



## News and Notes

### Welcome First Year IMSA Excellence 2000+ Schools!

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|---|--|
| Ariel Community Academy, <i>Chicago</i>                     | Komarek School, <i>North Riverside</i>         |
| Doolittle East School, <i>Chicago</i>                       | St. Mark Catholic School, <i>Peoria</i>        |
| Gray Elementary School, <i>Chicago</i>                      | Murray Language Academy, <i>Chicago</i>        |
| Rock Island Center for Math and Science, <i>Rock Island</i> | Eureka Middle School, <i>Eureka</i>            |
| Shoop Elementary, <i>Chicago</i>                            | Wentworth Junior High, <i>Calumet City</i>     |
| Greenman Elementary, <i>Aurora</i>                          | St. Raphael Catholic School, <i>Naperville</i> |

### Math Inquiry Field Trips to IMSA

*By Dr. Ray Dagenais, Curriculum and Professional Development Specialist*

Each school year the Excellence 2000+ (E2K+) Program offers opportunities for E2K+ teachers and their students to come to the Illinois Mathematics and Science Academy to attend a session of E2K+ Math Inquiry (MI). During the visit, partner school teachers and their students are treated to active presentations by IMSA mathematics faculty. A tour of the Academy allows the visitors to see some of the classrooms, laboratories, and recreation areas available to IMSA students. IMSA's Kids Institute provides our E2K+ 6-7th graders with an exciting science demonstration with the help of IMSA students. Eighth graders get to tour the student dorms and participate in an Admissions presentation. Before departing for home, students and teachers enjoy lunch in the IMSA cafeteria.



The demand for MI Field Trips has increased to the point where additional sessions have been added to our E2K+ calendar. Dr. Michael Sloan, a former IMSA mathematics faculty member, now retired, has agreed to facilitate the additional sessions. Students engage in inquiry-based, problem-centered activities involving pattern recognition, puzzle challenges, probability excursions, and hands-on model-building tasks, as well as other mathematically based activities. Besides the fun of successfully addressing new challenges, participants leave with new a understanding of mathematical topics and an increased interest in exploring more mathematical ideas.

**Spring  
2010**

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**Award-winning<sup>1</sup> student enrichment and teacher professional development program for Illinois schools by the Illinois Mathematics and Science Academy® <https://www3.imsa.edu/programs/e2k>**

IMSA Excellence 2000+ (E2K+) is an after-school enrichment program for late elementary and middle school students in 4<sup>th</sup>-8<sup>th</sup> grade who are talented, interested and motivated in mathematics and science. E2K+ also serves as a professional development program for teachers focusing on strengthening instructional strategies in science, technology, engineering and mathematics (STEM). IMSA E2K+ originated at the request of the Illinois General Assembly. IMSA E2K+ began in the 2000-01 academic year with seven pilot sites. To date, we have served more than 6,700 Illinois students. E2K+ employs IMSA's recognized core competency of designing, developing and delivering curricular materials and teaching approaches that are competency-driven (standards influenced), problem-centered ("real world"-focused), inquiry-based (student-led) and integrative (connected).

**Program Goals**

- Increase or maintain student interest, involvement and literacy in mathematics and science
- Enhance teacher knowledge and skills in mathematics and science
- Stimulate excellence in school mathematics and science programs
- Help increase access to programming for students who are historically underrepresented in mathematics and science and for all areas of the state.

**E2K+ Increases Access for Students Underrepresented, Underserved in STEM**

Year	% Low Income	% Cauca-sian	% African American	% Hispanic	% Native American	% Asian	% Male Female	% of Programs in Urban or Ru-ral Districts
2009	57	35.9	37.3	19.7	.1	2.2	51 M 49 F	65

**E2K+ Teachers Classroom Practice**

**Students Choose Advanced Courses**

<p>Teacher reported changes in instructional practices due to their participation in E2K+.</p> <p><b>Competency-driven:</b> 94% reported an increase in the application of math and science concepts</p> <p><b>Inquiry-based:</b> 100% reported an increase in use of open-ended, student-driven, high level questioning</p> <p><b>Integrative:</b> 94% reported an increase in integrative learning experiences across disciplines</p> <p><b>Problem-centered:</b> 100% reported an increase in the use of real-world problems in the classroom</p>	<p>E2K+ graduates' enrollment patterns in freshmen and sophomore mathematics and science courses.</p> <p>74% take advanced mathematics courses</p> <p>100% take advanced science courses</p> <p><i>Preliminary results based on 95 E2K+ graduates in four high school districts</i></p> <p>Data source, Dr. Elizabeth Oyer, Evaluation Solutions</p>
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<sup>1</sup>IMSA Excellenced as one of the "Best Practice" STEM Education programs showcased in our nation's capital on Sep. 28, 2006 at a STEM Education Diversity Forum hosted by the Bayer Corporation. The Forum highlighted programs with a "proven track of helping girls and underrepresented minorities to participate and achieve in STEM."

# IMSA E2K+ Students Serve as Leaders in their Schools

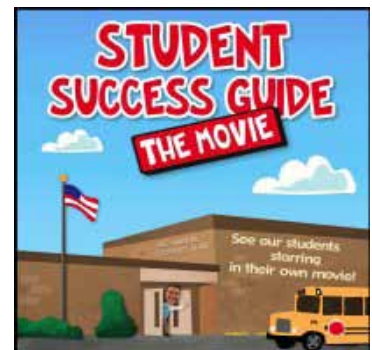
By Jami Breslin, E2K+ Project Director

## E2K+ Students Help Peers Find Success at Sandburg Elementary

Keith Kincaid, Principal of Sandburg Elementary in Springfield, believes that his Excellence 2000+ students serve as daily role models for their peers in “striving for excellence in academic achievement”. He also believes that these students exhibit the **“leadership skills, as well as the literacy and communication skills”**, necessary for school projects that extend beyond the classroom.

Sandburg’s E2K+ students were instrumental in creating an enormously popular video for the school entitled: *Student Success Guide: The Movie*. Mr. Kincaid wanted the print version of this guide to “come alive” for his K-5th grade students, so he and his E2K+ students created a 14 minute video **“designed to be used as a teaching tool for presenting the universal expectations of Sandburg School”**. The video is used four times annually, bringing peer-to-peer learning to a new level for the students.

**“The E2K+ students initially worked in small groups to write different scenes that would ultimately appear in the movie. They identified the key points of the expectations in each setting around the school. After that, the students created the script, peer edited other students’ scripts, rehearsed the scenes, discussed what the scenes should “look like”, and finally taped the voiceovers heard in the movie. This fall, our school hosted the “world premiere” of the movie. Our E2K+ students had VIP front row seats, and afterward, hosted a Q and A session on the making of the movie with over 300 people.”**



Sandburg Elementary has been with the Excellence 2000+ 4-5th grade program for two years. Kristin Colgren, Linda Daugherty and Jane Blickhan serve as the teachers. According to Mr. Kincaid, the benefits of E2K+ are numerous and far-reaching.

**“The immediate benefits are giving this population of students an opportunity where they get to solve problems together with peers of similar ability, really grapple with open ended problems, and have the opportunity to really be challenged by the top notch teaching staff we have working with this program. An additional immediate benefit is nurturing these children’s love and innate talents in math and science. This leads to what we anticipate to be future benefits: students continuing to excel in math and science and encouraging students to pursue career opportunities in math and science fields.”**

You can enjoy the *Student Success Guide: The Movie* on the Sandburg website at: <http://www.springfield.k12.il.us/schools/sandburg/>.

Your feedback is important to us! Teacher Feedback is due via online submission from our website after each lesson. Coordinator Feedback is due monthly.  
Thank you for your input!  
<http://www.3.imsa.edu/programs/e2k/forteachers>

## Spotlight on Washington Middle School Students in Aurora

By Layla Groleau, Gifted Coordinator / IMSA Excellence 2000+ Coordinator

Have you ever wondered what our IMSA Excellence 2000+ students do when they're not at our E2K+ program? We decided to take an inventory of the activities these students are involved in. You might be surprised to discover that IMSA E2K+ students are not just math and science "brainiacs". On the contrary, they enjoy using both the left and right sides of their brains and have a variety of interests. These students are not only a vital part of our middle school; they also share their gifts and talents with the community.



### **Emma Hicks**

Emma joined the E2K+ program because she just loves math! Actually, Emma loves a lot of things. . . like school, sports, music, and church. She played volleyball here at school, intends to play basketball in the winter, then run track in the spring. But this Renaissance woman balances this with her love for music. Emma is part of Washington's Early Morning Choir, she plays percussion in our band, and also plays the piano and the violin at home! One of her favorite pieces to play is Pachelbel's Canon in D.

### **Jessica Raymundo**

Jessica really enjoyed creating faces using computer software at our E2K+ program. She learned that if you see someone for a split second, you might not remember all the details. In addition to E2K+, Jessica loves sports and music! She just finished her volleyball season here at WMS, and will sign up for basketball in the winter. Her favorite sport is softball, though, and she plays for a summer league in Aurora. Each week Jessica attends CCD at her church, Holy Angels. Somehow, she still finds the time to practice her baritone for the school band, and her piano at home. Her favorite piece to play on the piano is "The Music of the Night" from The Phantom of the Opera.



### **Libby Wiet**

Libby had a really interesting reason for joining the E2K+ program. She said that although she has always excelled in math and science, she never really liked it. She had heard about all the fun hands-on activities, and thought that our IMSA program might help her enjoy math and science more. It already has! In addition to the E2K+ program, Libby enjoys volleyball and intends to play basketball. She plays trombone for the school band, and is also wondering if the drama club might be able to use her dramatic flair! In addition, Libby loves to dance at a local dance studio. Tap dance is her favorite.

### **Year-End Webinars**

*Attention all teachers and principals...In May we will have our E2K+ culminating, end-of-year sharing webinars! These events mark our final professional development requirement for the school year. We are eagerly anticipating these sessions so that we can hear about all of the exciting things happening in your E2K+ programs!*



## IMSA E2K+ Students Serve as Junior Group Leaders for Summer@IMSA

By Jami Breslin, E2K+ Project Director



IMSA's Kids Institute is a Professional Field Services program that offers a variety of summer programs, school assemblies, field trips, and Saturday programs. Kids Institute experiences provide hands-on enrichment in mathematics, science and technology for students in 3rd through 9th grades. The unique power of this program is that IMSA students develop and direct student learning, acting as teachers and mentors for younger students. The Kids Institute exemplifies student leadership and fosters the development of student leaders at IMSA and in the younger grades.

This past summer, five E2K+ students from Springfield served as Kids Institute Junior Group Leaders. Kara Milward, Kellen McCormick, Ben Roth, Merik Ducker, and Noah Flynn, students from Lincoln Magnet School in Springfield, came to IMSA for a full week of camp to “learn the ropes” of mentoring and teaching from IMSA Kids Institute student leaders, or “Allies”, according to Julie Dowling, Statewide Student Initiatives Specialist. Not only did the students learn how to assist in math and science lab activities, they also developed leadership and classroom management skills. Later that same summer in Springfield, the students put their skills to work with 3rd through 6th grade students in Science Explorers and Kidsplorations in Technology camps. IMSA and the Excellence 2000+ program offer participating students tremendous opportunities for growth and for the development of leadership skills that will better prepare them for their futures!



***If you are interested in having your E2K+ students participate in Summer@IMSA as Junior Group Leaders, or “Junior Allies”, please contact Tracy Miller, Director of Statewide Student Initiatives, [tmiller@imsa.edu](mailto:tmiller@imsa.edu) or 630.907.5674.***

*This summer, IMSA E2K+ is offering a new summer program:*

*“Tracking Killer Storms”! Learn more about our Summer@IMSA programs and encourage your students to register online*

*<https://www3.imsa.edu/programs/SummeratIMSA>.*



*Parent, Site Staff, and Student Surveys must be completed annually to help us continually improve our program to better serve our schools, teachers, and students! Please complete your survey today at [www.imsa.edu/programs/e2k](http://www.imsa.edu/programs/e2k). Thank you!*

## Springfield IMSA-Mania!

By Sharon Poynter, IMSA Site Support Specialist

On Saturday, November 21, 2009, two Springfield schools brought their 4-5th grade E2K+ students together for a Saturday morning IMSA event: IMSA-Mania! Iles School has two E2K+ groups this year, so the event was hosted at Iles. Sandburg teachers and students traveled across town for the morning activity. The day started in the gym with some ice breaker games and activities. Then, the students were randomly mixed together and put into three groups. The teachers from each E2K+ section planned an activity and facilitated that activity with each of the groups. The engaging activities included building and using single and double pulleys with legos, launching a toy car with rubber bands and gathering data, and simulating roller coasters online. Students enjoyed a mid-morning snack. At the end of the morning, students and teachers had time to debrief and share the events, activities, and challenges of the day. The students enjoyed all of the activities, but most of all, they enjoyed getting to know students from another school!



## Pat Trafton: “An Example of Excellence” in Teaching

By Jami Breslin, E2K+ Project Director

Pat Trafton, Math Teacher, Department Chair, and E2K+ Teacher at Lincoln Middle School in Schiller Park, truly exemplifies teacher excellence, and is a leader in her district. Recently, Pat was honored as the district’s “Example of Excellence” at a school board meeting for her editorial panel chairmanship with NCTM (the National Council of Teachers of Mathematics). After 22 years as a math teacher, Pat Trafton shows a growing love of not only her subject area, but also of the opportunity to learn more about effective teaching and learning. She explains; ***“My love of mathematics and my passion for helping others see the beauty, and appreciate the usefulness, of mathematics, has given me the opportunity to serve math teachers and students throughout our country. It is a privilege to do so.”*** Her superintendent, Dr. Roberta Taylor, presented Pat with the “Example of Excellence” award, stating that Pat’s ***“passion for teaching mathematics has had an impact not only on her students but the entire staff and faculty.*** Pat has provided the leadership necessary for effective implementation of the Connected Math Series. Dr. Taylor further commended Pat’s knowledge and support of her students, her questioning strategies, and her delivery of the IMSA E2K+ program. Congratulations, Pat!



*Pictured: Kimberly Boryszewski, Principal, Kennedy Elementary School, Dr. Roberta Taylor, Superintendent, Schiller Park School District 81, and colleagues from Lincoln Middle School: Constance Stavrou, Principal, Pat Trafton, Math Department Chair, Kathy Brant, Learning Facilitator, Brian Amsler, Assistant Principal*

## Introducing Our New IMSA Excellence 2000+ Staff

### **Liz Martinez, Curriculum Specialist**

Liz Martinez spent 29 years teaching sixth through eighth graders in a variety of educational settings, and has focused most of her energy on her passion for science. These years have afforded her unique opportunities, including working with the National Gorilla Foundation, Great Explorations in Math and Science, and the National Science Foundation. Being involved with the Science Education for Public Understanding Program (SEPUP) as a field tester, coordinator, author, and trainer since 1984 has been monumental. Liz continues to work with schools and make presentations around the country. Liz attended National College of Education for her undergrad work, and earned her Master's Degree in Curriculum and Instruction from Concordia University.



### **Renee Anderson, Curriculum Specialist**

Renee Anderson recently joined the Excellence 2000+ team as a Curriculum and Professional Development Specialist. She comes to us with several years of educational and professional experience. Previously, Renee taught physics and chemistry after earning her teaching certification through the Alternative Teaching Certification Program in Science and Mathematics at Benedictine University. Prior to teaching, Renee worked as an Engineer for the U.S. Department of Defense, Joint Program Manager for Nuclear, Biological, and Chemical Contamination Avoidance Team. She holds an M.S. in Agriculture and Biological Engineering and a B.S. in Food Science, both from Penn State University.

### **Sandy Kehl, Program Assistant**

Sandy Kehl began working as the new Project Secretary for the E2K+ Program in November, 2009. She brings 25 years of administrative experience to the program, along with a tremendous work ethic, personality, and outstanding skill set. She has jumped into program operations, asking great questions and assessing program needs, to learn as much as she can and to offer her help. We are thrilled that Sandy has joined the E2K+ team.



### **Jami Breslin, Project Director**

This past spring, the IMSA E2K+ team welcomed a new project director. Jami Breslin comes to the program after ten years of middle school teaching. She later served as a consultant and academic specialist for the Association of Illinois Middle-Level Schools and the University of Illinois. She gained experience in business working as a healthcare project manager, as well. She has a B.A. in Psychology from Loyola University of Chicago, and an M.A. in School Administration from Concordia University in River Forest. The E2K+ team is excited about the talent and energy that Jami brings to the initiative, and looks forward to working with her to offer our partner schools the continued quality and integrity for which the E2K+ Program has been recognized.

*Keep an eye on our website!  
The IMSA E2K+ website is always being  
updated with new information,  
opportunities, PROBLEMS of the MONTH,  
and the online version of our newsletter.*

***[www.imsa.edu/programs/e2k](http://www.imsa.edu/programs/e2k)***

The internationally recognized Illinois Mathematics and Science Academy® (IMSA) develops creative, ethical leaders in science, technology, engineering and mathematics. As a teaching and learning laboratory created by the State of Illinois, IMSA enrolls academically talented Illinois students (grades 10-12) in its advanced, residential college preparatory program, and it serves thousands of educators and students in Illinois and beyond through innovative instructional programs that foster imagination and inquiry. IMSA also advances education through research, groundbreaking ventures and strategic partnerships. ([www.imsa.edu](http://www.imsa.edu))

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