**

*** ENGLISH AND SOCIAL SCIENCE 14**

*** FOREIGN LANGUAGE 6**

- 2. SATURDAY SEMINARS - 4 TIMES PER YEAR
INTERDISCIPLINARY FOCUS:**

**AIDS
NUCLEAR WASTE MANAGEMENT**

- 3. RESEARCH SYMPOSIUM - APRIL 24, 1989**

- 4. MENTORSHIP PROGRAM - MENTORSHIP
COORDINATOR
INTENSE 5-6 HOUR WEEKLY RESEARCH
UNIVERSITIES AND RESEARCH LABS:
UNIVERSITY OF ILLINOIS-CHICAGO
NORTHERN ILLINOIS UNIVERSITY
LOYOLA MEDICAL
IIT
UNIVERSITY OF CHICAGO
ARGONNE LABORATORY
FERMILAB NATIONAL LABORATORY**

- 5. EXPANDED CURRICULUM DEVELOPMENT AND
ASSESSMENT RESEARCH**
 - * ESTABLISHING CURRICULUM DEVELOPMENT
MODEL**
 - * ASSESSMENT MODEL FOR HIGHER ORDER
THINKING AND APPRENTICE INVESTIGATOR**
 - * ESTABLISH STUDENT LEARNER OUTCOMES**

- 6. EXPANDED COMMUNITY SERVICE -
GRADUATION REQUIREMENT**

- F. EXPANDED OUTREACH PROGRAM INITIATIVES**
- * **TEACHER TRAINING**
 - * **STUDENT PROGRAMS**
 - * **LEGISLATED MANDATE TO SERVE AS A CATALYST TO STIMULATE IMPROVEMENT OF MATHEMATICS AND SCIENCE ACROSS ILLINOIS**
 - * **IMSA AS LEADER**
- * **BEGAN FOLLOWING INITIATIVES:**
- **SUMMER ADVENTURES IN MATHEMATICS, SCIENCE AND TECHNOLOGY I AND II - 9-12**
 - **STATE LEADERSHIP CONFERENCE (ISSUES IN MATHEMATICS, SCIENCE AND TECHNOLOGY WITH REGARD TO RECRUITMENT OF WOMEN AND MINORITIES)**
 - **IMSA PROFESSIONAL DEVELOPMENT CALENDAR**
 - **PRESIDENTIAL AWARDS FOR EXCELLENCE IN SCIENCE AND MATHEMATICS TEACHING (RECOGNITION/SEMINAR/PUBLICATIONS/DISSERTATION)**
 - **PROBLEM SOLVING AND CRITICAL THINKING IN MATHEMATICS; K-8 (NSF/TITLE II FUNDED)**
 - **SATURDAY SCHOLARS DISTINGUISHED**

LECTURE SERIES; 9-12

- **SUMMER INSTITUTE IN BASIC ECONOMICS FOR ELEMENTARY AND SECONDARY TEACHERS**
- **INTECH: COMPETITION OR YOUNG SCIENTISTS AND ENGINEERS**
- **AFTERNOON SCHOLARS (STATEWIDE PILOT); 3-8**
- **FERMILAB SUMMER INTERN PROGRAM**
- **DEPARTMENT OF ENERGY HONORS PROGRAM**
- **MATHEMATICS WORKSHOP FOR ELEMENTARY/MIDDLE SCHOOL TEACHERS**
- **NSF SUPPORTED TOPICS IN MODERN PHYSICS (FIRENDS OF FERMILAB)**
- **INPUT/MEETINGS WITH ADVISORY GROUPS ON FIVE-YEAR PLAN**
- **ARGONNE SUPERCONDUCTING PROGRAM**
- **JUNIOR SCHOLARS WEEKEND - GRADE 6**
- **STATEWIDE CLEARINGHOUSE NETWORK - '800' NUMBER, COMPUTERIZED RESEARCH**
- **QUARTERLY NEWSLETTER**
- **SATELLITE DELIVERY - INSTRUCTIONAL TV**
- **IMSA FELLOWS PROGRAM**

OUTREACH BUDGET

<u>LEVEL I STUDENTS</u>	<u>FY 1989</u>	<u>FY 1990</u>
SUMMER ADVENTURES		
JUNIOR SCHOLARS		
	\$ 296,070	\$ 459,249

<u>LEVEL I TEACHER</u>		
LEADERSHIP CONFERENCE		
REGIONAL CONFERENCE		
PROFESSIONAL TRAINING CALENDAR		
	\$ 57,215	\$ 119,465

<u>LEVEL I PROFESSIONAL DEVELOPMENT</u>		
OUTREACH ADVISORY TASK FORCE		
GRANT PREPARATION		
	\$ 19,604	\$ 18,346

<u>LEVEL II STUDENT</u>		
OF AFTERNOON SCHOLARS		
SATURDAY SCHOLARS		
	\$ 70,016	\$ 99,232

<u>LEVEL II PRESIDENTIAL AWARD</u>		
	\$ 23,335	\$ 25,885

<u>TOTAL</u>	\$ 468,993	\$ 725,746
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PERCENT OF GRF

5

8

F. UNIVERSITY AFFILIATE PROGRAM

**EXPLORED WAYS TO COLLABORATE WITH
ILLINOIS UNIVERSITIES**

MEMBERSHIP:

UNIVERSITY OF CHICAGO

NORTHWESTERN UNIVERSITY

UNIVERSITY OF ILLINOIS - CHAMPAIGN

UNIVERSITY OF ILLINOIS - CHICAGO

ILLINOIS STATE UNIVERSITY

NORTHERN ILLINOIS UNIVERSITY

EASTERN ILLINOIS UNIVERSITY

WESTERN ILLINOIS UNIVERSITY

ILLINOIS INSTITUTE OF TECHNOLOGY

CHICAGO STATE UNIVERSITY

SANGAMON STATE UNIVERSITY

SOUTHERN ILLINOIS UNIVERSITY-CARBONDALE

SOUTHERN ILLINOIS UNIVERSITY-EDWARDSVILLE

LOYOLA UNIVERSITY

GOVERNORS STATE UNIVERSITY

NORTHEASTERN ILLINOIS UNIVERSITY

COLLABORATED IN:

*** CURRICULUM DEVELOPMENT**

- * RESEARCH
- * FACULTY SABBATICAL
- * STUDENT TEACHING
- * MENTORSHIP

H. CORPORATE PARTNERSHIP INCREASE

1986-1989 \$ 300,000 FURNAS
 1987-1988 \$ 165,000 APPLE
 1987-1988 \$ 225,000 AMOCO - DEDICATED
 APRIL 24, 1989
 1988-1989 \$ 114,500 HITACHI
 TOTAL \$ 1.3 MILLION

ALL RESTRICTED AND DESIGNATED FOR
 SPECIFIC PROJECTS, AND ALL DEDICATED TO
 THE PEOPLE OF ILLINOIS--BECAUSE LABS ARE
 SHARED WITH TEACHERS
 AND STUDENTS ACROSS ILLINOIS THROUGH
 OUTREACH.

II. HIGHLIGHTS OF THIS YEAR

A. GRADUATION - JUNE 10, 1989

B. 65 NATIONAL MERIT SEMIFINALISTS

56 NATIONAL MERIT FINALISTS

119 OR 65 PERCENT OF CLASS COMMENDED

C. COLLEGE ACCEPTANCES:

MIT	10
HARVARD	8
UNIVERSITY OF CHICAGO	34
UNIVERSITY OF ILLINOIS	120

D. 2 - WESTINGHOUSE COMPETITION

**E. EASTLAND DISASTER HISTORICAL MARKER
PROPOSAL SUBMITTED TO ILLINOIS HISTORIC
PRESERVATION SOCIETY FOR ERECTION OF A
COMMEMORATIVE MARKER**

TO BE DEDICATED - SUNDAY, JUNE 4, 1989

F. SPECIAL TEACHER RECOGNITION

APRIL 22, 1988	268
APRIL 14, 1989	107

**"THANK YOU FOR CONTRIBUTING TO THE
MAGIC" - RECOGNIZED BY STUDENTS.**

G. NATIONAL CONSORTIUM

27	SCHOOLS
6	RESIDENTIAL
21	COMMUTING SCHOOLS

COLLABORATIVE

- * **THOMAS JEFFERSON HIGH SCHOOL - 2
CONFERENCES**
- * **NORTH CAROLINA SCHOOL, APRIL 27-29,
1989 - 2 CONFERENCES**
- * **ILLINOIS - SPRING, 1990**

ILLINOIS LEADERSHIP**H. SUMMARY**

**ALTHOUGH ONLY 3 YEARS OLD, BELIEVE
ACADEMY IS MAKING AN IMPACT ON
MATHEMATICS AND SCIENCE PROGRAMS IN
ILLINOIS**

**ACADEMIC RIGOR, INTERDISCIPLINARY
LEARNING, APPRENTICE INVESTIGATION,
ETHICAL DECISION-MAKING, AND THE
DEVELOPMENT OF A CARING COMMUNITY
CONTINUE TO BE OUR GOALS**

**I. APPRECIATE SUPPORT OF GENERAL ASSEMBLY
IN ENABLING US TO GO FORWARD**

III. CONCLUSION**SAGAN QUOTE:**

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 DESIGNBED 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. THERE, GIFTED STUDENTS TAUGHT BY CAPABLE TEACHERS WORK TOGETHER IN AN ATMOSPHERE OF ACADEMIC EXCELLENCE OPEN TO NEW IDEAS.

IT IS A GIFT FROM THE PEOPLE OF ILLINOIS TO THE HUMAN FUTURE.