

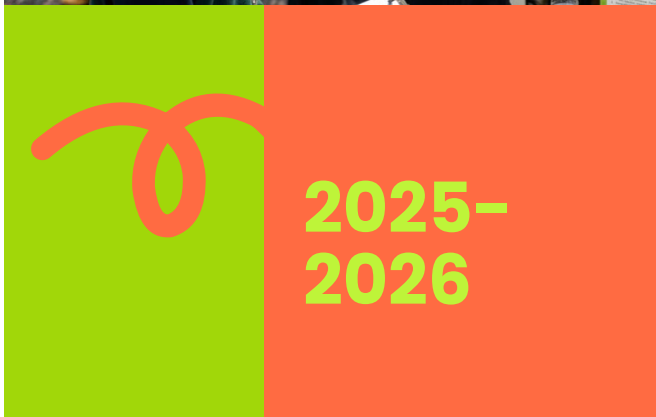


Louisville Regional
Science & Engineering Fair

Annual Report



Promoting
creativity
and
building
the future.



2025-
2026



lrsef.org

About LRSEF

The Louisville Regional Science & Engineering Fair (LRSEF) is a non-profit organization founded in 1964 and recognized as a Better Business Bureau accredited charity serving 59 Kentucky counties as a regional fair sponsor with the following mission and vision:

The mission of LRSEF is to engage, encourage, and empower the students in our region by providing them with opportunities to showcase their STEM research, compete for awards, and form meaningful connections with mentors and peers.

The vision of LRSEF is to attract, support, and inspire diverse and talented students; to foster a culture of scientific inquiry and excellence in our region; and to expand the STEM engagement of our community comprising students, teachers, parents, judges, community members, and sponsors.



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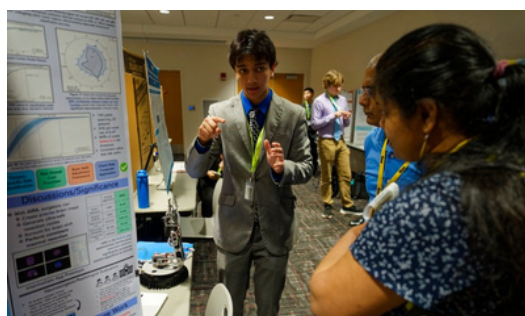


02.

LRSEF 2026

LRSEF 2026 was held at the Swain Student Activities Center of University of Louisville on Saturday, March 7. This regional Kentucky competition is nationally affiliated with the Regeneron International Science & Engineering Fair and the Junior Innovators Challenge sponsored by Thermo-Fischer Scientific.

Hosted by the 100% volunteer Board of Directors, LRSEF 2026 welcomed 36 schools with 329 middle and high school students presenting 289 projects. There were 22 public schools at the event and 14 private schools. A total of 235 volunteer judges in teams of two or three interviewed students in two rounds of judging for category awards, while special awards judges met with students throughout the day. LRSEF ensures the safety of the participating students by requesting that all judges and volunteers participate in background checks.



36

Schools



329

Students



235

Judges

03.

2026 Results

On Saturday March 7, judging interviews took place for Category Awards of 1st, 2nd, 3rd, and 4th place in 22 different STEM categories sponsored by grants or donations from local companies and donors. Category winners received ribbons, certificates and a total of **\$7,550** in awards.

GE Best of Fair Awards of **\$2,820** and trophies were given to eight projects: three in middle school and five in high school. The top three schools in both divisions were awarded trophies and a total of **\$1,750** for their STEM programs.

To determine additional winners of over 60 LRSEF Special Awards sponsored by both local and national organizations, over 60 volunteer special awards judges donated their time to LRSEF. Once the judging was complete, a total of **\$6,450** in awards were given to 103 projects in 2026 Special Awards.

In all, \$18,933 was awarded to students, teachers, and schools achieving excellence in the STEM fields at LRSEF 2026.



\$18,933
Total Cash Prizes

In addition, every student received a four-color printed program with their name and project title listed. a 2026 gold t-shirt with sponsor GE Appliances logo along with a free backpack, LRSEF lanyard, a Louisville Water Company water bottle as well as breakfast and lunch.

The 2026 Awards Ceremony was hosted by LRSEF title sponsor GE Appliances, a Haier Company on fair day from 4:30 to 5:30pm to announce the winners. Over 1,000 people from around the region attended to hear the results.



04.

High School

For the high school division, 171 students from 19 schools participated. There were 136 projects presented: 21 team projects and 115 solo. The winning schools were 1st – Central High School, 2nd – Ballard High School, and 3rd – Valley High School.

The top five high school students were named GE Best of Fair, and their projects were promoted to the Regeneron International Science & Engineering Fair held in Phoenix, Arizona, May 9–15, 2026. Each student received a trophy and a cash prize.

- **Leah Chen** – Gatton Academy of Science & Mathematics – *Bioinspired CO₂ Capture: Mimicking Carbonic Anhydrase with a Zinc (II) Histidine Metal Organic Framework*
- **Bailey Kaiser** – Ballard High School – *The Effect of Aggregate Size and Type on the Structural Integrity of Concrete*
- **Jiwoo Kim** – Gatton Academy of Science & Mathematics – *The effects of isoflurane on crayfish synaptic transmission*
- **Shreethan Palla** – North Oldham High School – *Vision Based Neural Biomechanics: Pose Estimation and Motion Pattern Learning for Accessible Real-Time Tennis Technique Evaluation.*
- **Gopalaniket Tadinada** – North Oldham High School – *AIRA: A Novel, Multimodal, & Automated Platform for the Risk-Guided Execution of Maximal Safe Glioma Resection*



LRSEF was also honored to give the First Build Innovation Awards of \$750 to support post-secondary education to **DaYou Choi**, Eminence High School, for *Hybrid Quantum-Classical QUBO Framework for Redundancy Aware Feature Selection in Predictive Maintenance Machine Learning* and to **Elijah Mayes**, Saint Xavier High School, Louisville, for *Arduino programmed copper matrix arrayed Velostat force sensor to optimize mechanical techniques required to produce the most effective dive desired for swimming competition*. The High School Amazon Innovation Awards sponsored by a Kentucky Science & Engineering Fair (KY-SEF) grant went to **Laila Johnson** and **Ciarah Mathers** of Central High School.

Middle School

For the middle school division 17 schools participated. There were 153 projects presented, 140 were solo and 13 were team projects with 158 students in the event. Winning schools were 1st - Saint Francis of Assisi, 2nd - Nur Islamic School of Louisville, and 3rd - Echo Trail Middle School.

The top three middle school projects were named GE Best of Fair with each student receiving a trophy and cash prize.

- **Lauren Duncan** – Saint Francis of Assisi, Louisville – *Cicada Shells: A New Natural Dye Adsorbent*
- **Sophia Fitzgerald** – Saint Francis of Assisi, Louisville – *Sunlight's Effect on Drug Toxicity in Aquatic Systems*
- **Bennett Garvin** – Saint Francis of Assisi, Louisville – *Neotame: Possible Impact on Bacteria from the Gut-Microbiome*

Also, 14 middle school scientists were named as nominees for the Thermo Fisher Scientific Junior Innovators Challenge (JIC) national competition and two outstanding projects received special national awards. **Lincoln Knockwafel** of Saint Francis of Assisi was named Lemelson Early Inventor and **Owen Park** of Saint Francis of Assisi was awarded the Department of Defense Leadership Prize. The Amazon Innovation Awards, supported by a grant from KY-SEF, went to **Ozil Hinojosa** of Montessori School of Louisville and to **Ma'Kel Mandeville** from Ohio County Middle School.





To engage students from underrepresented minorities and those who qualify for free/reduced lunch, LRSEF gave 66 students entry fee scholarships on fair day (20% of the total participation). Four excellence awards of \$100 each were also given, as noted above

New this year was a LRSEF Board initiative to support teachers new to the science and engineering fair. Three teachers applied for and received stipends for their participation. They were Ashley Newton from Ballard High School, Daniel Przybylski of Christian County Schools, and Keegan Woodley from Nativity Academy.

Also, during the school year, teacher grants totaling \$1,577 were given to support the purchase of STEM supplies for qualifying classrooms. These outreach efforts were funded in part by a grant from Amazon, through the KY-SEF and by the new LRSEF Teacher Outreach fund.



LRSEF @ KY-SEF

LRSEF promoted 96 winning projects to compete in the 24th annual Kentucky Science & Engineering Fair (KY-SEF) held at Eastern Kentucky University on Saturday, March 28, 2026. Being promoted by a regional fair is the only way students can compete at KY-SEF.

On that day, 32 of the 96 LRSEF projects won Category Awards.

LRSEF students won three of the six KY-SEF Best of Fair in the middle school division.

- **Carole Erwin** of Saint Francis of Assisi, Louisville, for *Exploring Accupressure as Stress Reduction in Horses* in the Life Sciences category
- **Sophia Fitzgerald** of Saint Francis of Assisi, Louisville, for *Sunlight's Effect on Drug Toxicity in Aquatic Systems* in the Physical Sciences category
- **Saneesh Nagane** of Noe Middle School, Louisville, for *Eraser Wipeout: The Quest for the Optimal Eraser* in the Physical Sciences category

An LRSEF student won one of the six KY-SEF Best of Fair in the high school division.

- **Gopalaniket Tadinada** from North Oldham High School, Louisville, for *AIRA: A Novel, Multimodal, & Automated Platform for the Risk-Guided Execution of Maximal Safe Glioma Resection* in the Life Sciences category



Eighteen different LRSEF schools were represented at state: St. Francis of Assisi, Sacred Heart Model School, Nur Islamic School of Louisville, Crosby, Echo Trail, Hopkinsville, St. Mary Academy, Montessori School of Louisville, Ohio County and Noe middle schools, as well as Ballard, Central, North Oldham, South Oldham, Trinity, Gatton Academy, Eminence and Louisville Collegiate high schools.

Twenty projects from LRSEF won Special Awards including eight additional LRSEF students named as Junior Innovators Challenge nominees and four students won Amazon Awards at KY-SEF.

Therefore, **of the 96 LRSEF projects 52 were awarded prizes at KY-SEF.** This is an outstanding achievement. Congratulations to all KY-SEF participants and winners from the Louisville Regional Science & Engineering Fair.

High School: Regeneron ISEF

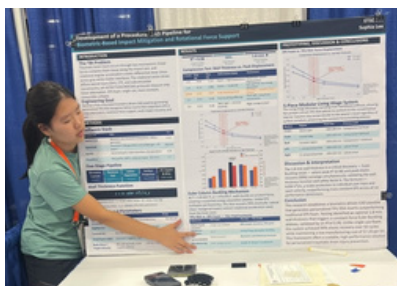
LRSEF promoted the five high school 2026 Best of Fair projects to the annual Regeneron International Science & Engineering Fair (ISEF) competition held in Phoenix, Arizona, May 9 -15, 2026.

Because LRSEF top student Gopalaniket Tadinada won Best of Fair at KY-SEF (and an additional trip to ISEF), LRSEF was able to promote a runner up Best of Fair student, Sophia Lee of the Louisville Collegiate School to also attend ISEF this year. Therefore, six LRSEF students attended ISEF including three females and three males from four different high schools. Each participant received a grant to support their registration, all expenses and travel to Phoenix for the week-long competition. LRSEF also supported our Board member Glenda Jones, Chemistry Teacher and Science Chair at Ballard High School as our chaperone. The LRSEF group made the trip to ISEF with TEAM KY which included 23 students and five teacher/chaperones from across the Commonwealth.

A Regeneron ISEF-affiliated science fair (such as LRSEF) is a research-based, high school competition that is a member of Society for Science & the Public's affiliated fair network. This year the ISEF competition featured more than 1,700 young scientists representing 365 affiliated fairs and 60 countries across the world. Top finalists are honored during a Special Awards ceremony and a Grand Awards ceremony with Category awards ranging from \$500 to \$5,000 and the top award totalling \$75,000. In total, more than \$7 million was awarded to the finalists, who were evaluated based on their projects' creativity, innovation, and level of scientific inquiry.

Congratulations to all six of our ISEF delegates and our three LRSEF ISEF winners.

- **Jiwoo Kim, Gatton Academy of Science & Mathematics** – 3rd PLACE, CELLULAR & MOLECULAR BIOLOGY – \$1,200
- **Gopalaniket Tadinada, North Oldham High School** – 2nd PLACE, BIOMEDICAL ENGINEERING – \$2,400
- **Sophia Lee, Louisville Collegiate School** – SPECIAL AWARD, Adam R Scripps Foundation – \$10,000



National Competitions

Middle School: Junior Innovators Challenge

LRSEF is honored to be a part of the national competition for middle schoolers called Junior Innovators Challenge (JIC) sponsored by Thermo Fischer Scientific. The online application asks questions about the student's science or engineering fair project and understanding of science and engineering in everyday life.

Fourteen LRSEF students were eligible to submit applications by the June deadline to be officially entered in the 2026 national competition. For LRSEF, all 14 students completed the applications. Another eight from LRSEF were selected at KY-SEF and all of them completed the applications. The 1,997 students participating nationally received t-shirts, bumper stickers, and other prizes. The entries are judged during the summer and 300 finalists will be announced in September. From these projects, 30 winners with their parent/guardian will win an all-expense-paid trip to the national finals in October in Washington, DC to compete for more than \$100,000 in awards and prizes and showcase their projects.

In October 2025, LRSEF student Owen Park of Saint Francis of Assisi School was named one of the top 30 winners of the 2025 Thermo Fisher JIC. He travelled to DC for the week-long competition. Owen is one of only four LRSEF students to win this award in the past.



Strategic Partners

LRSEF celebrates our founders – **Kiwanis**. Members of the area Kiwanis Clubs were the founders of the regional science fair in 1964 called LRSF (now LRSEF). The Kiwanis Club of Louisville returns over \$100,000 to the community each year, including a 2026 grant to LRSEF of \$3,000. Equally as important, each year over 40 Kiwanis Club of Louisville members volunteer on fair day at LRSEF serving as registration coordinators, the safety check team, food service helpers and in other helpful ways. Three Kiwanis members currently serve on the LRSEF Board of Directors.

Volunteer Judges – on fair day over 235 regional STEM professionals from academics, corporations, research organizations and other science and engineering ventures donate their time and expertise to serve as volunteer judges of the LRSEF student projects. In teams of two or three they interview and inspire students as they listen to details about each project. Judges then collaborate to determine the top projects in 22 different science categories and for over 60 Special Awards. Without the generous service of our judges, many who serve year after year, LRSEF would not be a viable and creditable event for supporting student research.

The **Asia IMPACT group** is a volunteer affinity group of engineers and STEM professionals at GE Appliances, a Haier company. Since 2014, LRSEF has been one of the Asia IMPACT group's nonprofit charity partners. Four members of this group serve on the LRSEF Board of Directors. Throughout the year, Asia Impact raises funds for LRSEF through sponsored events; members volunteer in outreach sessions at regional schools and coordinate the LRSEF Special Awards program. At the fair, Asia Impact volunteers serve as judges for Category and Special Awards, help with set up and clean up, registration, and back of house computer functions. The GE Appliances volunteers also host the Awards Ceremony.

The **Science Policy & Outreach Group (SPOG)** at University of Louisville is a graduate student organization connecting STEM researchers with the community and government officials to mutually benefit all. Volunteering at LRSEF is one of SPOG's largest outreach efforts, with members interacting with area students and encouraging them to become involved in STEM fields. For 2026, SPOG President Makenzie (Max) Stearsman served on the LRSEF Board of Directors and the Education & Outreach committee. During the school year, SPOG volunteers to visit schools to help students and teachers brainstorm project topics for LRSEF. Many SPOG members are involved in research and understand the anxiety students have presenting to judges at LRSEF. Therefore, SPOG wants to ensure that LRSEF participants have additional opportunities to discuss their project on fair day. SPOG recruited 20 volunteer STEM Ambassadors to talk with and inspire students throughout the day of the fair.

Board of Directors

Officers

Carson Garrett – President

Site Quality Manager at American Synthetic Rubber Company (ARSC), wholly owned by the Michelin Group

Michael Moreland – Vice President for Education and STEM Advocacy

Chemistry & Physics Teacher, J. Graham Brown School, Jefferson County Public Schools

Jonathan Hodge – Vice President for Business & Legal Attorney, Hodge & Smith PLLC

Meredith Jones Pritchett – Secretary and Chief Technology Officer

Chemical Engineer II, LG&E/KU

Theresa H. Mattei – Treasurer

Community Volunteer

Dr. Vanita Mani – Immediate Past President

Sr. Director of Technology, GE Appliances, a Haier Company

Fair Co-Directors

Appointed by LRSEF Executive Committee

Frederick J. Whitaker

Science Teacher, St. Francis of Assisi School, Archdiocese of Louisville

Keri Meador

Science Teacher, Central High School, Jefferson County Public Schools

Board of Directors

(Jefferson County resident, unless noted)

Dr. Tim Adams

Principal, Sacred Heart Academy

Dr. Balamurugan Appalakai (Dr. Bala)

Professor of Pediatrics & Surgery and Director, Islet Transplantation and Beta Cell Biology, University of Louisville and Norton Healthcare

Natalia Alisha Blagaia

Principal, Nur Islamic School of Louisville

Kumar Chellappan

Program Director, Cross Product – Finishes, & Representative of Asia Impact, GE Appliances, a Haier Company

Eboni Neal Cochran

Community Member

Dr. Sam Earls

Assistant Director of Academic Services, Gatton Academy of Mathematics and Science at Western Kentucky University (Warren County)

Joe Erskine

Support Analyst, RFX Technologies

Carmen Estopare

Executive Director of Organizational and Talent Development, GE Appliances, a Haier Company

Corinne M. Greenberg, CHMM

EHS Manager, ECKART America Corporation

Ravishankar Jayaram

Senior Manager, DT & Representative of Asia Impact, GE Appliances, a Haier Company

Glenda Jones

Science Teacher at Ballard High School, Jefferson County Public Schools

Vindhya Katta

Technology Solutions Lead & Program Director, Humana

Kaya A. K. Muller

Professor of Chemistry, KCTCS – Jefferson Community & Technical College

Sarah Osbourne

Retired IT Director – Enterprise Systems, GE Aerospace

Dr. Beth Quinn

Director of Education for the Doctor of Physical Therapy Program, Bellarmine University

Makenzie (Max) Stearsman

President of SPOG, Science Policy Outreach Group, University of Louisville

Jennifer Vermillion

Teacher, Valley High School, Jefferson County Public Schools

Chris Wahl

Kiwanis Representative and Director of Strategic Partnerships with Central Creativity Louisville

Dr. Hui Wang

Associate Professor Mechanical Engineering, Speed School, University of Louisville

Dr. Stuart Williams

Professor Mechanical Engineering, Speed School, University of Louisville (Oldham County)

Student Advisor

Gopalaniket (Aniket) Talinada

North Oldham High School

Board of Directors – Emeritus Members

Keith Cole

Retired from Dover Corporation, former Kiwanis Clubs Representative

Ronda K. Fields

Retired Science Educator from Jefferson County Public Schools & former LRSEF Fair Director

Mark Garman

Retired from LRSEF Board after 10+ Years of Service, Kiwanis Representative

Dr. Lawrence Gettleman

Professor of Prosthodontics & Biomaterials, Emeritus, University of Louisville School of Dentistry

Dr. Tina Gibson

Former LRSEF Science Fair Director, Currently at Mississippi State University

Joel Gittelson

Retired Engineer from General Electric Appliances, former LRSEF Fair Director

George McNair

Retired from Radio Sound Inc., Vice President of Manufacturing

Bob Olsen

Retired Mathematics Professor, KCTCS – Jefferson Community & Technical College

Terry A. Roach

General Manager, Carrollton Utilities

Deborah Shwab Fuller Clemmens

Retired Science Educator from Jefferson County Public Schools

John Gary Spanyer

Evergreen Environmental, Professional Engineer (PE)

12.

Financial Summary

as of June 30, 2026

Source of Funds

Contributions, gifts, grants	\$54,383
Program service revenue	\$6,173
Investment income	\$4,776
Total Income	\$65,331

Total expenses: \$65,123

Program expenses	\$54,273
Fundraising expenses	\$3,446
Administrative expenses	\$7,405

Income in Excess of Expenses \$208

Beginning Net Assets \$117,575

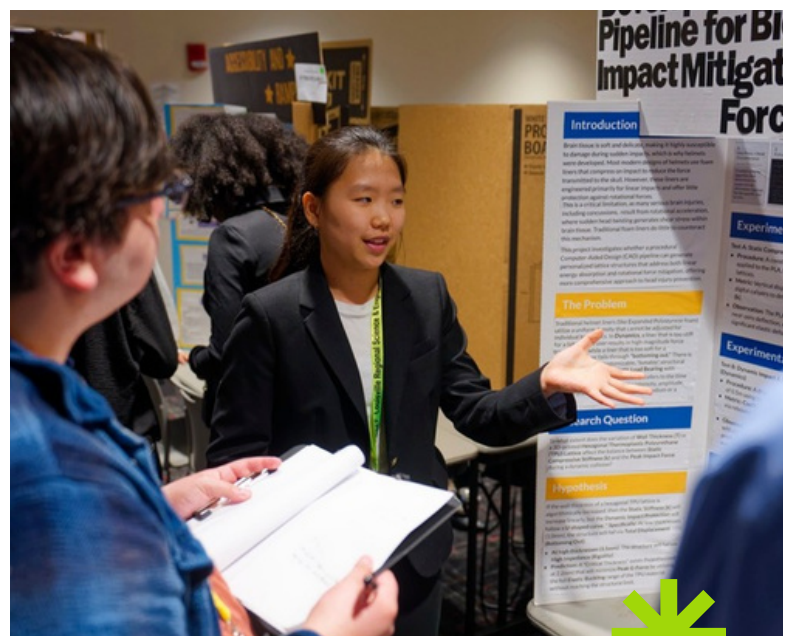
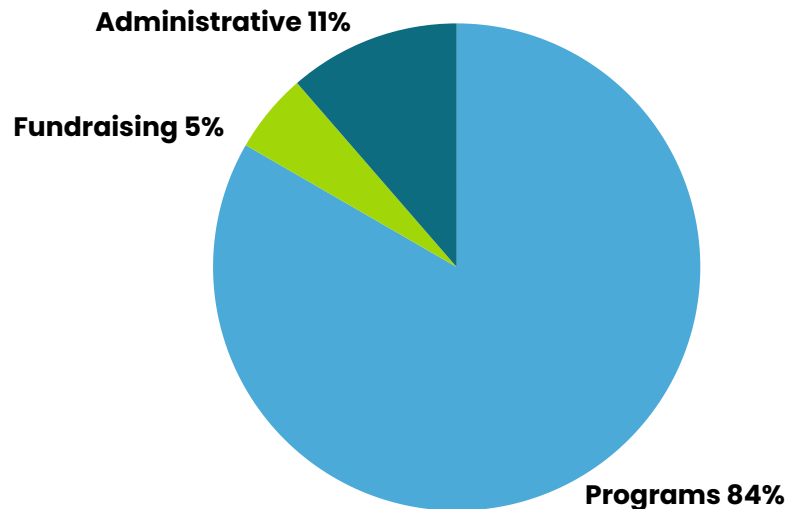
Changes In Net Assets \$846

Ending Net Assets \$118,421

Total Liabilities \$8,380

Total Assets \$126,801

LRSEF 2026 Expenses



13.

Key Indicators

	<i>LRSEF Program Year</i>	<i>2021-2022 3/5/22 virtual</i>	<i>2022-2023 3/4/23</i>	<i>2023-2024 3/2/24</i>	<i>2024-2025 3/1/25</i>	<i>2025-2026 3/7/26</i>
Numbers Served	KY Counties eligible	52	52	59	59	59
	KY Counties represented	4	5	7	8	7
	# of high schools (HS) represented	10	12	12	15	19
	# of middle schools (MS) represented	10	10	14	14	17
	# of HS students participated	177	180	89	112	171
	# of MS students participated	116	155	131	155	158
State/National Recognition	# of MS selected for Thermo Fisher JIC	15	15	15	14	14
	# of projects nominated for KYSEF	93	93	95	95	96
	# of HS projects eligible to send to ISEF	5	5	5	5	5
Community / Industry Sponsorships	# of Amazon grant supported URM students or/qualified for free lunch	48 (16%)	40(12%)	34(15%)	53(19%)	66(20%)
	# of Categories sponsored (of 44)	35	32	44	44	44
	# of Special Award Sponsors (local)	19	19	20	19	19
Annual Fair by the #s	# of Projects Judged on fair day	253	294	200	230	289
	Total # MS & HS students at fair day	293	335	220	267	329
	# of students receiving awards	160 (55%)	174 (52%)	157 (71%)	175 (66%)	177 (54%)
	# of board members (voting)	23	27	24	26	28
	# of sponsors	112	118	171	131	140
	Total # of Judges	185	215	216	217	235
	# of Special Award Judges (approx.)	(60)	(65)	74	70	62
	# of volunteers (Kiwanis & SPOG)	45	53	40	56	60
Annual Fair \$	Cash Awards given on fair day (\$)	16,580	14,870	14,623	15,975	18,933
	Total Income and funds raised (\$)	56,953	58,659	64,297	65,201	65,331
	Total Expenses (\$)	42,357	58,691	60,335	53,999	65,123



Louisville Regional Science & Engineering Fair



Thank You

LRSEF would not be possible without generous donations and grants from individuals, local foundations and organizations, as well as the corporate community. Click this link to see the **sponsors who made LRSEF 2026 possible**. Thanks to all.

LRSEF 2027 will be held on Saturday, March 6 at University of Louisville. You can **support the fair by making a gift online**.



info@lrsef.org



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lrsef.org

