

SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS

*No Limits
No Boundaries*



62nd Annual
Chicago Public Schools
Student Science Fair

Museum of Science and Industry
March 22 - March 25, 2012



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The Motorola Solutions Foundation is proud to support the Chicago Public Schools' Student Science Fair. We encourage students to use their imaginations to envision the impossible. Through the power of science and math, creativity has no limits.

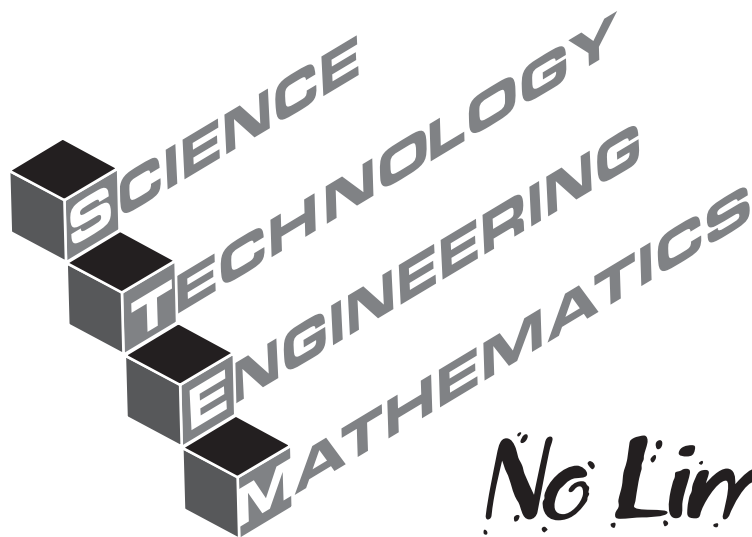
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2012 Science Fair Program Book

62nd Annual Chicago Public Schools Student Science Fair



*No Limits
No Boundaries*

Chicago Public Schools
Chicago Public Schools Student Science Fair, Inc.
Office of Curriculum & Instruction
Office of the Chief Executive Officer
Office of the Chief Education Officer

Museum of Science and Industry

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www.cpsscifair.org

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Schedule of Events

Thursday, March 22, 2012 – Symposium – details on page 23

9:30 A.M. – 11:30 A.M.	Symposium Morning Sessions (e-Suite, two Classrooms)
11:30 A.M. – 12:45 P.M.	Symposium Luncheon (Columbian Room)- by invitation only
1:00 P.M. – 3:30 P.M.	Symposium Afternoon Sessions (e-Suite, two Classrooms)

Friday, March 23, 2012 – Exhibit Judging – details on page 27

7:30 A.M. – 8:30 A.M.	Judges Briefing and Breakfast (Auditorium)
8:30 A.M. – 12:00 NOON	Judging of Exhibits (West Pavilion)
11:00 A.M. – 11:30 A.M.	Opening Ceremony (West Pavilion Main Entrance)
11:30 A.M. – 12:00 NOON	Ribbon Cutting and Exhibit Tour (West Pavilion)
11:30 A.M. – 1:30 P.M.	Judges Buffet Luncheon (Energy Exhibit)
12:00 NOON – 1:00 P.M.	Recognition Luncheon (Columbian Room) - by invitation only
12:00 NOON – 1:00 P.M.	Judging Continues (West Pavilion)
1:00 P.M. – 3:15 P.M.	Science Fair Open to the Public (West Pavilion)

Saturday, March 24, 2012– Public viewing and additional events – details on page 43

9:00 A.M. – 11:45 A.M.	Sixth-Grade Regional Winners Tour of the Museum
9:30 A.M. – 3:15 P.M.	Science Fair Open to the Public (West Pavilion)
9:30 A.M. – 3:00 P.M.	International Science and Engineering Fair Judging (Auditorium)
11:45 A.M. – 1:00 P.M.	Sixth-Grade Regional Winners Luncheon (Columbian Room) – p.43
2:00 P.M. – 3:00 P.M.	ComEd Science Club Social (Columbian Room) – by ticket only

Sunday, March 25, 2012 – Awards Convocation – details on page 45

11:00 A.M. – 12:00 NOON	Science Fair Open to the Public (West Pavilion)
1:00 P.M. – 3:00 P.M.	Awards Convocation (Auditorium) - by ticket only



Proclamation from the Mayor of the City of Chicago



OFFICE OF THE MAYOR
CITY OF CHICAGO

RAHM EMANUEL
MAYOR

PROCLAMATION

WHEREAS, from March 22 through March 25, 2012, the Chicago Public Schools, in association with the Museum of Science and Industry, will host the 62nd Annual Citywide Chicago Public Schools Student Science Fair; and

WHEREAS, the 2012 Student Science Fair follows the theme *Science, Technology, Engineering, Mathematics: No Limits, No Boundaries*; and

WHEREAS, approximately 300 students from a total of 10,000 participants at the local school and area levels will be selected to exhibit their projects and symposium papers at the Museum of Science and Industry; and

WHEREAS, 70 of those students will be sent to the Illinois Junior Academy State Science Fair at the University of Illinois at Urbana-Champaign, and four will be sent to the International Science and Engineering Fair in Pittsburg, Pennsylvania; and

WHEREAS, students will compete in sixteen categories, including aerospace science, behavioral science, biochemistry, botany, chemistry, computer programming, earth science, electronics, engineering science, environmental science, health science, materials science, mathematics, microbiology, physics and zoology;

NOW, THEREFORE, I, RAHM EMANUEL, MAYOR OF THE CITY OF CHICAGO, do hereby proclaim March 22-25, 2012, to be CHICAGO PUBLIC SCHOOLS STUDENT SCIENCE FAIR DAYS IN CHICAGO, in recognition of the exceptional talents displayed by these students and in appreciation of the teacher sponsors and parents who have provided support and encouragement for these young scientists.

Dated this 28th day of February, 2012.

Mayor



2011 Opening Ceremony

On Friday, March 25th, the 61st Annual Chicago Public Schools Student Science Fair opened with corporate and CPS sponsors' greetings, accolades and words of encouragement for the student scientists at this year's fair.



Fourth Ward Alderman Leslie Hariston extends congratulations to students, and to their parents and teachers.



Student Science Fair exhibitors assemble for the Opening Ceremony.



This trio is happy to be exhibitors at the 61st Annual Student Science Fair.



Fidel Marquez, Comed, An Exelon Company, expresses support of high school science clubs.



MSI Pyrotechnist, Brett Nicholas, prepares the audience for a loud explosion.



Hubbard HS JROTC cadet participates in the presentation of colors.



About the Chicago Public Schools Student Science Fair (CPSSSF)

About the Fair

We are proud to present the 62nd Annual Chicago Public Schools (CPS) Student Science Fair. The fair originated in 1950 as a vehicle to encourage and motivate young science students. Since then, a volunteer army of teachers and administrators has sustained this exemplary program. The objectives of the CPS Student Science Fair are to:

- provide opportunities and support for students to conduct authentic research
- expose students to diverse science learning communities
- obtain scholarships for selected Chicago Public Schools graduating seniors
- maintain perpetual interest in fostering scientific research, invention, and technological development
- promote scientific interests and hobbies of students
- conduct an annual science fair, symposium and essay contest

School, Regional, and City Science Fairs

More than 12,000 students enter projects, beginning at the local school level. Local school winners exhibit at the regional level. Approximately 300 winners from 20 Networks are exhibiting at this three-day citywide fair. The CPS Student Science Fair is always held in the spring at the Museum of Science and Industry.

Student Science Symposium and IJAS Essay Contest

Additional components of the fair are the CPS Student Science Symposium and IJAS Essay Contests. High school students participate in the symposium competition, presenting their research to a panel of judges. High school students and 7th- and 8th-graders participate in the essay contests, writing about a given contemporary issue in science.

State and International Fairs

Each year, approximately 50 students are selected to participate in the exhibition, and 25 research paper presentations are delivered at the Illinois Junior Academy of Science (IJAS) State Science Fair. This event is scheduled May 4 and 5, 2012, at the University of Illinois, Champaign-Urbana Campus. In addition, the four top-scoring students from the CPS Student

Science Fair will participate at the International Science and Engineering Fair (ISEF), which will be held in Pittsburgh, Pennsylvania, May 13-18, 2012.

Sponsors

Primarily, the CPS Student Science Fair, Inc. has three sponsoring organizations.

The Chicago Public Schools Chief Executive Officer appoints an executive director to oversee the planning for the local school, regional, and citywide science fairs. The CPS Department of Mathematics and Science is the host department for CPSSSF, employing the CPS/SSF Liaison and contributing operational funds to run the fair each year.

The Museum of Science and Industry hosts the citywide fair and provides technical support services to the participants and teacher volunteers.

Chicago-area corporations spearhead the drive within the Chicago business community to obtain the necessary financial support for a successful science fair experience. The Motorola Solutions Foundation, ComEd, An Exelon Company, BP America, Inc., and Takeda Global Research & Development Center, Inc. are this year's corporate sponsors.

How You Can Help

To help the CPS Student Science Fair and encourage young people to consider careers in science and technology, monetary contributions must be solicited. Without this financial support, the school and regional fair support, the production of the high quality event of the City Science Fair, and the participation in the state and international science fairs would be greatly limited.

Please consider being a contributor to the operating fund or scholarship fund, or providing special awards and tours prizes.

Please send a letter of interest to contribute to CPS Student Science Fair, Inc., P.O. Box 803945, Chicago, IL 60680-3945.



Greetings from the Mayor of the City of Chicago

Dear Friends:

As Mayor and on behalf of the City of Chicago, I offer my warmest greetings and welcome everyone gathered for the 62nd Annual Chicago Public Schools Citywide Science Fair.

This year's Science Fair proudly welcomes approximately 300 select students from various schools throughout our city and will allow participants to excel both inside and outside of the classroom. With the theme "*Science, Technology, Engineering, Mathematics: No Limits-No Boundaries*", the Fair will showcase a variety of scientific research projects from our city's best and brightest students. The fair will not only allow students to display the substantial developments in the areas of aerospace science, physics, and mathematics with essays and display boards, but will also provide participants with the opportunity to develop analytical and critical skills that will be beneficial throughout their academic and professional careers.

On behalf of the people of Chicago, please accept my best wishes to every participant for an enjoyable and successful competition.

Sincerely,

A handwritten signature in cursive script that reads "Rahm Emanuel".

Mayor
City of Chicago





Greetings from the President of the Board of Directors Chicago Public Schools Student Science Fair, Inc.

A Warm Welcome to All, and Congratulations!

Welcome students, teachers, parents, corporate sponsors, judges, volunteers and dignitaries to the 62nd Chicago Public Schools Student Science Fair event! Our theme this year speaks to the unbounded opportunities associated with the curiosity and dreams of exploration and experimentation ... *"Science, Technology, Engineering, Mathematics: No limits – No boundaries"*

Congratulations to approximately 300 student winners, who participated along with thousands of other students in local and regional fairs, to be competing at the City Science Fair. About 70 student competitors will go on from this event to participate in the Illinois Junior Academy of Sciences State Fair at Urbana-Champaign in May, and four will be elected to participate in the International Science and Engineering Fair in Pittsburg, Pennsylvania. Over the past decades, many Chicago City Science Fair winners have gone on to place in or win the International Fair . . . and we are hoping that the winners of this year's Fair will continue that commendable tradition. Aside from the awards associated with these events, several of our Chicago high school seniors will also be the recipients of college scholarships funded by our supporters and contributors.

While this Science Fair event demonstrates our student's best achievements, it is also a tangible representation of the spirit of the Chicago community and the strength and dedication of the Chicago Public Schools working together in the best interests of our students. The Board extends its sincere thanks to all, who - in the spirit of community - contribute their time, talent and financial support to the Science Fair.

In particular, we thank the past and current mayors of Chicago, the Chicago Public Schools CEO and leadership, the Museum of Science and Industry President and CEO and the museum staff, and numerous individual and corporate sponsors. The Science Fair would not be possible without the large number of volunteer judges from government, business industry and universities, or the dozens of Chicago Public Schools teachers and administrative staff – both current and retired – who donate their time and expertise at the school, regional, citywide, state and international fairs. Nor would it be possible without the parents, guardians, and family members who provide encouragement to our student scientists. The Board also extends sincere thanks to all those who work behind the scenes on Regional Science Fair committees and the extraordinary effort of the CPS Student Science Fair Chairperson, CPS Executive Director and CPS/CSSF Liaison. We thank you all for your passionate commitment and tireless efforts on behalf of our students!

Participating and competing in science fair activities provides a platform of focus and support to students who have a curiosity and aptitude in science, technology, engineering



and mathematics. And across the nation there is wide-spread evidence that our youth's contribution to discoveries in these fields of study gives acclaim to this year's Science Fair promise: "No limits – No boundaries".

In late 2011, Samantha Garvey, an inspiring homeless teenager in Long Island, New York, was honored in the Intel Science Talent Search for her studies on ribbed mussels on the bio-systems of some species in swampy areas along the east coast of the United States.

Three amazing teen winners of the first Google Science Fair in 2011 shared with the world the findings of their incredible research. Lauren Hodge investigated the introduction of carcinogens in the processing of chicken foods; Naomi Shah studied the impact of indoor air quality variables on asthmatics; the overall winner, Shree Bose, studied the various resistance factors to the chemotherapy drug cisplatin.

Whiz kid Angela Zhang – a 17 year-old high school student at Monta Vista High School in Cupertino, California - was the winner of the prestigious Siemens national science contest. Angela's after school project resulted in a potential procedure for identifying, isolating and destroying cancer cells without the debilitating side effects of traditional therapies.

Our world's future discoveries really do lie in the hearts, minds and hands of our student youth. During the White House sponsored second annual Science Fair on Feb. 7, President Barack Obama honored over 100 students who participated in the event, and stated, "When students excel in math and science, they help America compete for the jobs and industries of the future." We couldn't agree more! So I hope you will join me in engaging with our inspired student scientists and celebrating their achievements at this year's City Science Fair. Be prepared to be amazed!

Mary J. Boettcher
Vice President, Peoples Gas / North Shore Gas



We welcome back BP America, Inc.
as a corporate sponsor
to Chicago Public Schools Student
Science Fair, Inc.

We appreciate your support and
efforts in expanding science,
technology, engineering
and mathematics for the
students of Chicago.



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Greetings from ComEd, An Exelon Corporation Corporate Sponsor

Congratulations to Chicago's next generation of scientists, engineers, mathematicians, and inventors on your participation in the 62nd Chicago Public Schools Student Science Fair. ComEd continues to be an energetic supporter of the Science Fair, and we look forward to seeing how students are inspired by this year's theme: *Science, Technology, Engineering, Mathematics: No Limits – No Boundaries*.

At ComEd, we are enthusiastic about our support and investment in educational programs that get students excited about science, math and technology. The Chicago Public Schools Student Science Fair showcases the imaginations and hard work of Chicago students in the sciences. On behalf of everyone at ComEd, good luck in this year's competition. We hope you always continue to explore your potential in the field.

Anne Pramaggiore
President and CEO
ComEd



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Greetings from Motorola Solutions Foundation, Corporate Sponsor

Greetings to All Science Fair Participants:

Congratulations on your participation in the Chicago Public Schools' Science Fair! I applaud your interest in science and innovation and commend your entry in the 2012 fair. Hard-working students like you demonstrate the potential to make our world a better place.

At Motorola Solutions, we share your passion for innovation and scientific advancement. Motorola's global team of scientists, engineers and technicians use the scientific process you're demonstrating today to discover and develop new materials, technologies, architectures and algorithms for products that help our customers be their best in the moments that matter.

Motorola Solutions and the Motorola Solutions Foundation are proud to reinforce our commitment to learning. We extend our thanks to your teachers, parents and volunteers who have helped you reach for your potential in making this Science Fair a success.

We challenge you to continue to be your best through science and innovation as our future depends on it.

Best wishes,

Matt Blakely
Director
Motorola Solutions Foundation



**MOTOROLA SOLUTIONS
FOUNDATION**



WELCOME

Greetings from Takeda Global Research & Development Center, Inc.

To Our Scientists of Tomorrow:

Curiosity is at the heart of science and discovery. Without curiosity, we might not have computers, televisions, cars and other items we use every day. The Chicago Public Schools Student Science Fair celebrates your curiosity and how it can take you places you never thought you would go.

At Takeda Global Research and Development Center, Inc., our own curiosity helps us develop innovative medicines that improve lives. We are constantly striving toward better health for patients worldwide, and science makes it all possible. The future depends on having great scientists – like you – continuing to lead the charge.

We are thrilled to sponsor Chicago Public Schools Student Science Fair once again this year with scholarships for outstanding students to continue their education in science. This is an investment in you to become health innovators of tomorrow.

Good luck to all of you at the science fair and let me extend a special thank you to all the teachers, parents and volunteers who have given their time and dedication to support you in satisfying your curiosity and achieving your potential.

Best Wishes,

Azmi Nabulsi, M.D., M.P.H.

President,

Takeda Global Research & Development Center, Inc.





Greetings from the Museum of Science and Industry's President and CEO

Congratulations and Welcome

All of us at the Museum of Science and Industry (MSI) are pleased to welcome the students whose hard work and innovative thinking have brought them to the Chicago Public Schools Student Science Fair. We also are happy to welcome the parents, teachers, judges and supporters who make the science fair a success.

For 62 years, Chicago's young scientists and inventors have displayed their ideas at MSI where they've been seen not only by judges and family members, but by the guests who visit the Museum on science fair weekend. It's a great opportunity for students to serve as inspiring role models to the younger children visiting the science fair.

The Museum's partnership with the CPS Student Science Fair exemplifies our vision: to inspire and motivate our children to achieve their full potential in the fields of science, technology, medicine and engineering. We're working to achieve this vision through our Center for the Advancement of Science Education, which reaches out to students, teachers, communities and schools with innovative programs designed to get students excited about science.

Our efforts, like that of the science fair, aim to inspire today's students to become tomorrow's scientists. We know that science and technology are so critical to our well-being, our nation's economic growth, and our environment. Scientific discoveries will help us overcome challenges like climate change, energy, health, security and hunger, so that we all have a brighter future.

Through their science fair projects, these students are doing some of the same things we do here at the Museum. They're showing people that science



is fun, teaching them that science is all around them, and inspiring them to come up with their own discoveries.

Good luck to all the participants in this year's science fair. We hope that you find inspiration here at MSI and in the world around you, and I look forward to seeing the concepts and innovations yet to come from all of you.

Best wishes,

David R. Mosena
President and CEO
Museum of Science and Industry, Chicago



museum of
science+industry
chicago



Greetings from the Chicago Public Schools Chief Executive Officer

Thank you for joining Chicago Public Schools (CPS) for our 2012 Student Science Fair!

For 62 years, this annual event has served as an opportunity to encourage, motivate and engage our students in utilizing science, technology, engineering and mathematics (STEM) to shape the world around them. Given the ever-increasing national and global focus on economic development, technology, green-building and other cutting-edge efforts, equipping our students with STEM skills and inspiring them to experiment and explore are more important than ever.

This year, 249 of our students focused their time and energies on the exciting theme, Science, Technology, Engineering, Mathematics: No Limits, No Boundaries. They committed themselves to conducting an independent research project, learning first-hand how to design an experiment, collect and analyze data, and offer conclusions.

From aerospace science and engineering projects, to microbiology and zoology projects, our students have demonstrated outstanding intellect, inspirational creativity, unceasing drive, and a commitment to excellence. These truly are gifted young people, the leaders of our future, and I invite you to join me in congratulating each and every one.

I also want to thank the many individuals who made the success of our students possible. From the dedicated teachers, parents and families, to our community leaders and partners – we are grateful for the time, talent and encouragement you have given our students, enabling them to complete the exceptional projects you see today. I also want to thank our generous sponsors, including the Museum of Science and Industry, ComEd, Motorola Solutions Foundation, Takeda, Peoples Gas and BP for collaborating with us to provide our students with this important opportunity.



Once again, congratulations to our outstanding student scientists. You are an inspiration to all of us, and I look forward to seeing all the exciting things you are sure to accomplish in the future.

Sincerely,

Jean-Claude Brizard,
Chief Executive Officer
Chicago Public Schools



Greeting from the Chicago Public Schools Chief Education Officer

Greetings from the Chicago Public Schools Chief Education Officer

The Chicago Public Schools (CPS) is delighted to host the 62nd Student Science Fair. This year's fair theme is *Science, Technology, Engineering, and Mathematics: No Limits, No Boundaries*, which reflects the growing influence of technology on the global economy and in our popular culture. Our mission at CPS is to help every student in every community become college and career ready – and this year's Science Fair invites students to be part of the cutting edge, honing their skills for the 21st century job market.

Each year, the Science Fair gives students an opportunity to apply scientific principles first hand – formulating and testing a hypothesis, researching current literature on a topic and applying this knowledge to reach a conclusion. It also lets students have fun seeing how ideas can come alive in actions and reactions. By bringing together classroom knowledge with independent research, Science Fair competitions are one of the best ways to encourage young people to pursue scientific careers and to understand our changing world.

I congratulate all students for your hard work and participation. This event displays the Chicago Public Schools at our best. These science fair achievements stand alongside our long-term success in Academic Decathlon competitions, our national-championship creating Chicago Debate League and our numerous contributions to Chicago's artistic and cultural life. While the Chicago Public Schools as a system has tremendous work to do to close achievement gaps and achieve excellence in all communities, we need to recognize the numerous great schools, principals, teachers and students who demonstrate day-by-day just how high Chicago can soar.

My special thanks go out to the sponsors of this year's Science Fair – ComEd, the Motorola Foundation, Takeda, Peoples Gas, BP and the Museum of Science and Industry, who once again serve as



world-class hosts of this event. Your generous contributions contribute greatly to the success of this event.

To the participants in this year's Science Fair, CPS applauds your hard work, dedication and scientific curiosity. I look forward to seeing all of the great experiments you put on display ... and I promise, in the spirit of Phineas & Ferb's Heinz Doofenshmirtz, that first prize will not go to yet another baking soda volcano.

Noemi Donoso
Chief Education Officer
Chicago Public Schools

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Greetings from the CPS Office of Curriculum and Instruction

Welcome to this year's Chicago Public Schools Science Fair today, *Science Technology Engineering Mathematics No Limits No Boundaries*. It was not so long ago that phones had party lines and operators connected calls. Few people at that time envisioned our current live video conferencing capabilities. Individuals with a vision of the future brought us to where we are now. The students displaying their work at the 62nd Annual CPS Student Science Fair represent the scientists, technicians, engineers, and mathematicians with just such a vision of the future. Their designs will shape a world we can't imagine. As we look at our students' projects, we take in a glimmer of the future. Please take the time to have students explain their thinking and share their enthusiasm. You will be inspired. As in last year's State of the Union address, President Obama stressed the importance of STEM education this year. "Think about the America within our reach: A country that leads the world in educating its people. An America that attracts a new generation of high-tech manufacturing and high-paying jobs," he said. As you view this year's student projects, imagine these students in these high-tech jobs. They are our future. They will lead the United States into the next level of technological and engineering innovations. It is important to recognize all the support that needed to be in place for these students to complete their projects. Their elementary and high school teachers, department chairpersons, principals, mentors, parents and families all contributed to extending their learning beyond the classroom and placing them in a greater community of specialists. Their joint efforts have motivated students to have the confidence to carry their research and experimentation forward to produce the projects you see. Their joint efforts have provided these young scientists with this invaluable experience and are truly appreciated.



Finally, thank you to our corporate sponsors, The Museum of Science and Industry, Motorola, Com Ed, BP, and Takeda, who have all played a role in the success of The 62nd Annual CPS Student Science Fair.

Jennifer Cheatham
Chief of Instruction
Chicago Public Schools



Greetings from the CPS Department of Mathematics and Science

Welcome to the 62nd Annual CPS Student Science Fair

Greetings to all student participants in this year's Student Science Fair. This year's science fair theme, Science Technology Engineering Mathematics No Limits No Boundaries, represents your future. Your potential knows no boundaries. President Obama specifically calls out STEM technology in his 2012 State of the Union address. As you move forward in life, each of you has the ability to respond to his call for "a new generation of high-tech manufacturing." You can be proud of the creativity, innovation, energy, tenacity, and scientific thinking evident in your projects. We recognize and celebrate your achievement here today. Our hope is that as you move forward in your lives, each of you sees your participation in this Student Science Fair as the beginning of your work and not simply as a culminating event.

The Chicago Public Schools Student Science Fair has a 62 year tradition of bringing together science research and middle and high school students. The results of this meeting are always exciting. The designs, ideas, testable questions, investigations, analysis and conclusions represented here will impact our future in ways we cannot yet imagine. The foundation for medical, environmental, and technological advances, to name a few, can be found in the work represented here today. Its importance cannot be denied as technology moves forward at an ever faster pace.

As participants in the Student Science Fair, here at the Museum of Science and Industry, our middle and high school students are able to share their discoveries with their peers, their families, and teachers, and also with experts in varied fields of science. Such sharing is an essential element of the real work of scientists, engineers, technicians, and mathematicians. We thank SSF, Inc., as well as all of our university, museum, and corporate partners who continue to provide the support that allows our students this rich experience. Extended learning opportunities included afterschool clubs at the middle and high school levels sponsored by ComEd and Peoples Gas, mentoring by professionals in the



field at various institutions, and workshops hosted by our partner universities. Additionally, we thank City Colleges of Chicago for hosting regional fairs, as well as all of the chairpersons, teachers, and administrators who helped at the regional fair level. Finally, we express our thanks to all parents and families who provided support and mentorship to participants. And as always, we extend thanks to the MSI for providing the venue to showcase the best of CPS. With the support of all these partners there are no limits, no boundaries to the great work on exhibit today.

Jesch Reyes
Director, Department of Science
Chicago Public Schools

CHICAGO
PUBLIC
SCHOOLS

CPS



Greetings from Student Science Fair, Inc. Chairperson

Welcome to the 62nd Annual Chicago Public Schools Student Science Fair! We are delighted to congratulate the student exhibitors who have combined their creative talents to demonstrate that our future will be brighter because of the contributions they will offer. These students utilized their interdisciplinary skills to ask questions, created a pathway to find answers to those questions, and incorporated multiple technologies to collect and interpret data related to their inquiries.

Student Science Fair, Inc. remains committed to *fostering science education by encouraging students to engage in scientific inquiry and technological designs*. As indicated by the theme this year *Science Technology, Engineering, Mathematics: No Limits - No boundaries*, we acknowledge our role as a catalyst for inspiring and educating the next generation of innovators.

We recognize that these efforts would not be possible without a cadre of partners. We extend our sincere gratitude to the SSF, Inc. Board of Directors and our major corporate sponsors- Motorola Solutions Foundation, Com Ed, An Exelon Company, BP America Inc. and Takeda Global Research & Development Center, Inc. for their unwavering support and dedication. A special note of thanks is offered to our university partners and Peoples Gas for extending student learning beyond the traditional classroom creating opportunities that reinforce critical thinking skills and encourage students to be active participants in their own learning. We can't forget the many educators, mentors, volunteers and parents who continuously encourage our young people. Finally, we are very grateful to the Board of Education, our academic sponsor; the Museum of Science and Industry, our Industrial sponsor, and the Operating Committee Chairpersons for their continued support to Chicago Public Schools Student Science Fair.

Tomorrow's leaders depend on the educational experiences we provide our students today. These participants will be among those who will be STEM



educated, STEM capable and STEM successful in protecting our earth, preserving our natural resources for current and future generations, finding medical cures, and developing innovative ways to prepare our nation for the next century. We encourage you to celebrate the accomplishments of each student exhibiting here at the sixty-second Chicago Public Schools Student Science Fair.

Linda Carter
Chairperson
Chicago Public Schools Student Science Fair, Inc.

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CPS



Greetings from Student Science Fair, Inc. Executive Director

Welcome all participants and supporters to the 62nd Annual Chicago Public Schools City Science Fair. Students, with the assistance of their families, friends and teachers have diligently worked to demonstrate what they have learned over the course their scientific experience. With the help of *Science, Technology, Engineering, and Mathematics* students have shown that there are no limits or boundaries to what can be created. The City Science Fair isn't merely a competition; it gives students the opportunity to demonstrate how science works through the process of testing a hypothesis, researching a topic and applying and synthesizing data from a conclusion. The type of research and independent study that students need to complete their projects, promote concept comprehension and encourages articulation skills needed to describe their projects.

Science, Technology, Engineering, and Mathematics have been the cornerstone of global advancement. Participation in the Student Science Fair allows students the opportunity to look at challenges and apply scientific processes to find solutions for them. As a result of this fair, we hope that this leads you to discover cures for various diseases, "crack the code" for those various genetic disorders, to solve the food shortage problem, or assist in improving the global health of today's society. This experience will also assist in building the character, wisdom and integrity that will be needed as a decision-making citizen of our nation.

Classroom teachers, school coordinators, families, friends and sponsors, are to be commended for working with students and conducting the preliminary platform necessary to select the best of the best from across the city. The scientific community extends heartfelt appreciation for the countless volunteer hours, and finances that you have extended in order to assist students in the organization of their thoughts, to create the projects we see before us. Every student deserves the opportunity to think creatively and critically; to research and manipulate; and to find benefits in sharing findings with and receiving information from their peers and experts in science-related fields. The Science Fair provides a forum for learning about science and sharing scientific



knowledge. It is necessary to acknowledge every monetary and in-kind contributor who has because of their efforts, made this event possible. We must continuously support scientific methods of learning where observing, thinking, experiencing and validating claims become the habits of mind. Without your time and dedication this event would not be possible. For this we thank you.

Science Fair participants, you are the visionaries who have accepted the challenge of discovery and problem solving. It is the hope of the *science, technology, engineering and mathematical* community that each of you consider this experience a stepping stone in your creative career. Good luck to you in your experience here at the Museum of Science and Industry's, City Science Fair.

Pamela Sherley
Executive Director
CPS Student Science Fair, Inc.

CHICAGO
PUBLIC
SCHOOLS

CPS



Corporate Sponsors

Beginning in 1958, the scope and complexity of the Science Fair outgrew the ability of the Chicago Board of Education and the teacher volunteers to continue without financial support from the business community. Illinois Bell Telephone was the first to recognize the importance of this premier academic event to the students of this city and participated as a corporate sponsor.

We are particularly grateful to those at Motorola Solutions Foundation, ComEd, An Exelon Company, BP America, Inc., and Takeda Global Research & Development Center, Inc. whose leadership was essential in helping us obtain the necessary support of local business and industry, and whose generous financial contributions made this year's Science Fair possible.

Over the years, the involvement, responsibilities, and obligations of the corporate sponsor have evolved. Currently, Science Fair asks the following of the corporate

sponsor:

- Provide a substantial contribution of up to \$50,000 for operating capital.
- Provide assistance in soliciting additional funds for the balance of the costs incurred. These costs include goods and services, publications, scholarships and grants, support to regional fairs and the city fair at the Museum of Science and Industry, and participation at the Illinois Junior Academy of Science State Science Fair and the International Science and Engineering Fair.
- Provide help in securing a corporate sponsor for the next year's Science Fair.

For further information about becoming a corporate sponsor please send inquiries to CPS Student Science Fair, Inc., P.O. Box 803945, Chicago, IL 60680-3945

We would greatly appreciate your partnership.

2012	BP America, Inc.,		Kraft Foods	1981	Sears, Roebuck and Company
	ComEd, An Exelon Company		The Motorola Solutions Foundation	1980	International Harvester
	The Motorola Solutions Foundation	2000-02	Kraft Foods	1979	Morton Norwich
	Takeda Global Research & Development Center, Inc.		The Motorola Solutions Foundation	1978	Bell & Howell
		1999	The Motorola Solutions Foundation	1977	Zenith Radio Corporation
2011	ComEd, An Exelon Company			1976	Standard Oil (Indiana)
	The Motorola Solutions Foundation	1998	Kraft Foods	1975	U.S. Steel
	Takeda Global Research & Development Center, Inc.		The Motorola Solutions Foundation	1974	Commonwealth Edison
		1996-97	The Motorola Solutions Foundation	1973	Harris Bank
2010	ComEd, An Exelon Company			1972	Peoples Gas
	The Motorola Solutions Foundation	1994-95	Argonne National Laboratory With support from The University of Chicago Board of Governors	1971	Motorola, Inc.
				1970	Illinois Bell Telephone
				1969	Borg-Warner
2006-09	BP America, Inc			1968	Western Electric
	ComEd, An Exelon Company	1993	Chicago Sun- Times	1967	Sears, Roebuck and Company
	The Motorola Solutions Foundation	1990-92	Motorola, Inc.	1966	Inland Steel
		1989	Sara Lee Corporation	1965	Montgomery Ward
		1988	AMOCO Corporation	1964	Standard Oil (Indiana)
2004-05	BP America Inc.	1987	Acme Steel Company	1963	Swift & Co.
	ComEd, An Exelon Company	1986	Interlake Corporation, Inc.	1962	Commonwealth Edison
	Kraft Foods	1985	Chicago Sun-Times	1961	International Harvester
	The Motorola Solutions Foundation	1984	First National Bank of Chicago	1960	Peoples Gas
		1983	Peoples Gas	1959	U.S. Steel
2003	BP America Inc.	1982	Illinois Bell Telephone	1958	Illinois Bell Telephone



Contributors

To all of those who contributed to the operating and scholarship funds, we offer a very special THANK YOU for helping make the 2012 Science Fair a success.

Operating Fund

Donations to the Operating Fund help produce the City Science Fair, the Regional Science Fairs and many programs supporting students' independent research for science fair.

Academic Sponsor

- CPS Office of Curriculum & Instruction

Site Sponsor

- Museum of Science and Industry

Corporate Sponsor – \$25,000 Minimum

- BP America, Inc.
- ComEd, An Exelon Co.
- Motorola Solutions Foundation

Executive Circle - \$5,000 Minimum

- Illinois Tool Works
- Peoples Gas Light & Coke
- Baxter International Inc.

Angels - \$1,000 Minimum

- GKN Foundation
- McMaster-Carr Supply Co.
- Melanie Wojtulewicz
- S & C Foundation

- William Wood Skinner Foundation

Patrons - \$500 Minimum

- Ethelene Hare
- Kenneth Zdunek & Mary Memhardt

Donor - \$100 Minimum

- L'OREAL USA, Inc.
- Naylor Pipe Company

Scholarship Fund

Donations to the Scholarship Fund go to qualified high school seniors who have presented a project at a Regional Science Fair and will major in one of the following areas - science, technology, engineering or mathematics in college.

Benefactors of Academic Scholarships

- DePaul University
- Illinois Institute of Technology
- Loyola University
- Northeastern Illinois University
- University of Chicago
- University of Illinois at Chicago

Corporate Sponsor – \$25,000 Minimum

- Takeda Global Research & Development Center, Inc.

Executive Circle - \$5,000 Minimum

- Roy Coleman & Dianna Uchida

Angels - \$1,000 Minimum

- BP America, Inc.
- Blum-Kovler Foundation
- ComEd, An Exelon Co.
- Donald & Helen Edwards
- Motorola Solutions Foundation

Patrons - \$500 Minimum

- Chicago Teachers Union
- CPS Combined Charities
- Henry & Dolores Rosenbaum
- Kenneth Zdunek & Mary Memhardt
- Rita Nelson
- Society of Retired Principals & Superintendents of Chicago

Donor - \$200 Minimum

- Anthony Crowe
- Florence Gabbard
- Linda Carter
- Martin Gartzman
- Melanie Wojtulewicz

Friends – \$100 Minimum

- Active Copier Co., Inc.
- Anne Marie Sherry
- David Gilligan
- Gloria Dobry
- Joanne & Kenneth Gray

- Lewis & Deonne Wright
- Luba Johnson
- Mary Nalbandian
- Walter Pilditch

Supporters - \$20 Minimum

- Shirlee Hollander
- Marilyn Hourston
- John McNicholas
- Nancy Toomey
- Peter Insley
- Yolanda Del Rio

If you are interested in supporting the Science Fair or becoming a sponsor, additional information can be obtained by sending an inquiry to CPS Student Science Fair, Inc., P.O. Box 803945 Chicago, IL, 60680-3945.



Symposium and Essay Contests

Symposium Information

Symposium is an integral and popular feature of the Chicago Public Schools Student Science Fair. This event held on Thursday, March 22, 2012, takes place at the Museum of Science and Industry. Student presenters from Grades 9–12, through their teacher sponsor, first submitted a scientific research paper. In January, a committee of volunteer readers evaluated these papers and up to thirty research papers were chosen to be presented on March 22, 2012. Each student must have performed the primary research described in their paper, must defend the scientific merit of the research, and display written and oral communication skills. During the Symposium competition, a panel of judges from the scientific, academic, and business communities listen to, question, and evaluate each presentation. Fifteen to twenty finalists are selected to participate at the Illinois Junior Academy of Science (IJAS) State Science Fair at the University of Illinois in Champaign-Urbana, on May 4 and 5, 2012.

Essay Contests

IJAS Essay Contest

Also evaluated by volunteer readers at the January Symposium/Essay Reading Session are the essay papers submitted by students from Grades 7–12. As an ancillary activity of the State Science Fair, the IJAS sponsors an essay contest for students who conduct library research and prepare a 1500-word essay. The 2012 topic is: *The Nature Around Us*.

Ten of the IJAS student essays are selected as outstanding and the top scoring essay will be forwarded to the IJAS for evaluation at the state level.

2012 Essay Contest Winners

Ex#	Student Name	Grade	Network	School	Title
801	Thicklin, Raymond	7	SWHS	Lindholm	The Plight of Nature
802	Varallo, Ryan	8	Fult	Columbus	The Bees are Disappearing
803	Afable, Gabrielle	9	WSHS	Whitney Young	Effects of Invasive Species in the Great Lakes
804	Armento, Tristen	10	WSHS	Whitney Young	Deforestation in the Amazon
805	Kalensky, Fiona	10	WSHS	Whitney Young	Lake Michigan and Pharmaceutical Pollution
806	Murphy, Nora	10	WSHS	Whitney Young	Controlling the Spread of West Nile Virus
807	Oropeza, Felipe	10	WSHS	Whitney Young	Geomagnetic Reversal
808	Sargent, Ethan	9	WSHS	Whitney Young	Does Air Pollution Cause Suicide?
809	Schmidtke, Katie	11	SWHS	Bogan	The Nature Around us Through the Eyes
810	Soto, Alejandro	10	WSHS	Whitney Young	Energy and the Environment
811	Steppan, Brandon	10	NNWH	Steinmetz	Lake Vostok: A Keyhole of Nature
812	Staib, Brittany	10	FSHS	CHAS	Tremendous Tornadoes

* See page 29 for the Network Abbreviation Key



Symposium Schedule

Thursday, March 22, 2012

AM Presentation Schedule

Room 1-Session A 9:00a.m. to 11:30p.m.

Ex#	Student Name	Grade	Project Title	School	Category	Network
601	Kajderowicz, Kathrin	11	Classical Music Effect on Vivid Memory	Lane	Behavioral Science	NNWH
602	Oladeji, Afolayan	12	Dominance Status and Transgenic Mice	Lincoln Park	Behavioral Science	NNWH
603	Erazo, Kellie	11	HDL Synthesis in Plasma	Phoenix	Health Science	WSHS
604	Ahsan, Najah	10	Effect of De-Icers on Freshwater Ecosystem	Northside	Environmental Science	NNWH
605	Ortega, Miguel	11	Solar Energy Concentration	Lane	Environmental Science	NNWH
606	Ou, Sharon	12	Chicago River Pollution	Lincoln Park	Environmental Science	NNWH
607	Skowron, Kornelia	10	Limestone Versus Granite	Lane	Environmental Science	NNWH

Room 2-Session B 9:00a.m. to 11:30p.m.

608	Chlenski, Philippe	12	Three Methods for Milk Quality Control	Lincoln Park	Biochemistry	NNWH
609	Khan, Saad	12	Role of FoxO1 in Skeletal Muscular Atrophy	Lane	Biochemistry	NNWH
610	Zhang, Weipeng	10	Chronic Pelvic Pain Syndrome Chemokine	Young	Biochemistry	WSHS
611	Banik, Mark	12	Save Green With Biofuels	Chicago Ag	Chemistry	SSHS
612	Litoff, Aaron	12	Alginate Microbeads for Type 1 Diabetes	Lincoln Park	Chemistry	NNWH
613	Tran, Margaret	12	Flammability of Fabric Softeners	Lane	Chemistry	NNWH
614	Zitoli, Alexander	12	The Effect of Emulsifiers on Hexane Emulsions	Lincoln Park	Chemistry	NNWH

Room 3-Session C 9:00a.m. to 11:30p.m.

615	Boganey, Justin	12	Coated Nanoparticles and DNA Cleavage	Chicago Ag	Material Science	FSHS
616	Pirpiris, Deanna	11	To Hot to Handle!	Taft	Electronics	NNWH
617	Pirpiris, Patrice	11	Catching More Rays!	Taft	Electronics	NNWH
618	Cvetkovic, Samuilo	11	Angular Penstocks and RPMS	Lane	Engineering Science	NNWH
619	Evans, Christopher	10	The Fall of Lego Blocks	Von Steuben	Engineering Science	NNWH
620	Lathan, Devin	12	The Effect of the Angle of Attack on Windmill	Lane	Engineering Science	NNWH
621	Vargas, Samuel	10	Creations a Robotic Arm	Lane	Engineering Science	NNWH

* See page 29 for the Network Abbreviation Key



Thursday, March 22, 2012

PM Presentation Schedule

Room 1-Session D 1:00p.m. to 3:30p.m.

Ex#	Student Name	Grade	Project Title	School	Category	Network
622	Ahsan, Zahra	10	Effect of EM Field on Microbial Cell Activity	Northside	Microbiology	NNWH
623	Deiss-Yehiely, Elad	12	Antibacterial Activity of Allium Vegetables	Lincoln Park	Microbiology	NNWH
624	De La Vega, Rafaella	10	Tea Tree Oil Vs. Salicylic Acid on Acne	Lane	Microbiology	NNWH
625	Gutierrez, Yadid	9	Dandelion Roots Vs. Bacteria	Curie	Microbiology	SWHS

Room 2-Session E 1:00p.m. to 3:30p.m.

626	Jahan, Nushrat	10	The Effects of pH on E. Coli Growth	Lane	Microbiology	NNWH
627	Liang, Katie	11	The Effects of Quercetin on H1299 Cell Line	Lincoln Park	Microbiology	NNWH
628	Patel, Khusbu	10	Effect of Temperature on Bioremediation	Lane	Microbiology	NNWH
629	Sachs, Willa	12	The Effect of Propolis on Gloeolapsa	Lane	Microbiology	NNWH

Room 3-Session F 1:00p.m. to 3:30p.m.

630	Gentner, Lily	12	The Effect of Altitude on Batting Average	Lane	Mathematics	NNWH
631	Kingman, Alison	12	The Cantor Set	Lincoln Park	Mathematics	NNWH
632	Reynoso, Fabian	12	Modeling Rigid Paper Folding in Origami	Lincoln Park	Mathematics	NNWH
633	Vergara, Wendy	11	Speed of Sound	Curie	Physics	SWHS

* See page 29 for the Network Abbreviation Key



SYMPOSIUM THURSDAY



Symposium Luncheon Schedule

Thursday, March 22, 2012

Columbian Room – 11:30 a.m

Remarks	Linda Carter Chairperson CPS Student Science Fair, Inc.
Introduction of Special Guest	Nina Hike-Teague Symposium Committee Chairperson
Guest Speaker	Bernhard Beck-Winchatz DePaul University
Recognition of Symposium Participants	Nina Hike-Teague
Recognition of Judges (Years of Service)	Nina Hike-Teague Linda Carter

SYMPOSIUM THURSDAY



Essay Scholarship Finalists



Essay Scholarship Winner Yichao
Chen from Whitney M. Young Magnet
High School



Exhibit Information

The CPS Student Science Fair offers academically and scientifically talented young people an opportunity to showcase their accomplishments. The projects on display represent the most outstanding scientific endeavors of students in Grades 7–12.

The exhibitors at this year's CPS Student Science Fair were selected from approximately 12,000 students who competed in school and regional science fairs throughout the city during this past December and January. These winners were chosen on the basis of their scientific approach, thoroughness, creativity, and presentation.

On Friday, March 23, 2012, over 300 judges from the scientific, academic, and business communities will observe, listen to, question, and evaluate the exhibitors. Winners are selected based on established criteria as indicated in the Science Fair Handbook.

The top 50 winners will participate at the Illinois Junior Academy of Science (IJAS) State Science Fair, held May 4 and 5, 2012, on the campus of the University of Illinois, Champaign-Urbana. Students will compete with other students from around the state.

On Saturday, March 24, 2012, the top 35 outstanding high school projects will be evaluated by a special panel of judges. Four finalists will be invited to compete at the International Science and Engineering Fair (ISEF), which is being held May 13-18, 2012 in Pittsburgh, Pennsylvania.

Some of the judges also function as Special Awards judges for the companies that have graciously sent them to evaluate the exhibitors. Each company may have one or more special criteria, in addition to the established criteria, by which to determine the



recipient of its special award. All CPS Student Science Fair participants will be recognized with certificates and souvenirs at the Awards Convocation on Sunday, March 25, 2012, at 1:00 p.m., in the main auditorium of the Museum of Science and Industry. Approximately 100 students will be individually recognized with cash prizes, awards, and other special gifts. In addition, all CPS Student Science Fair participants are eligible to apply for financial support grants and college scholarships in their senior year of high school.

All CPS Student Science Fair participants are WINNERS!

If you would like to serve as a judge, please contact Yolanda Del Rio at yolanda_delrio@comcast.net to have your name added to the database. At a minimum, judges must have a degree in science, mathematics, computer science, or engineering. They may not be a current employee of the Chicago Public Schools





Exhibit Schedule

Friday, March 23, 2012

Science Fair Exhibit Judging

7:30 A.M. –8:30 A.M.	Judges Briefing and Breakfast	Main Auditorium
8:30 A.M. –11:00 A.M.	Judging of Exhibits	West Pavilion
11:00 A.M.–11:30 A.M.	Opening Ceremony	West Pavilion Main Entrance
11:30 A.M.–12:00 NOON	Ribbon Cutting and Exhibit Tour	West Pavilion
11:30 P.M. –1:30 P.M.	Judges Buffet Luncheon	Energy Exhibit
12:00 NOON –	1:30 P.M. Columbian Room	Recognition Luncheon (by invitation only)
12:00 NOON –	1:00 P.M.	Judging Continues West Pavilion
1:00 P.M. –3:15 P.M.	Fair Opens to the Public	West Pavilion

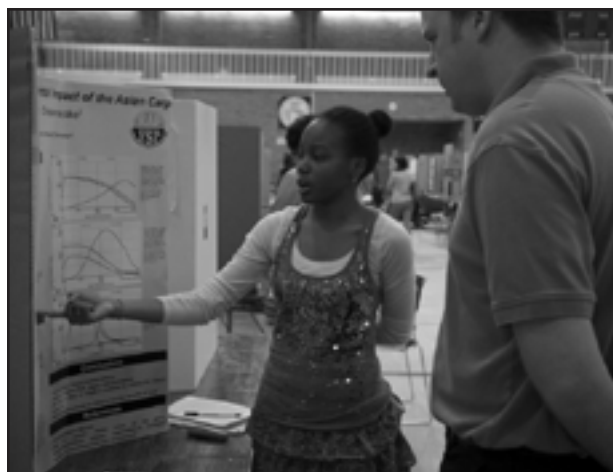


EXHIBIT JUDGING
FRIDAY



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
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Aero Space Science

1	Bransford, Karrie	8	Up, Up, and Away	LCal	Colemon
2	Villanueva, Johan	8	Propeller Length Effecting Lift Off Time	OHar	Smyser
3	Isaacson, Robert	10	Does Air Temperature Affect the Amount of Lift?	WSHS	Young HS
4	Bridges-Reed, Jeffrey	11	Open the Chute	SSHS	Air Force Academy
5	Nguyen, Michael	11	Martian DO ₂ me	SSHS	Air Force Academy
6	Williams, Zachary	11	Effective Shielding Against Cosmic Radiation	SSHS	Air Force Academy
7	Alawawdeh, Mohammad	12	Radius of Planets vs. Semi-Major Axis	NNWH	Amundsen HS
8	Du, Jonathan	12	Drake Equation	NNWH	Amundsen HS
9	Zahra, Fiddia	12	Multi-Planetary Systems	NNWH	Amundsen HS

Behavioral Science

10	Garcia, Bella	7	Listen Up Teens	Prsh	Lara
11	Hall, Jalisa	7	Study Habits of Middle School Students	Skwy	Powell
12	Ciesil, Hannah	8	The Tower of Babel	OHar	Edgebrook
13	Navarro, Michelle	8	Images vs. Numbers	Mdwy	Hernandez
14	Del Cid, Sergio	9	Are You Puzzled?	SWHS	Hubbard HS
15	Khalaf, Susan	9	Battle of the Minds: Male vs. Female	WSHS	Young HS
16	Ring, Austin	9	Can You Hear Me Now?	WSHS	Young HS
17	Davis, Shameka 1	10	How Prejudice Are You?	WSHS	Westinghouse HS
18	Gomez, Erika	10	Effects of Appearance on Human Socialization	WSHS	Westinghouse HS
19	House, Desiree	10	Does Age Affect Human Reaction?	Altr	Peace and Education
20	Rodriguez, Jorge	10	Effect of Sugar on Teenagers	SWHS	Curie HS
21	Vu, Jennifer	10	The Human Mind Identifying Color and Shape	WSHS	Westinghouse HS
22	Agunloye, Olufolabi	11	Fear Factor 2: Effects of the FFR on STMN	NNWH	Lane HS
23	Castillo, Felix	11	Music vs. Memory	WSHS	Juarez HS
24	Cortez, Ximena	11	Night Insects Are Attracted to Lamps	SWHS	Hubbard HS
25	Hunter, Sharnequa	11	Music Heartrate and Emotions	WSHS	Raby HS
26	Kajderowicz, Kathrin	11	Classical Music Effect on Vivid Memory	NNWH	Lane HS
27	Mendez-Rozo, Rocio	11	My Cheeks Are Cuter!	NNWH	Payton HS
28	Brito, Anita	12	The Effect of Color on Memory	NNWH	Kelvyn Park HS
29	Hampton, Dyvonne	12	Effects of Diltiazem on Daphnia's Heart Rate	WSHS	Phoenix Military HS
30	Jean-Baptiste, Ednereson	12	How High Can You Go?	SSHS	New Millennium HS
31	Moqeet, Faique	12	Modeling Parkinson's Reversal Learning Errors	NNWH	Northside Prep HS
32	Morris, Chevon	12	Stereotypes	FSHS	Julian HS
33	Oladeji, Afolayan	12	Is Dominance Status a Confound in Mice?	NNWH	Lincoln Park HS
34	Palencia, Cynthia	12	Does Fashion Impact the Behavior of Others?	NNWH	Kelvyn Park HS

Network (Abbreviation)

Alternative (Altr),
Austin-North Lawndale (AuNL),
AUSL (AUSL),
Burnham Park (Brnm),
Charter/Contract (ChCo),

Englewood-Gresham (EnGr),
Far South Side (FSHS),
Fullerton (Fulr),
Fulton (Fult),
Garfield-Humboldt (GarH),
Lake Calumet (LCal),

Midway (Mdwy),
North/Northwest Side (NNWH),
O'Hare (OHar),
Pershing (Prsh),
Pilsen-Little Village (P-LV),
Ravenswood-Ridge (RavR),

Rock Island (RkIs),
Skyway (Skwy),
South Side (SSHS),
Southwest Side (SWHS),
West Side (WSHS)

EXHIBIT JUDGING
FRIDAY



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
Biochemistry					
35	Flores, David	7	Classy Peppers	Prsh	Shields
36	Kunes, Chloe	7	To C or Not To C?	RavR	Nettelhorst
37	Guo, Zirui	8	Superlative Preservative	Fult	Skinner
38	Jones, Keith	8	Extracting DNA	Lcal	Carver G
39	Schwieger, Victoria	9	pH'n Your Distillation	NNWH	Taft HS
40	Lumzy, Marsean	10	Vitamin C Content	SSHS	Dyett HS
41	Salgado, Betsania	10	Effect of Medications on Hearts of Daphnia	NNWH	Lincoln Park HS
42	Asplin, Daniel	11	Thiol-Drugs and pH on Cystine Solubility	NNWH	Payton HS
43	Berumen, Juan	11	Does the Amount Really Matter?	NNWH	Lake View HS
44	Cheung, Lisa	11	Carbohydrates in Your Milk	SSHS	Kenwood HS
45	Foulks, Sydney	11	Sweeteners vs Moisture Content & H ₂ O Activity	FSHS	Chgo Agr HS
46	Hayes, Emily	11	Interactions Between EDCs and Glucocorticoids	NNWH	Payton HS
47	Law, Celia	11	Don't Drink Your C's	SSHS	Kenwood HS
48	Terrones, Raul	11	Cheese Production	NNWH	Lake View HS
49	Chlenski, Philippe	12	Three Methods for Milk Quality Control	NNWH	Lincoln Park HS
50	Coleman, Darielle	12	Food Osmosis	SWHS	Robeson HS
51	Khan, Saad	12	Role of FoxO1 in Skeletal Muscular Atrophy	NNWH	Lane HS
52	Kunovac, Stefan	12	Methylation Location of SRY-Related HMG-Box	NNWH	Taft HS
Botany					
53	Wlazlo, Michael	7	Is Organic Fertilizer Better than Synthetic?	Mdwy	Twain
54	Cepeda, Juan	8	Which Type of Fertilizer Works Best?	Mdwy	Edwards
55	Chan, Ginger	8	Flower Power	RavR	Stone
56	Diaz, Bryan	8	How Do Worms Affect Plant Growth?	GarH	Casals
57	Pineda, Daisy	8	Seed Germination in Normal Conditions	Fulr	LaSalle
58	Roman, Jesse	8	Magnetified Algae	Prsh	Shields
59	Sanchez, Diana	8	Hot or Not???	Prsh	Shields
60	Shuaibi, Asma	8	Effect of Magnets on Great Northern Beans	Mdwy	Dore
61	Escalante, Brenda	9	The Effect pH has on the Germination of Seeds	NNWH	Steinmetz HS
62	Haj, Husam	9	Effects of Magnetism on Plants	SWHS	Kennedy HS
63	Kundert, Andreas	9	Fungus	NNWH	Ogden HS
64	Lane, Shantell	9	Is Bleach a Killer?	WSHS	Clemente HS
65	Marusarz, Maria	9	Which Pain Reliever Helps Grass Grow Best?	SWHS	Kennedy HS
66	Moses, Dominique	9	The Effects of Acid on Plant Growth	WSHS	Crane HS
67	Szczecz, Justyna	9	The Effect of Different pH Levels on Radish Growth	NNWH	Steinmetz HS
68	Ziarko, Daniel	9	Different Fertilizing Methods for Plants	WSHS	Young HS
69	Agbeo, Priscilla	10	Medicated Plants	ChCo	U of C - Woodlawn
70	Alvarez, Isa	10	Killing Soil Microorganisms on Plant Growth	WSHS	Westinghouse HS
71	Li, Jiawen	10	Water and pH on Bean Germination	NNWH	Lincoln Park HS

* See page 29 for the Network Abbreviation Key



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
72	Singleton, Aliyah	10	Effect of Fertilizer on Brassica Rapa Growth	ChCo	U of C - Woodlawn
73	Tucker-Moore, Waltavis	10	The Different Plant Pigments	WSHS	Clemente HS
74	Watt, Alexander	10	Effect of Music on Radish Growth	ChCo	U of C - Woodlawn
75	Escobar, Jocelyn	11	Is Hydrogen Peroxide Safe to Use on Seeds?	NNWH	Lake View HS
76	Gasparas, Brandon	11	Hydroponic Sweet Corn	FSHS	Chgo Agr HS
77	Villarreal, Alex	11	Cellular Growth Parameters in Sorghum Types	FSHS	Chgo Agr HS
78	Yanez, Stephanie	12	Agriculture vs. Aquaculture	Lcal	Washington G HS

Chemistry

79	Adeyinka, Jemima	7	Drink At Your Own Risk	Brnm	Beasley
80	Duarte, Credo	7	The Electrolyte Competition	Fulr	Franklin
81	Magana, Jose	7	What Music Type Affects Laser Patterns?	Prsh	Columbia Explorers
82	Sawin, Allie	7	Effect of Polymers on Endothermic Reactions	RavR	Bell
83	Bornfreedom, Almighty	8	Effect of NaCl Solution on Voltage Output	FSHS	Morgan Park
84	Hoefling, Jacquelyn	8	Which Antacid Suppresses Stomach Acid Best?	Mdwy	Twain
85	Jojo, Justeena	8	Free Radicals!	OHar	Beaubien
86	Kemet, Chinyere	8	Which is the Best Alternative to Sport Drinks?	Skwy	Dixon
87	Lee, Jasmyne	8	Which Lotion Keeps Moisture in Your Skin?	AuNL	Clark G
88	Monroy, Nydia	8	Efficiency of Fleece as an Insulator	GarH	Nobel
89	Segovia, Dominique	8	Which Method Distills Salt Water Efficiently?	GarH	Nobel
90	Williamson, Daysha	8	Which Medicine Dissolves Fastest in HCl?	Skwy	Westcott
91	Wright, Shannon	8	Chemistry of Ice Cream Making	RkIs	Mount Greenwood
92	Chramiec, Natalia	9	Reaction Rates of Alka-Seltzer Tablets	SWHS	Kennedy HS
93	Klein, Jacob	9	Pepper Breakdown	NNWH	Ogden HS
94	Prince, Angel	9	Do All Mixed Nuts Have Similar Composition?	SSHS	Hirsch HS
95	Garnica, Clemencia	10	Unsaturated Fats in Oils	WSHS	Juarez HS
96	Griffin, Aquila	10	Soda Pop Fizz	SSHS	Dyett HS
97	Guzman, Cynthia	10	The Burning of Firewood	NNWH	Lincoln Park HS
98	Maloney, Shannon	10	Through Which Medium Does Sound Travel Best?	NNWH	Lincoln Park HS
99	McElroy, Phyllis	10	Effect of Decarbonation on pH of Soft Drinks	SSHS	Hirsch HS
100	Montanez, Violetta	10	Which Type of Water is Hardest?	WSHS	Juarez HS
101	Pierre, Saiye	10	Hydrogen Peroxide Volumes and Hair Color	SSHS	Hyde Park HS
102	Tavera, Reyna	10	Which Fruit Contains the Most Vitamin C?	SWHS	Hubbard HS
103	Zaragoza, Elizabeth	10	If It Costs More, Does It Pop More?	SWHS	Tilden HS
104	Alanis, Vanessa	11	Turning Iodine to Iodide	NNWH	Lake View HS
105	Brizuela, Edward	11	Dissolving Time of Ibuprofen	SWHS	Gage Park HS
106	Gillespie, Kwanita	11	Fatty Acids	SSHS	Dyett HS
107	Gordon, William	11	Quantitative Burning Properties of Various Fuels	NNWH	Taft HS
108	Hoff, Ingvid	11	Protecting the Tower of Pisa From Acid Rain	NNWH	Mather HS
109	Obot, Sefonobong	11	Hydrogen Fuel	NNWH	Von Steuben HS
110	Olbera, Elaina	11	Salt A Micronutrient	SWHS	Tilden HS

* See page 29 for the Network Abbreviation Key



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
111	Opakunle, Oluwatobi	11	The Investigation of Metal-Bound Biomaterials	SWHS	Lindblom HS
112	Smith, Carrie	11	Does Temperature Affect the pH Level in OJ?	FSHS	Morgan Park HS
113	Ahmed, Nida	12	Effect of pH and Fiber on Levothyroxine	NNWH	Lake View HS
114	Arreola, Mireya	12	A Sweet Lie	FSHS	Carver Military HS
115	Banik, Mark	12	Save Green with BioFuels	FSHS	Chgo Agr HS
116	Lemiesz, Aleksandra	12	What's in Your Coffee?	SSHS	King HS
117	Litoff, Aaron	12	Alginate Microbeads for Type 1 Diabetes	NNWH	Lincoln Park HS
118	Miller, LaDonna	12	A Change in Drugs	SSHS	King HS
119	Perez, Jacqueline	12	Removing Waste from Spent Motor Oil	FSHS	Carver Military HS
120	Saucedo, Jasmin	12	The Balloon Race	WSHS	Phoenix Military HS
121	Vasquez, Andrew	12	What's the Fastest Way to Cool a Soda?	SWHS	Hancock HS

Computer Science

122	Ameereen, Ajmal	8	Simulating Cancerous Tensegrity	RavR	Kilmer
123	Moya, Francesca	9	Taking Control of Your WiFi Signal	NNWH	Lincoln Park HS
124	Portis, Tyler	9	Hiding in Plain Sight	FSHS	Brooks HS
125	Lopez, Sergio	10	The Effect of USB Cable Length on Data Rate	WSHS	Westinghouse HS

Earth Science

126	Thicklin, Raymond	7	Biodiesel: Solution to Our Acid Rain Problem	SWHS	Lindblom HS
127	Mosley, Deyon	8	Is Your Soil Safe?	Lcal	White
128	Uddin, Sahdia	9	Solar Collector	NNWH	Von Steuben HS
129	Smith, Christopher	11	Soil Type and Water Retention	SSHS	Dunbar HS
130	Serna, Jonathan	12	Does the Angle of the Sun Impact Earth's Temps?	SWHS	Hancock HS

Electronics

131	Loper, Taylor	7	Does Mass Affect the Life of a D Cell Battery?	AuNL	McNair
132	Stanley, Dominick	8	Light It Up!	RkIs	Cassell
133	Wheelan, Katrina	8	Solar Car Efficiency as Affected by Gear Size	NNWH	Alcott
134	Pirpiris, Deanna	11	Too Hot to Handle!	NNWH	Taft HS
135	Pirpiris, Patrice	11	Catching More Rays!	NNWH	Taft HS

Engineering Science

136	Tenorio, Stive	8	Electromagnetic Power	P-LV	Gary
137	Diaz, Daniel	10	Keep Your Tea Warm	WSHS	Juarez HS
138	Vargas, Samuel	10	Creating a Robotic Arm	NNWH	Lane HS
139	Evans, Christopher	11	The Fall of the Lego Blocks	NNWH	Von Steuben HS
140	Garcia, Isabella	11	Which Heat Insulation Retains the Most Heat?	NNWH	Lake View HS
141	Herrera, Charles	11	Evaluation of a GPS Unit on Necks of Cattle	FSHS	Chgo Agr HS
142	Chavez, Maritza	12	Bridge Efficiency	WSHS	Phoenix Military HS
143	Mack, Tatiana	12	Bridges Weight?	SSHS	King HS
144	Surganov, Anthony	12	Photovoltaics: Novel Method for Passive Tracking	NNWH	Lane HS

* See page 29 for the Network Abbreviation Key



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
Environmental Science					
145	Gordon, Maxwell	7	How Safe is Chicagoland's Drinking Water?	OHar	Beaubien
146	Helm, Mariah	7	The Effect of Location on the Acidity of Rain	SSHS	Kenwood HS
147	Kim, Vivekae	7	A Comparison of Water Technologies	OHar	Edgebrook
148	Rodriguez, Victor	7	Park Soil Contaminated?	AuNL	Clark G
149	Vega, Claudia	7	The Effect of Gasoline on Grass	Prsh	Seward
150	Bravo, Jocelyn	8	Are Green Detergents Less Toxic?	Prsh	Burroughs
151	Clark-Jordan, Azana	8	UV Light	ChCo	U of C - Woodlawn
152	Graziano, Matthew	8	Is Our Drinking Water Safe?	AuNL	Sayre
153	Nava, Onix	8	Salt on Pothos, Philodendron, Codiaeum Plants	Fulr	Salazar
154	Wesley, Joia	8	Splitting H ₂ O	Skwy	Burnside
155	Conde, Emily	9	Cleaning Up Oily Water	NNWH	Von Steuben HS
156	Suden, Andriy	9	Moisture on the Temperature of Compost	NNWH	Steinmetz HS
157	Ahsan, Najah	10	Effect of De-Icers on Freshwater Ecosystem	NNWH	Northside Prep HS
158	Branch, Jaeda	10	Catch the Sun	FSHS	Morgan Park HS
159	Zavala, Deneb	10	Creating a Water Filter for 3rd World Countries	NNWH	Lane HS
160	Hernandez, Brenda	11	Ozone Levels in Near Space	SWHS	Curie HS
161	Rupert, Danielle	11	Air Particulates and Pollution	SSHS	Hyde Park HS
162	Gomez, Jumiko	12	The Effects of Temperature on Dissolved Oxygen	SWHS	Hancock HS
163	Martinez, Cristian	12	Turn Up the Heat	WSHS	Phoenix Military HS
164	Mercado, Nelka	12	Effect of Oil Spills on Aquatic Life	NNWH	Kelvyn Park HS
165	Plummer, Justice	12	Dynamic Modeling: Impact of Asian Carp	FSHS	Chgo Agr HS
166	Scott, Krystina	12	Natural Electricity	SSHS	King HS
Health Science					
167	Friedrich, Kaiden	7	Effects of Adolescent BMI on Blood Pressure	NNWH	Lane HS
168	VanZale, Emma	7	How Consistent is SPF 30?	Fult	Jackson G
169	Villasenor, Steffany	7	Fruits and Vegetables Are Healthy..Right?	RkIs	Keller
170	Spina, Sam	8	How Clean is Clean?	Fult	Galileo
171	Yip, Amy	8	Fingerprint Pattern Inheritance	Fult	Skinner
172	Hasan, Areij	10	Blood Pressure	SWHS	Hubbard HS
173	Siu, Angela	10	Smells Tasty	WSHS	Westinghouse HS
174	Erazo, Kellie	11	HDL Synthesis	WSHS	Phoenix Military HS
175	Torres, Liliana	11	Find the Man in the Coffee Beans!	SWHS	Gage Park HS
176	Williams, Evelyn	11	How Does Exercise Effect Body Temperature?	WSHS	Raby HS
177	Davila, Loreana	12	I See Vitamin C!	WSHS	Phoenix Military HS
178	Ghezali, Sarra	12	How Does Caffeine Affect Partial Pressure?	NNWH	Amundsen HS
179	Ismail, Sadeka	12	Tackling Cancer Barriers	NNWH	Amundsen HS
180	Jones, Robert	12	Walk A Mile in My Shoes	WSHS	Crane HS
181	Lewis, Teanna	12	The Effects of HIV/AIDS on Every Race	WSHS	Manley HS
182	Osmani, Kashif	12	Hypertension, Obesity, Rage and Renal Carcinoma	NNWH	Northside Prep HS

* See page 29 for the Network Abbreviation Key

EXHIBIT JUDGING
FRIDAY



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
Materials Science					
183	Quiroz, Vanessa	8	Metal Power	Prsh	Shields
184	Carrillo, Alejandro	8	Magnets Under Water	LCal	Gallistel
184	Robledo, Eric	8	Magnets Under Water	LCal	Gallistel
185	Ross, Deontae	8	Millions of Static Charges	AuNL	Mason
186	Aguillon, Blanca	9	Put a Ring on It	WSHS	Juarez HS
187	Rodriguez, Noe	9	Time for Household Fabrics to Burn	SWHS	Hubbard HS
188	Rohrbeck, Christopher	9	Dye It Yourself Naturally!	NNWH	Von Steuben HS
189	Hardin, Jacqueline	10	Fabrication on Titanium Orthopedic Implants	NNWH	Lane HS
190	Jiang, Yiwei	10	Biodegradable Starch-Based Plastic	WSHS	Young HS
191	Moore, Andrew	10	Competent Concrete	NNWH	Von Steuben HS
192	dela Cruz, Justine	11	The Absorbency of Silver Colloidal on Swimsuits	NNWH	Von Steuben HS
193	Boganey, Justin	12	Coated Nanoparticles and DNA Cleavage	FSHS	Chgo Agr HS
194	Kruk, Michelle	12	Multi Layer Multi Color Micro-CT Scintillator	NNWH	Payton HS
195	Smith, Shawn	12	Blood Splat	SWHS	Robeson HS
Mathematics					
196	Raymundo, Isabel	10	Fold For Your Thought	SWHS	Lindblom HS
197	Ocampo, Jazmin	11	Triangles on a Sphere: 2D and 3D	WSHS	Phoenix Military HS
198	Agunloye, Oluwamide	12	Drake Equation: A Novel Decision Procedure	NNWH	Lane HS
199	Dickerson, Diamond	12	Color Me Wonderful	FSHS	Julian HS
200	Nelson, Jennifer	12	Irrigation with the Monte Carlo Method	FSHS	Chgo Agr HS
201	Reynoso, Fabian	12	Modeling Rigid Paper Folding in Origami	NNWH	Lincoln Park HS
202	Zhao, Cheng	12	Unknotting Problem	NNWH	Lincoln Park HS
Microbiology					
203	Timms, Nicholas	7	I'm Still Sick...Ugh	LCal	Colemon
204	Alvarez, Iliana	8	What Lives in Your Toothbrush?	RavR	Audubon
205	Bartley, Anthony	8	The Effect of Resveratrol on Dictyostelium	RkIs	Vanderpoel
206	Kean, Jeremy	8	Life Under A Magnet	RavR	Coonley
207	Xu, Daniel	8	A Novel Preservative for Strawberry Storage	Fult	Jackson A
208	Augusthy, Sebastian	9	Effect of Hydroxycitric Acid on Bacteria	SSHS	Kenwood HS
209	Gutierrez, Yadid	9	Dandelion Roots vs. Bacteria	SWHS	Curie HS
210	Ahsan, Zahra	10	Biological Effects of Electromagnetic Field	NNWH	Northside Prep HS
211	Rivera, Yaretzi	10	Which Acne Cleanser Will Prevent That Zit?	WSHS	Juarez HS
212	Singleton, Olivia	10	The Effect of Sugar on Yeast CO ₂ Production	ChCo	U of C - Woodlawn
213	Solis, Karla	10	"Steroids" for Beans	NNWH	Steinmetz HS
214	Goodman, Maurice	11	Effect of Diet on the Growth of Probiotics	NNWH	Payton HS
215	Le, Ngan	11	The Effect of Temperature on Bacteria	NNWH	Amundsen HS
216	Khan, Muhammad	12	Effect of Light Waves on the Growth of E.coli	NNWH	Amundsen HS

* See page 29 for the Network Abbreviation Key



Exhibits by Category

Ex#	Student Name	Grade	Title	Network	School
Physics					
217	Moss, Fabio	7	Wheels on the Skateboard Go Round and Round	GarH	Calhoun
218	Ramotowski, Lidia	7	Electric Slide	NNWH	Taft HS
219	Wu, Austin	7	The Effect of Various Temperatures on Voltage	NNWH	Lane HS
219	Yeh, Hugh	7	The Effect of Various Temperatures on Voltage	NNWH	Lane HS
220	Bocanegra, Armando	8	The Effect of Different Darts in a Launcher	P-LV	Gary
221	Dilworth, Dominique	8	Does Water Bottle Size Affect Rocket Flight?	GarH	West Park
222	Kopytko, Patryk	8	Temperature and Magnets	OHar	Gray W
223	Potoczny, Michelle	8	Simple Harmonic Motion	AUSL	Chgo Acad
224	Scalise, Erica	8	Harness The Power of the Sun!	Prsh	Sheridan
225	Valerio, Emilio	8	Magnetism and It's Power Underwater	Lcal	Marsh
226	Vazquez, Daniel	8	Height of a Rollercoaster Kinetic Energy	Prsh	Calmecca
227	Wischnewsky, Samuel	8	Gone With the Wind Turbines	WSHS	Young HS
228	Babbar, Roshni	9	What Type of Food Contains the Most Energy?	NNWH	Von Steuben HS
229	Hensey, Bennett	9	Water on the Motion of a Ball Over Grass	SSHS	Kenwood HS
230	Walsh, Claire-Wen	9	Most Efficient Gear Ratio for People with MS	WSHS	Young HS
231	Anderson, Johnnevan	10	Effect of a Follow Through on a Jump Shot	SSHS	Hyde Park HS
232	Calhoun, Antonya	10	Speed of Light Using a Microwave	SSHS	Hyde Park HS
233	Hruby, Raymond	10	Hull Design and Hydrodynamics	WSHS	Juarez HS
234	Lopez, Gabriela	10	Temperature vs. Electricity	NNWH	Von Steuben HS
235	Press, James	10	Viscosity of Sweetened Water	SWHS	Tilden HS
236	Razo, Rafael	10	Mass vs. Distance	SWHS	Curie HS
237	Arrieta, Maria	11	Factors That Affect the Transfer of Force	SWHS	Hancock HS
238	Gordon, Christian	11	The Effect of Sugar on the Viscosity of Water	NNWH	Taft HS
239	Mena, Erik	11	Electrolytes: Sports Drinks vs. Juices	NNWH	Lake View HS
240	Phillips, Marcus	11	Super Magnets	SWHS	Robeson HS
241	Rebolledo, Alexis	11	Plate Speakers	WSHS	Infinity HS
242	Binbek, Asha	12	Egged!	SSHS	Kenwood HS
243	Rosero, Valeria	12	Relationship Between Velocity and Pressure	NNWH	Kelvyn Park HS
Zoology					
244	Law, Grace	7	Sight/Smell-Which Do Fruit Flies Use Most?	Brnm	Ray
245	Harris, Nia	8	The Effect of OTC Drugs on Daphnia	Skwy	Lenart
246	Taylor, Qwanisha	8	Stimulants/Depressants on Daphnia Heart Rate	RkIs	Bennett
247	McAfee, Kayla	10	The Effects of Vinegar on Fruit Flies	ChCo	U of C - Woodlawn
248	Smith, Akilah	11	Regeneration in Planaria	SSHS	King HS

* See page 29 for the Network Abbreviation Key

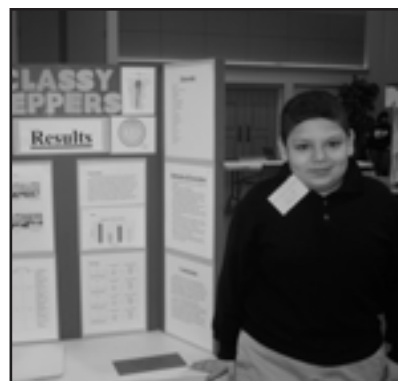
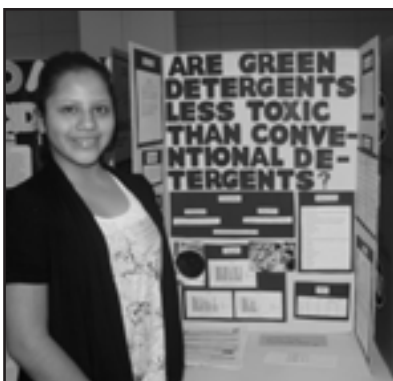
EXHIBIT JUDGING
FRIDAY



Exhibits by Category

Category	Elementary			Secondary			Total			Team Projects
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Aero Space Science	1	1	2	6	1	7	7	2	9	0
Behavioral Science	0	4	4	8	13	21	8	17	25	0
Biochemistry	2	2	4	7	7	14	9	9	18	0
Botany	4	4	8	8	10	18	12	14	26	0
Chemistry	3	10	13	6	24	30	9	34	43	0
Computer Science	0	1	1	2	1	3	2	2	4	0
Earth Science	2	0	2	2	1	3	4	1	5	0
Electronics	1	2	3	0	2	2	1	4	5	0
Engineering Science	1	0	1	5	3	8	6	3	9	0
Environmental Science	3	7	10	2	10	12	5	17	22	0
Health Science	2	3	5	2	9	11	4	12	16	0
Materials Science	3	1	4	5	5	10	8	6	14	1
Mathematics	0	0	0	3	4	7	3	4	7	0
Microbiology	4	1	5	3	6	9	7	7	14	0
Physics	8	4	12	9	7	16	17	11	28	1
Zoology	0	3	3	0	2	2	0	5	5	0
TOTAL ▶	34	43	76	68	105	173	102	148	250	2

EXHIBIT JUDGING
FRIDAY



Student Exhibitors

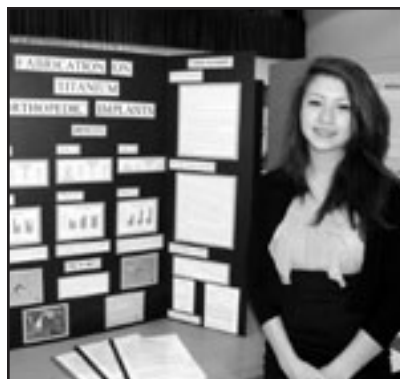
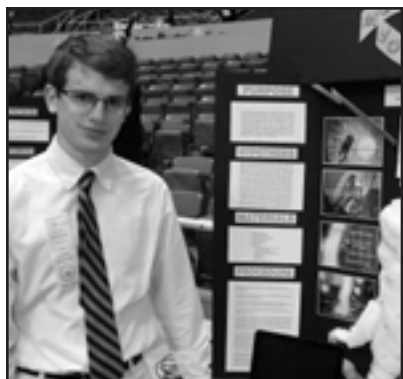
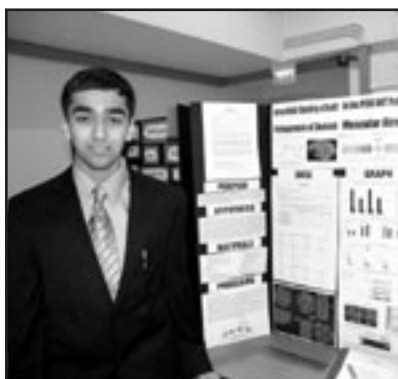
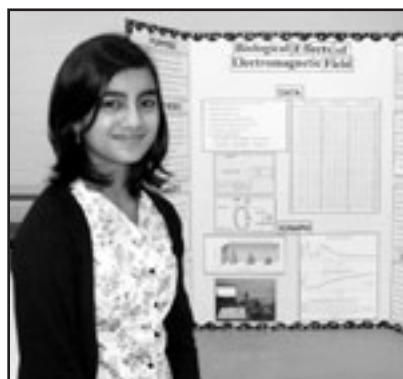


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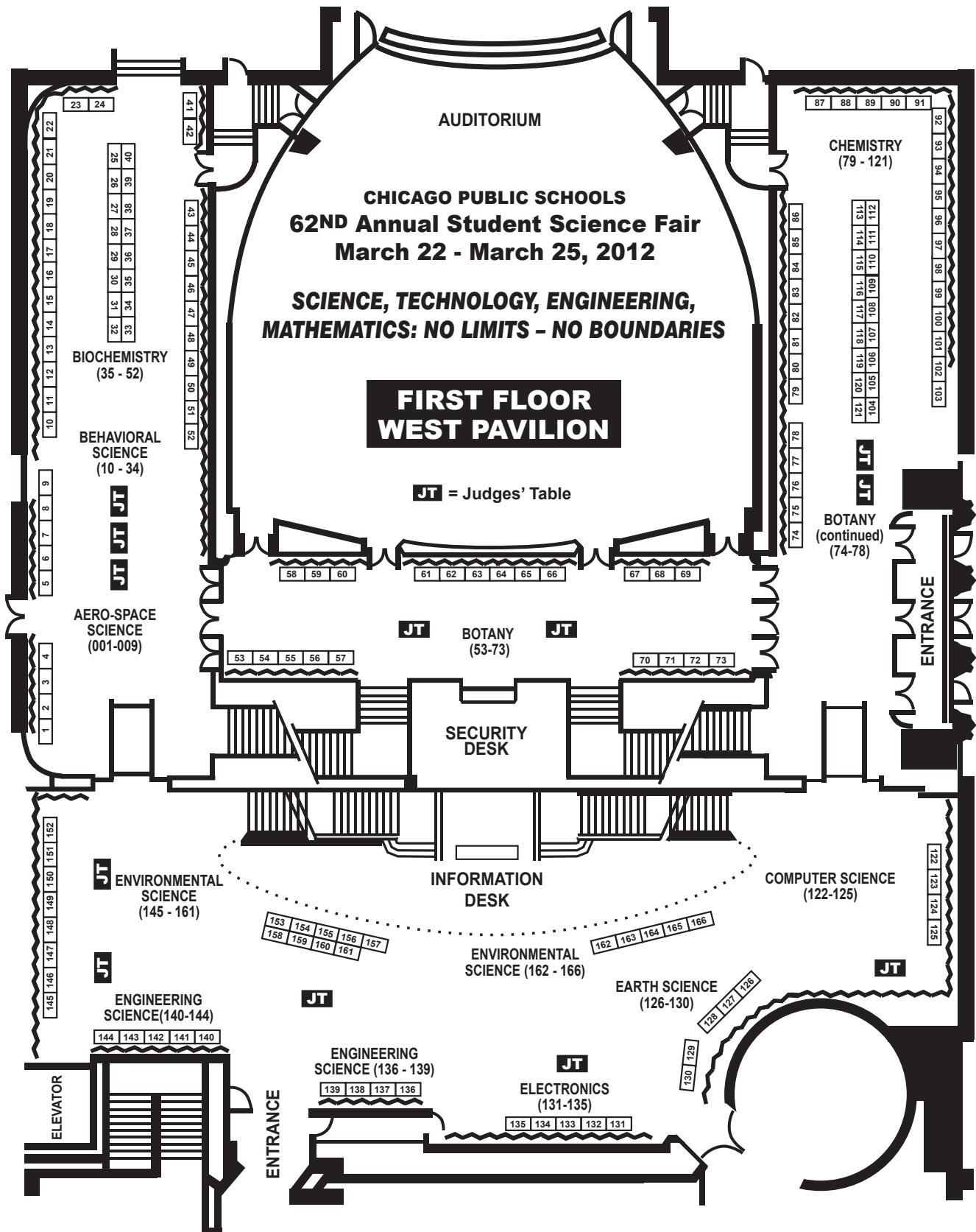
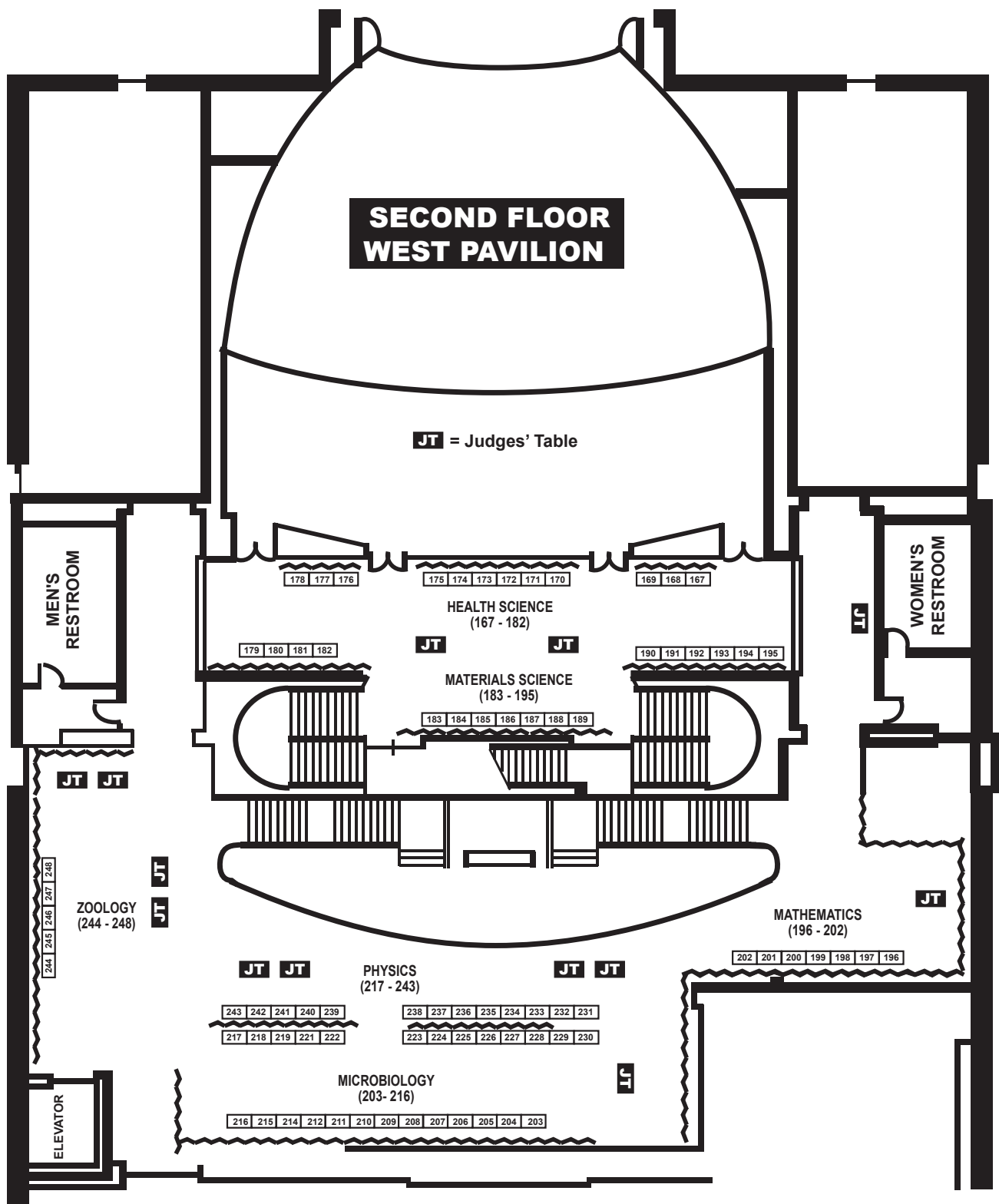


EXHIBIT JUDGING
FRIDAY



**EXHIBIT JUDGING
FRIDAY**



Student Exhibitors

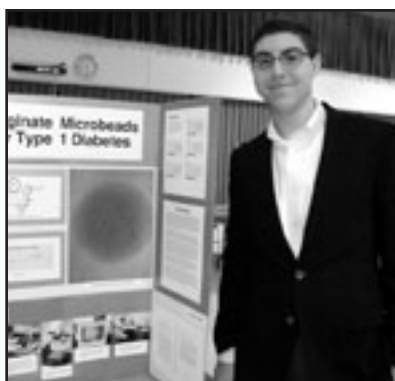
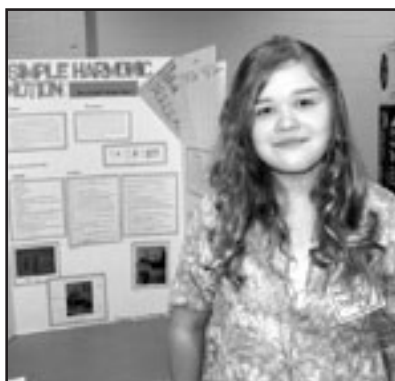
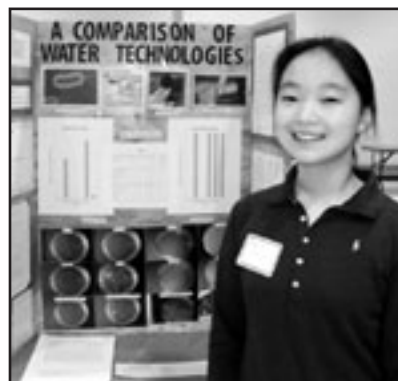
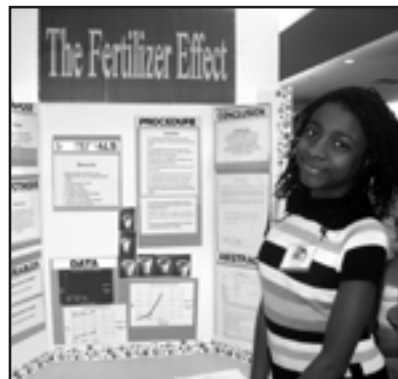


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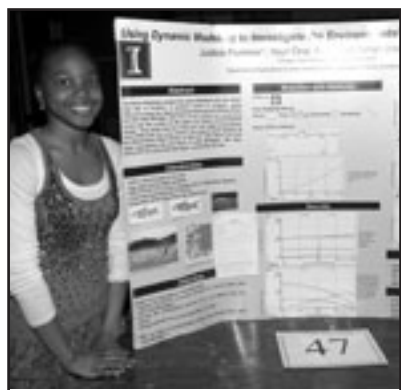


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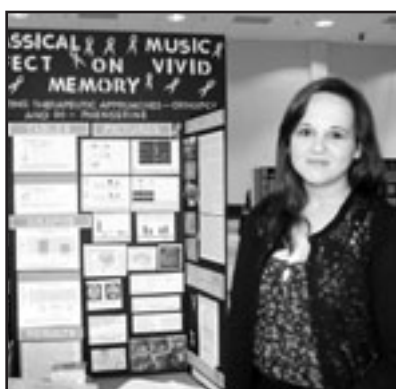
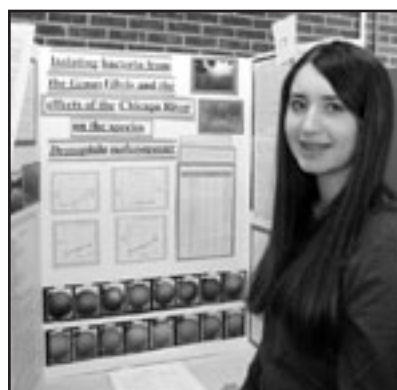
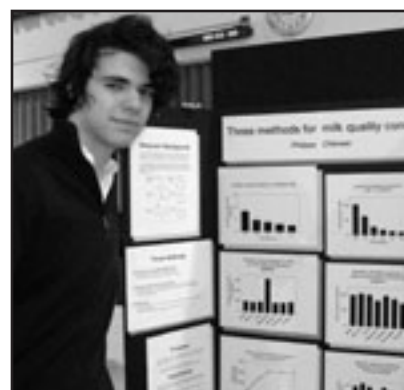


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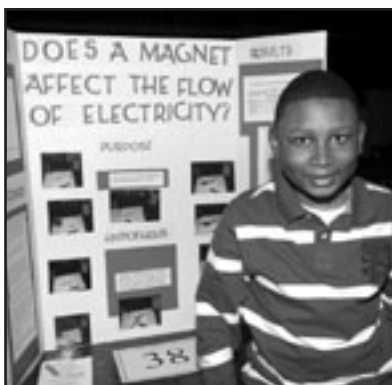


Sixth-Grade Regional Winners Recognition Luncheon

Saturday, March 24, 2012

11:45 A.M. – Columbian Room

Welcome	Linda A. Carter <i>Chairperson, CPS Student Science Fair, Inc.</i>
Comments	Christian Greer <i>CPS Student Science Fair, Inc. Board of Directors</i>
	Luba Johnson <i>Chair-Elect</i> <i>CPS Student Science Fair, Inc.</i>
Presentation of Awards	Linda A. Carter
	Christian Greer
	Luba Johnson
Group Photo	Allan Reisberg <i>Chairperson, Digital Imaging</i> <i>CPS Student Science Fair, Inc.</i>



**PUBLIC VIEWING & 6TH GRADE
LUNCH SATURDAY**



Sixth-Grade Regional Winners

List of 2011–2012 Sixth-Grade Network Winners

Name	School	Project Title	Network
Allen, Brendan	Ogden	Underground Farmers	Fullerton
Allen, Jerilynn	Poe	Damage Done by the Sun	Lake Calumet
Brown, Kaiya	Mt. Vernon	The Pressure is On!	Rock Island
Cartman, Amiya	Bennett	Stimulants/Depressants on Daphnia Heart Rate	Rock Island
Cheevers, Ava	LaSalle	Efficient Sail Design	Fulton
Clark, Bradford	Poe	Does A Magnet Affect the Flow	Lake Calumet
Clason, Sophia	UofC Woodlawn	Seismic Waves	South Side
Davis, Sydney	McDade	Roller Coaster Mania	Skyway
Dore, Abigail	Blaine	Oil + Plants = ?	Ravenswood-Ridge
Feldman, Gabriel	LaSalle	Desalination Tap Water vs. Ocean Water	Fulton
Gatewood, Jaylen	Black	What Type of Cell Phone Emits Less Radiation?	Skyway
Hernandez, Marcos	Saucedo	Which Liquid Does Evaporative Cooling Effect?	Pilsen-Little Village
Hernandez, Vanessa	Lara	Ideal Temperature for Dissolving Alka-Seltzer	Pershing
McGowan, Kirsten	Grissom	Greasy Chips, How Greasy Are Lay's Potato	Lake Calumet
Medina, Fernando	Ruiz	Which Brand of Popcorn Leaves the Least Kernels?	Pilsen-Little Village
Monroy, Jorge	Nobel	Which Material Produces Smog More Rapidly?	Garfield-Humboldt
Morales, Andrew	Gallistel	Acid or Base?	Lake Calumet
Morgan, Jalaya	Green	Gel Electrophoresis	Rock Island
Perez, Mario	Clark	Aluminum or Wood Bat?	Austin-North Lawndale
Puczko, Daniel	O.A. Thorp	Getting Fit for a Stronger Heartbeat	O'Hare
Resendiz, Lexus	Calmecca	How Much Energy is Stored in Different Foods	Pershing
Salvana, Gabriel	Decatur	Flight! The Affect of Time and Distance	Ravenswood-Ridge
Sanchez, Pablo	Nightingale	How Rusting Effects Metals Magnetic Strength	Midway
Shearrill, Arani	Burr	Got Sleep?	Fulton
Smith, Taya	L. Armstrong	Which Pops the Most?	Austin-North Lawndale
Sobolewski, Megan / Berg, Michaela	Oriole Park	Who Has the Strongest Breath?	O'Hare
Willis, Gary	Owen	Radiant Radish Seeds	Midway

PUBLIC VIEWING & 6TH GRADE LUNCH SATURDAY

Awards Convocation

Sunday, March 25, 2012

1:00 P.M. – Auditorium

Pledge of Allegiance

National Anthem

Greetings

Linda A. Carter

Chairperson, CPS Student Science Fair, Inc.

Welcome

Nicole Kowrach

*Director of Teaching and Learning
Museum of Science and Industry*

Remarks

Noemi Donoso

*Chief Education Officer
Chicago Public Schools*

Mary Boettcher

*President
CPS Student Science Fair, Inc. Board of
Directors*

Awards Presentation

Lorraine Wilson

*Co-Chairperson, Special Awards and Tours
Committee*

- Special Awards
- Military Awards
- Special Tour Awards

Recognition of Winners

Noemi Donoso

Nicole Kowrach

Mary Boettcher

Linda Carter

Recognition of

Symposium Winners

Nina Hike-Teague

Chairperson, Symposium Committee

**Illinois Junior Academy
of Science (IJAS) Awards**

Anne Marie Sherry

Chairperson, IJAS Committee

**International Science
and Engineering Fair
(ISEF) Awards**

Linda A. Carter

Chairperson, CPS Student Science Fair, Inc.

Closing Remarks

Linda A. Carter

Chairperson, CPS Student Science Fair, Inc.





Special Awards

Individuals, industry, educational organizations, and professional societies provide varieties of awards. The contributors listed below provide cash awards, bonds, medals, scientific equipment, tour and convention trips, certificates of merit, and subscriptions to professional journals, as indicated. The judges who represented these contributors are also listed below.

At the Awards Convocation on Sunday, March 25, 2012, students, whose projects are selected by Special Awards Judges, will be the direct recipients of these awards.

If you are interested in becoming a Special Awards contributor, please contact Linda Carter, P.O. Box 803945, Chicago, IL 60680 or lacarter2010@aol.com

On behalf of all the young scientists, a special THANK YOU is extended to the contributors of Special Awards.



In Memory of Shirley Davis- Morrissey a monetary award will be given to a middle school teacher sponsor who has successfully demonstrated outstanding leadership and educational mentorship to students exhibiting at CPS Student Science Fair.

Achievement Award

Three \$50.00 cash awards to first time High School City Science Fair exhibitors

- Rita Nelson
- RyAnn Nelson -Jaiyesimi

Adler Planetarium

Two family passes to Adler Planetarium to exhibitors showing promise in space science and two certificates of participation in Astro-Science workshop for outstanding high school exhibitor

Heidi Schmitt

Alpha Kappa Alpha Sorority

One \$50 cash award for a 7th grade female exhibitor in health

- Linda W. Carter

A.S.M International, Chicago Regional Chapter

Two \$125 cash awards to outstanding projects in Engineering Science and Materials Science

- Jan Edwards

American Meteorological Society

Two certificates to Meteorology exhibitors

- Society for Science and the Public

American Nuclear Society-Chicago Section

One \$100 cash award, one \$50 cash award, and one \$25 cash award with recognition books and certificates for each school to exhibitors promoting peaceful uses of nuclear energy.

- Roger W. Tilbrook

American Psychological Association

One certificate to an outstanding psychology exhibitor in Behavioral Science

- Society for Science and the Public

American Science & Surplus

One \$75 American Science and Surplus gift-certificate for the most original and creative exhibit.

- Amanda Hermann

Anti-Cruelty Society

One \$75 cash award to an outstanding exhibitor demonstrating consideration for animals

Association for Women Geoscientists

One certificate to an exemplary female exhibitor in Earth or Planetary Science

- Society for Science and the Public

Association of Women in Science (Chicago)

Five \$50 cash awards to promising young female exhibitors showing promise in scientific research

- Sandy Pearce

Bartley Family Award

One \$50 cash award to an outstanding microbiology exhibitor

- Jeanette Bartley

Baxter Healthcare Women In Science and Engineering

Five \$50 American Express gift cards to promising young female exhibitors showing promise in scientific research

- Paroo Uppal



Special Awards

Brenlen Associates

One \$100 cash award to an outstanding middle school exhibitor

- *Brenda J. Harris*

Broadcom MASTERS

A special invitation to the top 10% of exhibiting Middle grade exhibitors to qualify for Middle school Science & Engineering Fair

- *Society for Science and the Public*

Camacho Math and Science Award

Four \$50 cash awards to minority female middle grades exhibitors

- *Lena Camacho*

CETMC (Chicago Elementary Teachers of Math Club)

Special acknowledgement for project that best demonstrates elementary mathematics

- *Carol Miller*
- *Jim Oehler*

Charles Braxton Brown Jr. Award of Excellence

A \$50 cash award to a minority student exhibiting excellent use of technology.

- *Janice Brown*
- *Vincent C. Brown*

Charles Braxton Brown Jr. Award of Ingenuity

A \$50 cash award to a minority students exhibiting ingenuity in experimentation

- *Vincent C. Brown*

Cheryl Deese Science Award

Three \$50 cash awards to exemplary exhibitors

- *Cheryl Deese*

Chicago Intellectual Property Alliance (CIPA)

Three "Most Inventive" awards: First place - assistance with filing a patent application, a \$500 cash award, and a plaque; Second place - a \$300 cash award and a plaque; Third place - a \$200 cash award and a plaque

- *Mike Harlin, Esq.*
- *Gina Bicknell*
- *Steve Parmelee*
- *Sarah Kofflin*

Chicago Principals and Administrators Association

Five \$100 Target Gift cards to high school exhibitors and five \$100 Target Gift cards to elementary exhibitors in Behavioral Science, Biochemistry, Chemistry, Environmental Science, Mathematics, or Microbiology

- *Clarice Berry*
- *Walter Pilditch*

Chicago Zoological Society - Brookfield Zoo

One to Ten family memberships to exhibitors demonstrating forward thinking in conservation or animal welfare

Jennifer Marvel-Gillono

Christine M. Krupa Award

One \$250 cash award to an outstanding Mathematics exhibitor

- *Christine Krupa*

D. Lewis Future Science Star Award

Four \$25 cash awards to inspiring elementary exhibitors

- *Deborah Lewis*

Delta Sigma Theta Sorority Inc.

Special recognition to outstanding exhibitors

Judy Walter

Dr. Allen L. Wright Orthopedic Surgeon Award

One \$50 cash award

Leslie Swain-Store

Dr. Janice M. Buckley Perseverance Award

Two \$25 cash awards to 7th grade exhibitors who overcame obstacles to compete

- *Linda A. Carter*

Dynamic Duo

A 2012 Souvenir Lanyard to each exhibitor

- *Linda A. Carter*
- *Barbara Dubielak-Wood*

Earth and Environmental Award

A \$300 cash award distributed among exemplary exhibitors in Earth and Environmental categories

- *Gary L. Cygan*
- *David M. Petrovski*

ETA Cuisenaire

A 2012 Souvenir tote to each exhibitor

- *Jim Spude*

Ezell Smith Award

Special recognition award for exhibit related to food

- *Edna Smith*

FBC Memorial Foundation for Assisted Living Award

A \$50 cash award to an exhibitor working on wellness

- *Velma Chiles*

Frey Scientific

Five \$50 Frey gift certificates for items from the on-line catalog to outstanding middle school exhibitors and a \$50 gift certificate to each of their Teacher Sponsors

- *Vince Zaccardi*

First Lady Award in honor of Michelle Obama

One \$300 cash award to an outstanding female exhibitor

- *Melanie R. Wojtulewicz*

GE Energy Services Award

One \$500, one \$300 and one \$200 cash awards to exemplary projects related to renewable energy

- *Andrew Leon*

Gerald Rudnick Technology Award

One \$50 cash award to an exhibitor that best demonstrates the most innovative use of technology

- *Gerald Rudnick*



Special Awards

Granular Materials Award

One \$100 cash award to an exhibitor using granular materials

- *Paul J. Dolan Jr.*

Hambrick Opportunities

Two \$50 cash awards to exemplary artistic designs and innovation exhibitors

- *Arlene Hambrick*

Hayden-McNeil Speciality Product Award

Classroom set of student lab notebooks for exhibitors in chemistry, organic chemistry, life science, physics

- *Jennifer Hayman*

Herbert Hoover Young Engineer Award

One certificate and medallion to an exhibitor showing a grasp of engineering fundamentals

- *Society for Science and the Public*

IJAS State Exposition

Accommodations for 75 exhibitors and symposium presenters to attend the IJAS state exposition

- *Anne Marie Sherry*

IJAS Essay Finalists

Elementary Division - One \$250, one \$125, one \$75 and one \$50 cash award to elementary writers; High School Division - one \$250, one \$125, one \$75 and one \$50 cash award to high school writers; and \$25 to all other participants

- *Nina Hike-Teague*

Illinois Speech-Language-Hearing Association

Two \$100 cash awards to projects related to communication disorders and sciences

- *Denise Prohaska*
- *Cynthia Keller*
- *Vicki Jay*

Institute for Women's Health Research, Northwestern University

One \$50 cash award and one day working along side a scientist for most innovative middle school projects impacting women's health

- *Cathryn Smeyers*

Intel Excellence in Computer Science

Special qualifying application for the top computer science high school exhibitor

- *Society for Science and the Public*

I Rivera, L.Wallberg, T. James, J, Rogers Science Award

Four \$50 cash awards to middle school exhibitors demonstrating best use of experimentation

- *Eddie Marie Gonzalzes*

ISEF

Trip for four delegates to International Science and Engineering Fair and recognition to two alternates

- *Pam Moy*

I-SWEEP

Special qualifying application to an outstanding sustainability project

- *Ismail Ayyildiz*

Janice Lemar Brown Women In Mathematics Award

A \$50 cash award to an outstanding minority mathematics exhibitor

- *Vincent C. Brown*

Jaylin Denwood Award

A \$50 cash award to an outstanding female 7th grade exhibitor

- *Lorraine B. Wilson*

John W. Swain Pharmacist / Entrepreneur

Two \$50 cash awards to exemplary exhibitors

- *Leslie Swain-Store*

Kathryn Peecher Memorial Award

Four \$25 cash awards to inspiring elementary exhibitors

- *Vickie Jackson*
- *Linda Carter*
- *Marie Clouston, Chandra Garcia, Maureen Tucker*

Leap Learning Systems Recognition

Special qualifying invitation to attend Speech & Language training session

- *Michael Levesque*

Linnae Wise Bryant Science Award

A \$50 cash award to an outstanding minority exhibitor

- *Linnae Wise Bryant*
- *Katrina Washington*

LoEva Reid

Two \$50 cash award to elementary exhibitor

- *Leon Williams*
- *Fred Williams*

Luba Johnson Science Award

Two \$50 cash awards to outstanding exhibitors

- *Luba Johnson*

Luis Alvarez Capilla Award

One \$50 cash award to outstanding exhibitors in the area of agriculture

- *Elizabeth Alvarez*

Lula Mae Puritt

Two \$50 cash awards to exemplary exhibitor

- *Fred Williams*
- *Leon Williams*

Marie Curie Sklodowska Award

Four \$25 Gift Cards to outstanding projects in physics and chemistry

- *Stephanie Dubielak*
- *Barbara Dubielak-Wood*



Special Awards

Mary J. McKinney Award

One \$50 cash award to an outstanding female middle school exhibitor

- *Gina Grant*

McGraw Hill School Education Group

Two \$100 gifts of products from McGraw Hill catalog to exemplary exhibitors

- *Ardena White*

Metropolitan Water Reclamation District

One Superior Award, 25 letters of commendation, an invitation to the Commissioner's Award Ceremony, and a boat tour of the Chicago River and Lake Michigan with lunch on board for exhibitors and parents

- *Mary Carroll*

Mu Alpha Theta

One certificate to a high school exhibitor creatively using modern mathematics

- *Society for Science and the Public*

Murff Mathematical Merit Award

A \$50 cash award to an outstanding exhibitor

- *Ricky Murff*
- *Vivian Murff*

Museum of Science and Industry

An MSI family membership to exhibitors chosen to go to IJAS

- *Pam Barry*
- *Rachel Schmeisser*

National Oceanic & Atmospheric Administration

One certificate and medallion to an exhibitor in earth conservation

- *Society for Science and the Public*

National Society of Professional Engineers

One certificate and lapel pin to an exhibitor demonstrating innovative engineering

- *Society for Science and the Public*

National Technical Association

One \$50 cash award to an outstanding exhibitor

- *Cynthia Slater*
- *Melvin Slater*

Omega Psi Phi Fraternity Inc.

Three \$50 cash awards to outstanding exhibitors

- *Melvin Slater*
- *Melvin Hargrett*
- *Turon Ivy*
- *Ron Wright*

Optical Society

Special recognition to exemplary exhibitors

Peggy Notebaert Nature Museum

A Family membership to PNNM and a \$60 Visa gift card to an exemplary environmental science exhibitor

- *Lynn Arcuri*
- *Barb Powell*

Pena Mathematical Excellence Award

Two \$65 cash awards to one middle grade and one high school exhibitor exhibiting the best use of collecting, analyzing and reporting data

- *Jorge Pena*
- *Natasha Buckner-Pena*

Radvila Physical Science Award

One \$50 cash award to a Physical Science exhibitor

- *Nijole Mackevicius*

Ricoh Sustainable Development Award

Special recognition to outstanding environmental exhibitors

- *Society for Science and the Public*

Rochelle Hawes Bolton - Award of Excellence

Five \$25 cash awards to exemplary exhibitors in the area of Health Science, Material Science, Botany, or Zoology

- *Deborah Hawes*

Science Enterprise Award

Six \$50 cash award to exhibitor showing initiative and determination

- *Gary Morrissey*
- *Shirley Morrissey*

Scientific Merit Award

Four \$50 cash awards to exemplary high school exhibitors in botany, microbiology, environmental, biochemistry or zoology

- *RyAnn Nelson Jaiyesimi*
- *Rita Nelson*

Scope Shoppe Inc.

One field microscope with case for exhibitor in Biology or Environmental Science

- *Pat Schlinder*

Slater Association

One \$50 cash award to an outstanding exhibitor

- *Cynthia Slater*
- *Melvin Slater*

Society for In Vitro Biology

Recognition for outstanding 11th grade student exhibiting in areas of plant or animal in vitro biology or tissue culture

- *Society for Science and the Public*

Society for Technical Communication

Chicago Chapter

Two \$75 (at maturity) Savings Bond for excellence in visual communication to an exhibitor

- *Chris Hester*

Society of Tribologists and Lubricating Engineers

Special recognition to lubrication related exhibitors

- *Russell Turray*



Special Awards

SPIE-- The Intl Society for Optical Engineering

One \$250 cash 1st place, One \$150 cash 2nd place, One \$100 cash 3rd place and one \$100 cash award from Optical Society of Chicago

- *George Magerl*
- *John M. Madigan, Jr.*

State Farm Insurance Co. Award

A \$50 cash award to an exemplary exhibitor

- *Cynthia Slater*
- *Melvin Slater*

Stockholm Junior Water Prize

Three certificates to exemplary high school water related exhibits and eligibility to participate in the Stockholm Junior Water State Competition

- *Society for Science and the Public*

Susan Engel Award of Excellence

One \$50 cash award to a high school exhibitor in Health or Medical Sciences

- *Susan Engel*

Symposium Award

One first place cash award of \$250, one second place cash award of \$125, one third place cash award of \$75, one fourth place cash award of \$50 and thirty participation cash awards of \$25 to Symposium presenters

- *Nina Hike-Teague*

Teach Our Children, Inc. Tyrone K. Smith Memorium Award

A \$100 cash award to an outstanding electronics exhibitor

- *Tracy Raoul*

The Field Museum

A one year family membership, lunch box, T shirt, tote bag, chocolate making kit, and mammals playing cards awarded to an exemplary exhibitor

- *Anne Marie Fayen*

The National Sorority of Phi Delta Kappa, Inc.

Two \$50 cash awards to exemplary chemistry exhibitors

- *Katrena Washington*
- *Shannette Rooks*

United States Air Force

Four Certificates, Victory Sport Bag, Sonic Sound Speaker, and Junior Tech Organizer to outstanding Science or Engineering project

- *Phyllis Chronaberry*
- *Bryan Stevens*

United States Army

A certificate of achievement and tangible award to exemplary exhibitors

- *Society for Science and the Public*

US Metric Association

A certificate to a high school exhibit that involves quantitative measures which best uses the SI metric system

- *Society for Science and the Public*

United States Navy

A certificate of achievement and letter redeemable for AAS catalog items to exemplary exhibitors

- *Society for Science and the Public*

University of Illinois at Chicago - Computer Science Department

One iPad to an exhibitor with the outstanding use of Computer Science

- *Dale Reed*

UOP, A Honeywell Company

Eight cash awards: One Gold award of \$150; two Silver award of \$100; and five Bronze awards of \$50 each to be awarded in the areas of chemistry, physics and environmental sciences

- *Willie Morrisette*
- *Douglas Nafis*
- *John Kulach*

Wangari Maathai Memorial Award

Two \$50 gift cards for exemplary projects with potential for positive environmental impact

- *Wendy Jackson*

Wild About Nature Award

Three certificate with congratulatory letter and invitation to Forest Preserve Bd. of Commissioner's May 2012 meeting

- *Judges: Forest Preserve District -Cook County*
- *Laura Kaster*

Wilson Family Award

A \$100 cash award to an outstanding 7th or 8th grade exhibitor

Lorraine B. Wilson

Wojo Award

One \$200 cash award to an exemplary elementary exhibitor

- *Melanie Wojtulewicz*

World Book Encyclopedia Inc.

A copy of World Book Science Year 2012 to all exhibitors

- *Mark Willy*
- *Victor Mazzeo*

Yale Science & Engineering Association

One certificate to an outstanding 11th grade exhibitor in Computer Science, Engineering, Physics, or Chemistry

- *Society for Science and the Public*

Young Scientist Award

Three \$50 cash awards to High School students for their scientific research endeavors in botany, chemistry, environmental science, or microbiology

- *RyAnn Nelson Jaiyesimi*
- *Rita Nelson*

A Special Award from The James Dyson Foundation, an Engineering Box, to the school with the most participants at the 62nd Annual Science Fair.

Special Awards





CPS Student Science Fair Special Programs

Research Grants – money for student research

Mini-grants are available to students in Grades 7 through 12 for the purpose of providing financial aid while conducting research projects. Students may apply for renewable grants of up to \$100 per semester. These funds may be used for the purchase of materials and equipment not available in their schools, but which are needed to complete the student's experimental research. Students may apply to the Research Grants Committee of CPS Student Science Fair, Inc.

Maxi-grants are awarded to students in Grades 9 through 12 and provide financial support in amounts of \$101–\$500. This grant is available to students who have already demonstrated excellence in science projects and are in need of more expensive materials and equipment in order to continue their research. Students must apply to the Research Grants Committee of CPS Student Science Fair, Inc. and, if accepted, must present their work at an interview with members of this committee. An application can be found in the current *Science Fair Handbook* and on the Internet at: www.cpsscifair.org.

Advise-a-Student – professional advice for student research

The Advise-a-Student program is designed to provide technical advice to students in Grades 7 through 12 who are working on a research project. Advice is available only after students exhaust school resources and have thoroughly researched their topic in the library. In order to discuss and obtain assistance in improving their projects, students must apply for a research advisor by submitting an application to the Advise-A-Student Committee of CPS Student Science Fair, Inc. An application can be found in the current *Science Fair Handbook* and on the Internet at: www.cpsscifair.org.

Science Fair Central – workshops for student research

Northeastern Illinois University and Chicago State University opened labs in their science buildings on Saturday mornings this past September and October and invited high school and elementary school students, teachers, parents, and mentors to the campus. NEIU and CSU provided professional scientists, in-

cluding university faculty and staff, to advise and assist the students. In some cases lab set-up space and materials were made available. More details will follow in a mailing to teachers at the beginning of the next school year. Please contact Paul Dolan, Professor of Physics, Northeastern Illinois University at: P-Dolan@neiu.edu or 773-442-5785.

Science Clubs – after school help from teachers for student research

ComEd, An Exelon Company has continued to provided funding for 20 high school science clubs this school year. The primary objective is to compensate teacher-sponsors for guiding students as they developed science fair projects. Club sponsors receive money to purchase supplies, materials, and/or equipment for conducting club activities. Peoples Gas provided funding for 17 middle school science clubs this school year. In addition to stipends, teachers were able to help students collect data by using Vernier *LabQuest*, which brought more technology into the classroom. These clubs also have engineers from Peoples Gas who volunteer to advise club members on their science research.

Scholarships – college funds for science fair alumni

In order to support the CPS Student Science Fair and to encourage students to consider careers in science, several local universities have provided renewable tuition waiver scholarships. In addition, monetary contributions from various sources in the business community have been volunteered as well as solicited to provide additional scholarships. Any prospective Chicago public high school graduate who has participated in at least one science fair (during Grades 7–12) at the regional or city level and/or the symposium is eligible to apply for a scholarship. The Scholarship Committee, comprising Science Fair representatives, business and education, selects scholarship recipients on the basis of participation in the Chicago Public Schools Science Fair, scholastic achievement, future goals, and personal interviews. Since 1956, CPS Student Science Fair Inc. has awarded 1,946 scholarships valued at \$2,811,802 to students from 72 Chicago public high schools.



2011 Scholarship Winners

Any prospective June CPS high school graduate who has participated in CPS science fairs (during grades 7-12) at a regional or the city level and/or the symposium/essay competition; and who is planning to major in science, mathematics, engineering, or computer science was eligible to apply for a scholarship. The Scholarship Committee, representing business and education, selects scholarship recipients on the basis of participation in the Chicago Public Schools Science Fair, scholastic achievement, future goals, and personal interviews.

The June 2011 high school graduates listed below were selected to receive financial scholarships by the Chicago Public Schools Student Science Fair, Inc. Scholarship Committee.

Since 1956, Student Science Fair, Inc. has awarded 1,946 scholarships, valued at \$2,811,802 to students from 72 Chicago public high schools.

Key:

Student/High School
College Destination
College Major
Sponsor/Amount

Jonathan Aird/Payton
University of Illinois
Psychology/Neuroscience
Geri Blakley Memorial/\$1,500

Fatimah Askia/Williams Medical
Loyola University Chicago
Pre-Medicine/Anesthesiology
Takeda Global Research &
Development Center, Inc./\$5,000

Tashayla Baker/Manley
Western Illinois University
Pre-Nursing/Nursing
Alumni Association/\$1,000

Nicole Bolton/Morgan Park
DePaul University
Environmental Studies
DePaul University Tuition Waiver/
4-Yr Renewable - \$8,000 Yr

Eduardo Cisneros/Lane
University of Chicago
Biological Sciences/Research
University of Chicago Tuition Waiver/
4-Yr Renewable - \$2,000 Yr

Moriah Elustra/Bogan
Illinois Institute of Technology
Biology/Pharmacy
CPS Student Science Fair, Inc./\$1,000

Edith Flores/Hubbard
University of Wisconsin-Madison
Biology/Secondary Teacher
Chicago Teachers Union/\$1,000

Amber Fredricks/W. Young
University of Illinois at Chicago
Biology/Pre-Medicine
UIC Tuition Waiver/
4-Yr Renewable - \$12,000 Yr

Arlevea Freeman/Morgan Park
Wellesley College
Math/Actuarial Science
Blum-Kovler Foundation/\$1,000

Teodoro Gomez, Jr./Schurz
University of Illinois at Chicago
Computer Engineering
Tom Maloney Memorial/\$1,000

Jezabel Guerrero/Phoenix Military
University of Iowa
Nursing/Military Nursing
Allen Nelson Memorial/\$1,000

Sana Hira/Von Steuben
Loyola University Chicago
Biology/Pre-Medicine
Harold Keihm Memorial/\$4,000

Jourdan Howard/Lindblom
Truman State University
Biology/Pharmaceutical Research
Takeda Global Research &
Development Center, Inc./\$3,000

Sana Iqbal/Senn
Loyola University Chicago
Biology/Pre-Medicine
Loyola University Tuition Waiver/
4-Yr Renewable - \$2,000 Yr

Nicole Kuklinski/Lane
Benedictine University
Radiation Therapy
Takeda Global Research &
Development Center, Inc./\$5,000



2011 Scholarship Winners

Austin Maliszewski/Payton
University of Michigan
Computer Engineering
Motorola Solutions Foundation/\$3,000 &
Harold Keihm Memorial/\$1,000

Maria Manghi/Payton
University of Pennsylvania
Biology/Pre-Medicine
Takeda Global Research &
Development Center, Inc./\$3,000

Naomi Mine/Payton
University of Chicago
Neuroscience/ Psychology
CPS Combined Charities/\$1,000

Maribel Nieves/Kelvyn Park
Illinois Institute of Technology
Civil Engineering
CPS Student Science Fair, Inc./\$1,000

Jonathan Perez/Lane
University of Chicago
Biology/Pre-Medicine
Rosenbaum Scholarship/\$500 &
CPS Student Science Fair, Inc./\$500

Karen Perez/Lane
University of Illinois at Chicago
Chemistry/Pharmacy
Takeda Global Research &
Development Center, Inc./\$4,000

Alexis Raybon/Chicago Ag
University of Alabama
Occupational Therapy
Takeda Global Research &
Development Center, Inc./\$5,000

Omari Roberts/Williams Medical
Trinity College
Electrical Engineering
ComEd, An Exelon Company/\$3,000

Charnice Robinson/Chicago Ag
Auburn University
Animal Science/Pre-Vet
Janice Brown Memorial/\$1,000

Alexandra Rojek/Northside CP
Harvard University
Chem-Physics-Bio Research
Takeda Global Research &
Development Center, Inc./\$5,000

Madeline Rollins/Payton
Northwestern University
Biological Sciences/Pre-Medicine
Barbara McCormick Memorial/\$1,000

Faiza Sulaiman/Lane
Kenyon College
Biochemistry/Pre-Medicine
Donald & Helen Edwards Scholarship/\$1,500

Alicia Walker/Lane
University of Wisconsin-Madison
Animal Science/Pre-Vet
Ray Readus Memorial/\$1,000

Mikchayel Watkins/Morgan Park
University of Illinois
Aerospace Engineering
Zdunek-Memhardt Scholarship/\$500 & CPS Student
Science Fair, Inc./\$500



2011 Takeda Scholarship Winners



2011 Scholarship Winners

Number of Scholarships Awarded (1956 – 2011)

Map no. School Scholarships

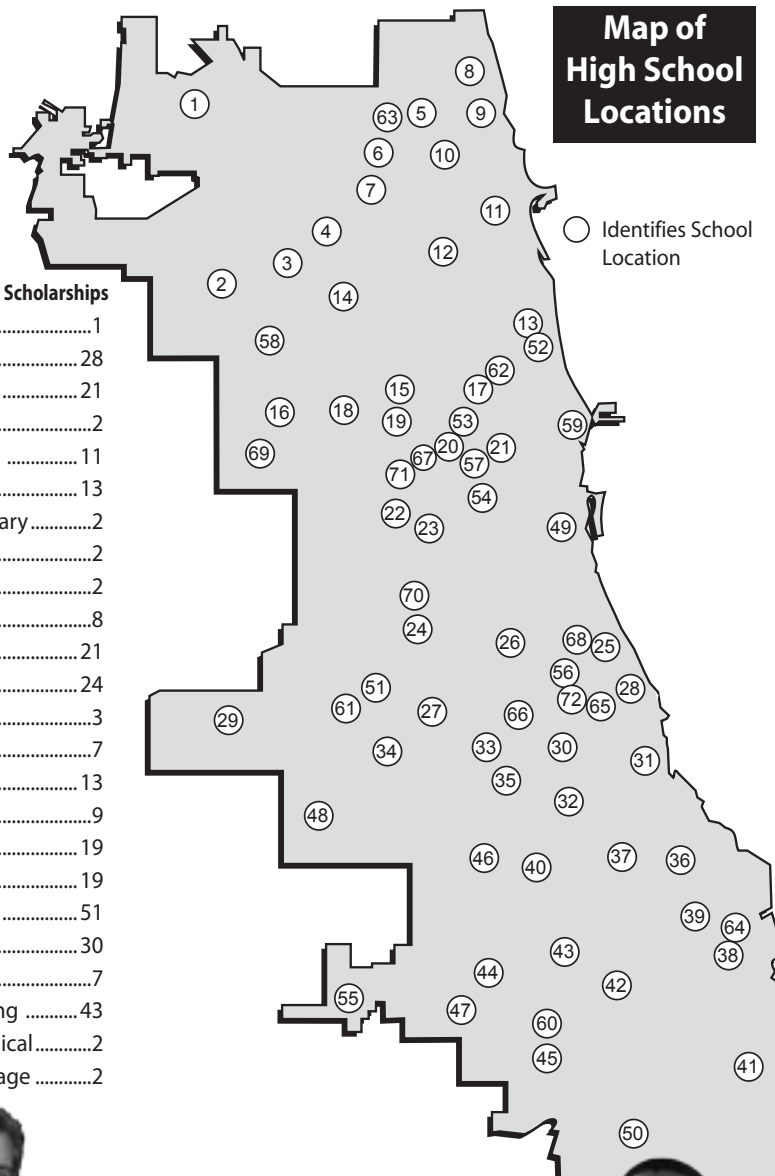
10	Amundsen	27
16	Austin	8
64	BEST	1
57	Best Practice	1
48	Bogan	28
38	Bowen	15
68	Bronzeville	1
60	Brooks	3
46	Calumet	4
50	Carver	6
69	Chicago Academy	1
55	Chicago Ag. Sci.	41
39	Chicago Voc.	7
15	Clemente	1
42	Corliss	11
20	Crane	1
53	Cregier	2
51	Curie	14
49	Dunbar	1
56	DuSable	3
65	Dyett	1
30	Englewood	4
22	Farragut	4
45	Fenger	14
18	Flower	1
03	Foreman	24
27	Gage Park	4
61	Hancock	4
43	Harlan	5
35	Harper	4
23	Harrison	4
37	Hirsch	5
66	Hope	2
34	Hubbard	16
31	Hyde Park	16
59	Jones	4
54	Juarez	3
44	Julian	4
24	Kelly	11
14	Kelvyn Park	12
29	Kennedy	14
28	Kenwood	15
25	King	3
11	Lake View	10
12	Lane	106
13	Lincoln Park	113
33	Lindblom	21
19	Marshall	2

Map no. School Scholarships

71	Manley	1
05	Mather	28
47	Morgan Park	21
52	Near North	2
63	Northside CP	11
62	Payton	13
67	Phoenix Military	2
58	Prosser	2
32	Robeson	2
07	Roosevelt	8
04	Schurz	21
09	Senn	24
40	Simeon	3
36	South Shore	7
02	Steinmetz	13
08	Sullivan	9
01	Taft	19
26	Tilden	19
06	Von Steuben	51
41	Washington	30
17	Wells	7
21	Whitney Young	43
72	Williams Medical	2
70	World Language	2

Map of High School Locations

○ Identifies School Location





ComEd High School Science Club Program 2011-2012

The following high schools have approved after-school science clubs sponsored by ComEd, An Exelon Company. Each club is provided with a stipend for the club sponsor (or shared among two or more club co-sponsors) and funds for instructional supplies. The primary objective of the ComEd Science Club Program is to provide extended science experiences and guidance to students interested in developing science fair projects.

Amundsen

Eman Sarhan

Chicago HS for Agricultural Science

Daniel Martin

Joan White

Chicago Vocational Career Academy

Joni Ann Jones-Chaney

Curie

Carlos Guerrero

Jennifer Patush

Hancock

Stephen Farr

Erin Neidt

Hyde Park

Maya Raja

Julian

Monique Murray

Lane Tech

Allison Krakowski

Emily Irwin

Lindblom

RyAnn Nelson-Jaiyesimi

Marine

Zebedee Ducre, Jr.

Jonathan Paskiewicz

James Field

Payton

Walter Kinderman

Angela Hassan

Phoenix

Beatrice Jaji

Sandra Tobias

Simpson Academy

Charlotte Wood-

Harrington

Wells Community

George Hill

Whitney Young

Lynne Muhammad





Peoples Gas Middle School Science Club Program

The following elementary schools have approved after-school science clubs sponsored by Peoples Gas. Each club was provided with a stipend for the club sponsor and incorporated technology using Vernier *LabQuest* in collecting data for analysis. Giving students the knowledge and experience of using technology helps to inspire ideas for independent research projects. Peoples Gas engineers volunteered to lend their expertise to club members on their projects. The primary objectives of the Peoples Gas Science Club Program was to provide guidance to students interested in developing science fair projects and using *LabQuest* for data collection.

Ashburn Community

Megan McKay

Belmont-Cragin Elementary

Arlene Garcia

Rachel Carson Elementary

Kathleen Lizarraga

Edward Coles Elementary

Glenn Johnson

Hernandez Middle School

Rosario Canizales

Kozminski Elementary

Carole Weaver

Marconi Elementary

Lucas Smith

Portage Park Elementary

Patricia Ryan

Reed Elementary

Laura Kessinger

Sayre Language Academy

Nicole Augustine

Seward Elementary

Lorel Madden

Shields Elementary

Shelia Lane

Suder Montessori

Jodi Curl

Vanderpoel Magnet

William Ness

Waters Elementary

Margaret Ballasch

West Ridge Elementary

Leslie Hurt

Woods Academy

Juanita Brown

Peoples Gas Engineers

Laura Budzinski

Scott Davis

Michael Fisher

Michael Freeman

Joe Kaczmariski

Tim Liace

Anthony McEvoy

Jim McNelis

Julie Maupin

Andrew Park

Eric Wagener

James Ziska

SPECIAL PROGRAMS





Science Fair Volunteers

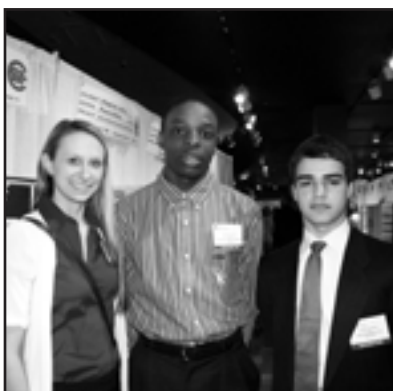
On the following pages are the names of almost 1300 people who give of their own time and of themselves to make the CPS Student Science Fair possible. **THANK YOU!**



THANK YOU



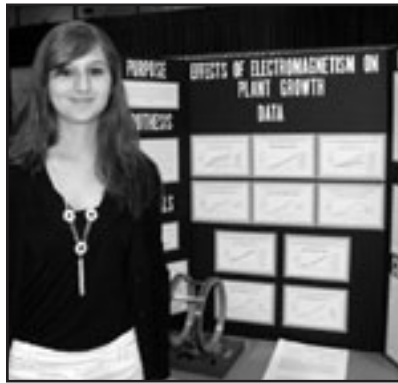
Faces of the Student Science Fair



THANK YOU



Faces of the Student Science Fair



THANK YOU



Faces of the Student Science Fair



THANK YOU



Exhibit Judges

Each year approximately 300 judges from the scientific, academic, and business communities generously donate their time, effort, and expertise in order to objectively and professionally evaluate the most scientifically talented students from the Chicago Public Schools. Science Fair honors judges who have served for a minimum of five years and on every fifth anniversary. Judges receiving a plaque for service are invited to a special Recognition Luncheon which will be held after judging is completed.

Science Fair salutes ALL the Exhibit Judges participating in the 62nd Annual CPS Student Science Fair.

Thank you and congratulations for a job well done!

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Symposium Readers

The following individuals, in addition to the Symposium Committee, generously volunteered their time and expertise on Saturday, January 28th, 2012 to read research and essay papers submitted for evaluation. *Thank you, Symposium Readers!*

Cynthia Anderson-Ward
Marie Benas
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Yolanda Del Rio
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The following scientists and engineers volunteered their time and expertise on Thursday, March 22, 2012 to act on a panel of judges to select the finalists who will participate in the Illinois Junior Academy of Science Symposium.

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The City Science Fair would not be possible were it not for the effort of the dedicated CPS employees and retirees who give days and weeks of their time and have done so for years. They invest their time behind the scenes preparing an event and supporting programs for the purpose of fostering science education, encouraging students to engage in independent research and providing those students a public forum to present their work.

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Many thanks go to the Regional Science Fair Committees, who contribute their time and effort to create the events at which the best of the projects from the school science fairs are presented and judged. Regional Science Fair Committees are chaired by a science teacher or specialist. The committees may include lead science teachers from participating schools and colleagues from Network Offices. Their efforts to insure a successful Regional Science Fair is greatly appreciated. Though the focus of the event is on students' projects, these events succeed due to the care and attention to detail of those people working on arrangements, credentials, exhibits, judging and safety committees. This year the Regional Science Fairs were grouped by Networks.

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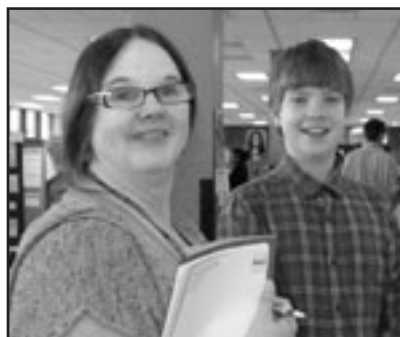
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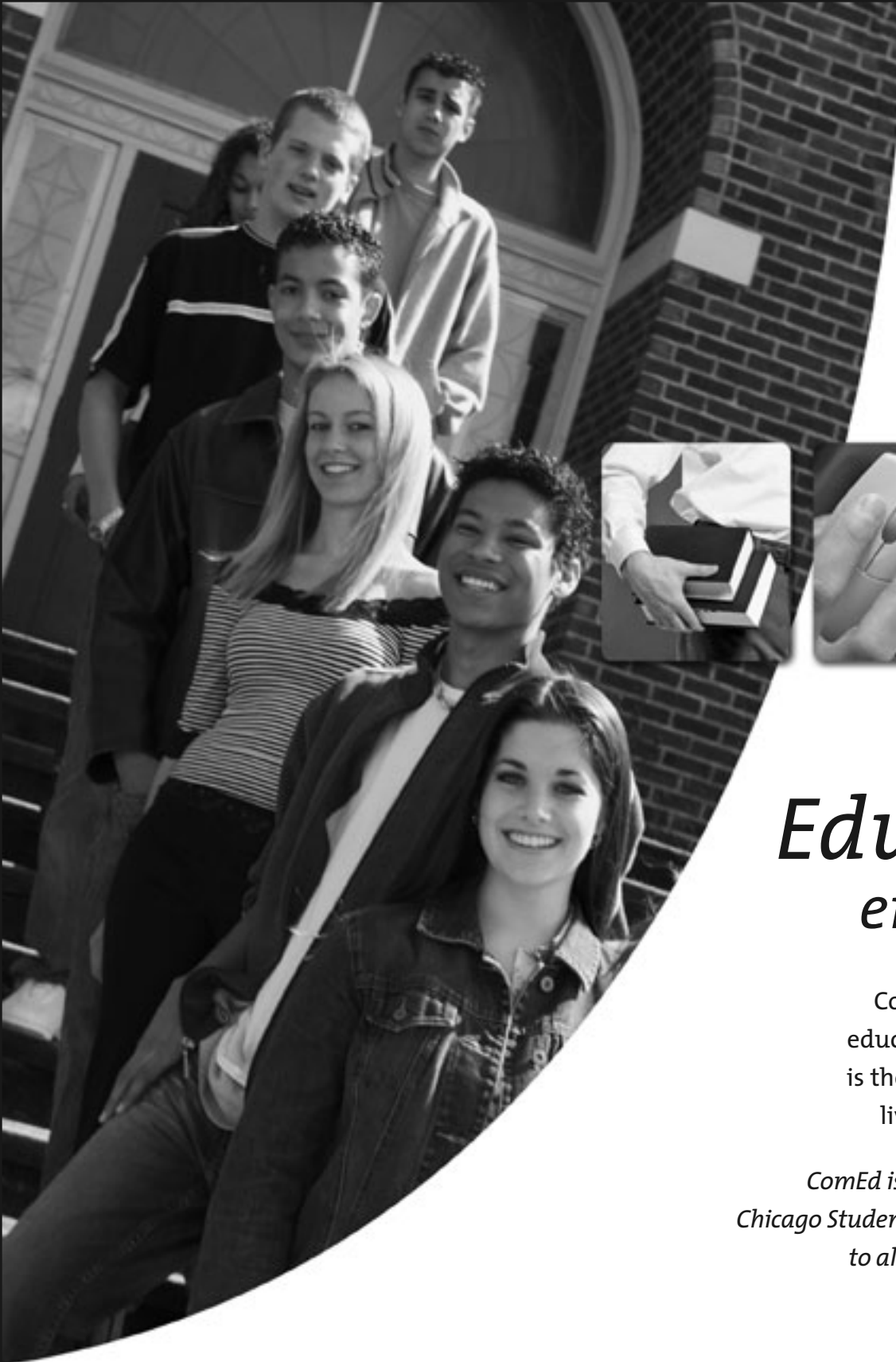


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