

NORTH CAROLINA SCIENCE FAIR FOUNDATION

.....
Inspiring Innovation in Student Research



Year in Review
2022



OF CONTENTS

INSPIRING INNOVATION in Student Research

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INTRO

The North Carolina Science Fair Foundation (NCSFF) is a non-profit educational organization that is the proud sponsor of the North Carolina Science and Engineering Fair (NCSEF). The NCSFF supports the NCSEF through fundraising and outreach to inspire innovation and excellence in student research.

The NCSEF is affiliated with the International Science and Engineering Fair (ISEF). ISEF is organized by the Society for Science & the Public dedicated to the public engagement in scientific research and education. Their vision is to promote the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate, inspire. Through this affiliation, selected NCSEF students progress to compete in the Broadcom Master's Program for grades 6-8 and the ISEF for grades 9-12. ISEF provides the rules and regulations governing student engaged research and safety for the NCSEF. In addition to the state NC Science & Engineering Fair, Regional Fairs 3A, 3B and 6 are ISEF-affiliated.

Vital Role Science Plays in Human Advancement



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MISSION

The North Carolina Science Fair Foundation (NCSFF) is a non-profit organization whose purpose is to promote science literacy in elementary-, middle-, and high-school students through participation in inquiry-based learning. NCSFF:

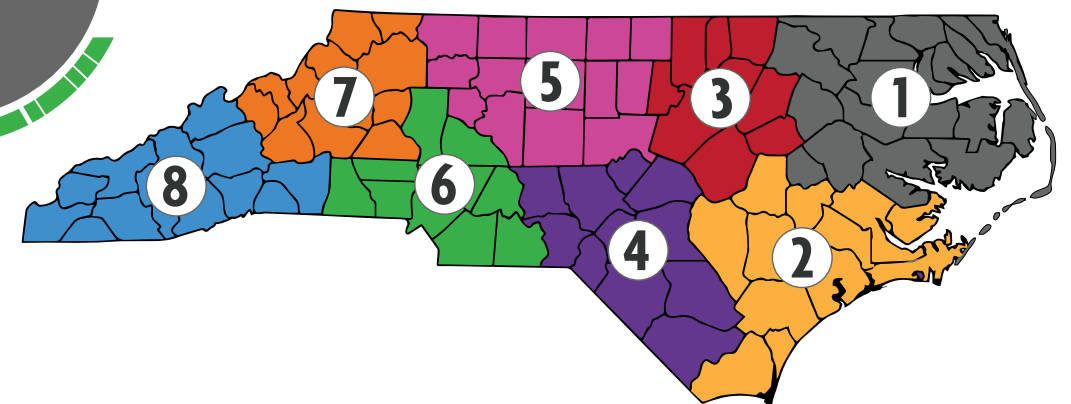
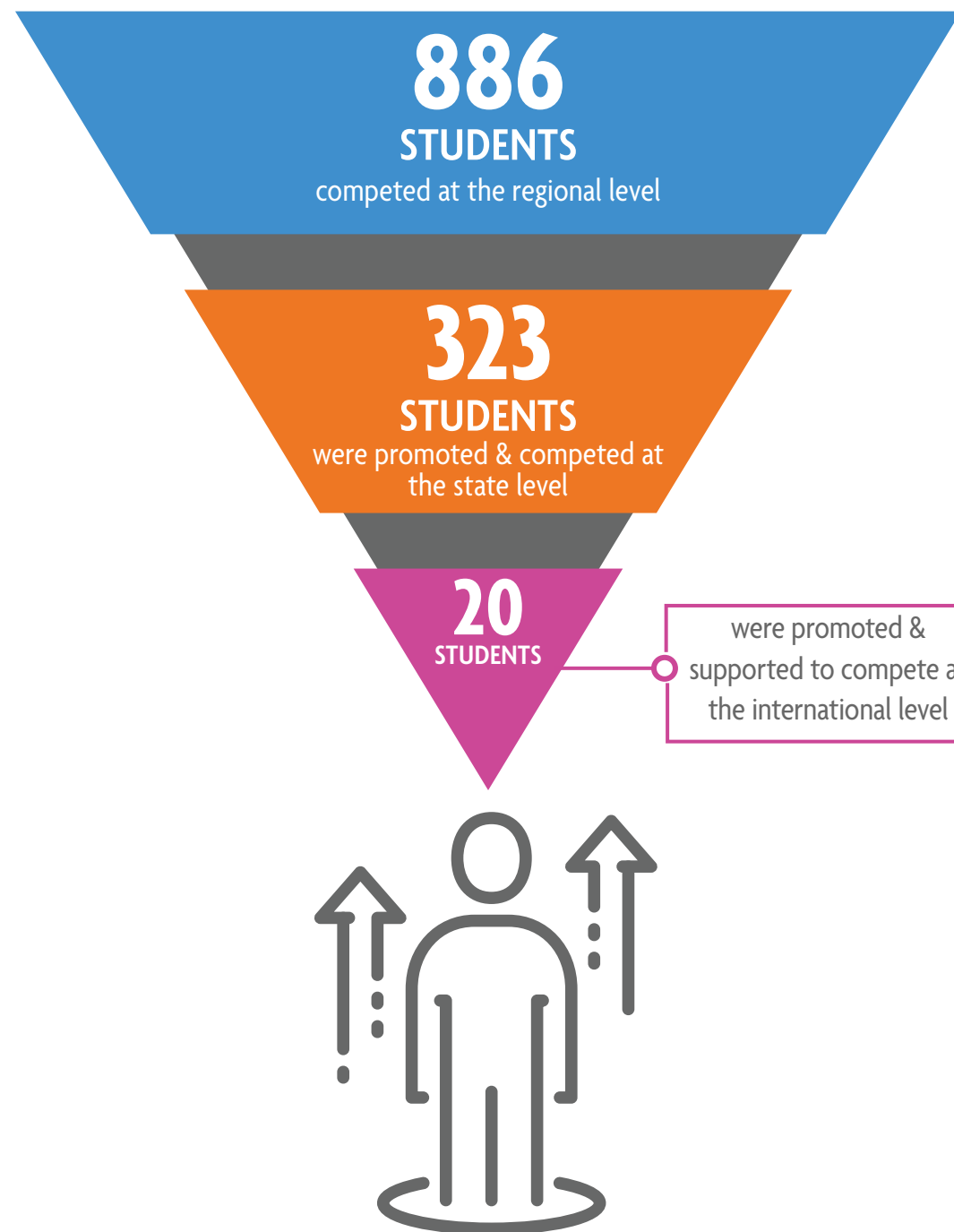
- promotes science and engineering research by partnering with the community to integrate student scientific research into science education.
- works to increase diversity and engagement of underrepresented student populations in science and engineering research.
- organizes science and engineering fairs to showcase and celebrate student success in research and learning.

VISION

The North Carolina Science Fair Foundation (NCSFF) will be a leader in providing opportunities to the diverse student population of primary and secondary education in the state to become scientifically literate citizens, and contribute to society as science and engineering leaders.

GOALS

- 1** Provide effective internal and external communications
- 2** Support outreach and professional development activities for stakeholders
- 3** Develop and maintain a strong and effective board
- 4** Attract and develop partners to expand the impact and reach of NCSFF
- 5** Develop and maintain strong resource acquisition plans to support NCSFF activities
- 6** Support regional fairs and regional fair directors



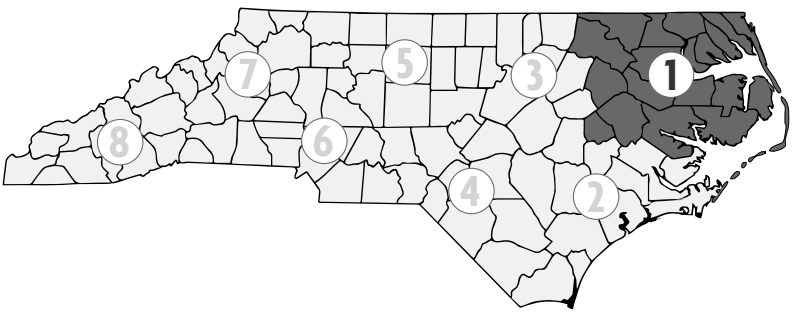
NC Science Fair Foundation supports nine regions in hosting an annual regional science and engineering fair. Students are promoted from a local fair to compete at the regional level. In 2021-2022 all regional fair events were fully virtual, with the exception of Region 8, due to the COVID19 pandemic health and safety regulations. The region for fair participation is determined by the student's school of record at the time when their region's NC Science & Engineering Fair is scheduled to be held.



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2021-2022 NC REGIONAL FAIR INFORMATION

Region	Date	Director	Hosting Partner
REGION 1 Northeast Region Science Fair	February 26, 2022	Dr. Eric Anderson	East Carolina University
REGION 2 Southeast Regional Science Fair	February 14-18, 2022	Dr. Heddy Clark	UNC-Wilmington
REGION 3A Central Region Science Fair	February 25, 2022 (grades 3-5) Feb 26, 2022 (grades 6-8 and 9-12)	Dr. Becky Dalton	Wake Technical Community College
REGION 3B NC School of Science & Mathematics Fair	February 14, 2022	Dr. Jon Bennett Dr. Kim Monahan	NC School of Science and Mathematics
REGION 4 South Central Regional Science Fair	February 19, 2022	Dr. Quinton Rice	UNC-Pembroke
REGION 5 North Central Regional Science Fair	February 17-18, 2022	Judy Day	UNC-Greensboro
REGION 6 Southwest and Charlotte- Mecklenberg	February 10-12, 2022	Alisa Wickliff	UNC-Charlotte
REGION 7 Northwest Regional Science Fair	Week of January 28, 2022	Dr. Coleman Bailey	Appalachian State University
REGION 8 Western Regional Science Fair Elementary Division	February 14, 2022 (Grades 3-5) February 15, 2022 (Junior & Senior Division, Grades 6-12)	Dr. Frank Forcino	Western Carolina University



Northeast Region Science Fair

Regional Director

Dr. Eric Anderson
reg1director@ncsciencefair.org

Dr. Eric Anderson is a Teaching Assistant Professor at East Carolina University with expertise in Biotechnology and Microbiology. He is the longstanding regional director for region 1.



ECU

Partner & Host
East Carolina University

By the Numbers



59
projects



71
students



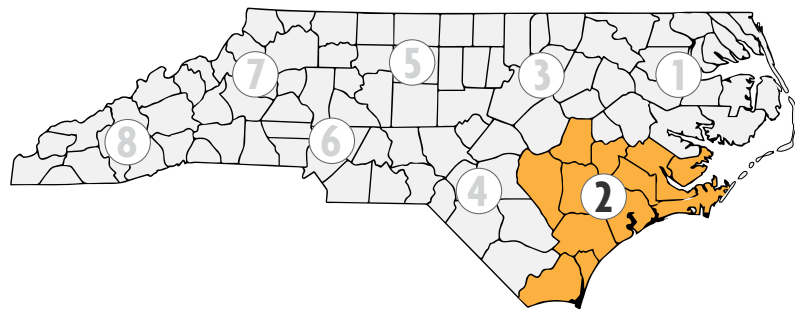
7
judges



6
schools

Areas Served

Hertford, Gates, Perquimans, Pasquotank, Currituck, Camden, Bertie, Pitt, Beaufort, Greene, Hyde, Washington, Edgecombe, Halifax, Northampton, Dare, Tyrrell, Chowan, Martin, Lenoir



Southeast Regional Science Fair



Regional Director

Dr. Heddy Clark
reg2director@ncsciencefair.org



Partner & Host

University of
North Carolina at
Wilmington

Dr. Heddy Clark is the Director of the STEM Learning Cooperative & Interim Director of the Center for Education in Science, Technology, Engineering, and Mathematics (CESTEM.) She took on the role of regional director during the summer of 2020.

By the Numbers



75
projects



94
students



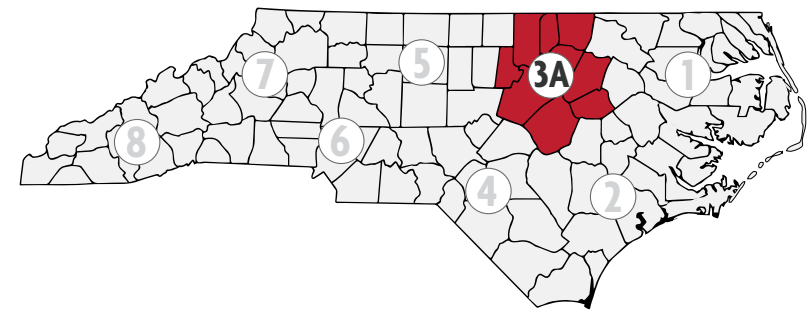
26
judges



16
schools

Areas Served

Sampson, Wayne, Craven, Pamlico, Jones, Onslow, Duplin, Carteret, Pender, New Hanover, Brunswick



Central Region Science Fair



Regional Director

Dr. Rebecca Dalton,
reg3adirector@ncsciencefair.org

Partner & Host



Wake Technical Community
College (WTCC)

Dr. Rebecca Dalton is an Ecologist working for the Environmental Protection Agency. She took on the role of Region 3A director in the summer of 2020.

By the Numbers



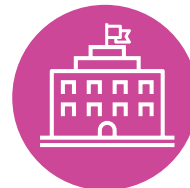
146
projects



175
students



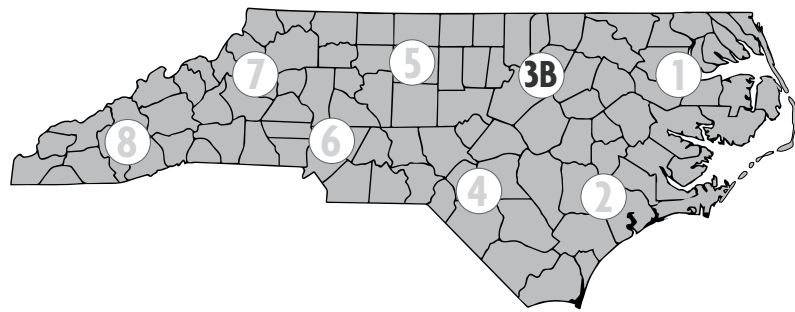
36
judges



33
schools

Areas Served

Durham, Granville, Wake, Vance, Warren, Johnston, Wilson, Nash, Franklin



NC School of Science & Mathematics Fair



Regional Director

Dr. Jon Bennett
reg3bdirector@ncsciencefair.org

Dr. Jon Bennett is an instructor at the North Carolina School of Science and Mathematics. He has expertise in physics and research. He is the longstanding regional director, working alongside Dr. Kim Monahan to lead region 3B.

Partner & Host



North Carolina
School of Science
and Mathematics

By the Numbers



37
projects



38
students



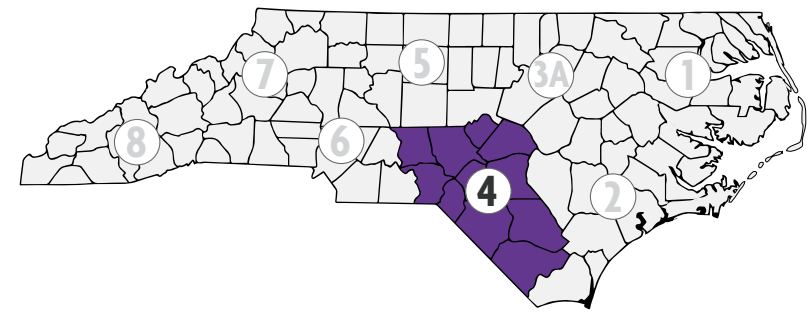
48
judges



1
school

Areas Served

Residential students attending NC School of Science and Mathematics from across North Carolina.



South Central Regional Science Fair



Regional Director

Dr. Quinton Rice
reg4director@ncsciencefair.org

Dr. Quinton Rice is an Assistant Professor of Physics at the University of North Carolina-Pembroke. He took on the role of regional director in the Spring of 2020.

Partner & Host



University of
North Carolina at
Pembroke

By the Numbers



21
projects



23
students



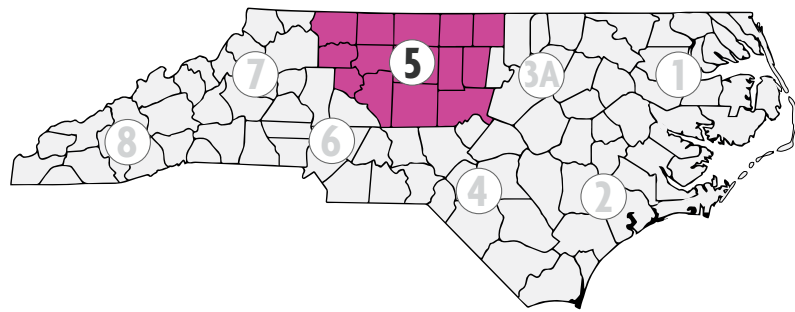
12
judges



20
schools

Areas Served

Moore, Lee, Harnett, Cumberland, Hoke, Bladen, Columbus, Montgomery, Scotland, Richmond, Robeson



North Central Regional Science Fair



Interim Regional Director

Judy Day
director@ncsciencefair.org

Judy Day recently retired from her role in the Department of Undergraduate Research at NC State University. She is the long standing State Fair Director in North Carolina and is serving as the Interim regional director for region 5.

Partner & Host



University of
North Carolina at
Greensboro

By the Numbers



49

projects



169

students



50

judges

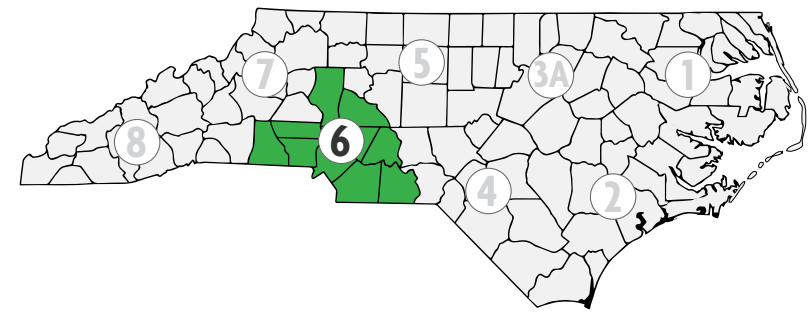


36

schools

Areas Served

Stokes, Forsyth, Davidson, Rockingham, Guilford, Randolph, Caswell, Person, Orange, Alamance, Chatham, Davie, Surry (including Mt. Airy), Yadkin



Southwest and Charlotte-Mecklenberg

Regional Director

Alisa Wickliff
reg6director@ncsciencefair.org

Alisa Wickliff is the Associate Director of the Center for Science, Technology, Engineering, & Mathematics [STEM] Education (CSTEM). She is the longstanding regional director for region 6.

Partner & Host



University of North Carolina at Charlotte

By the Numbers



184

projects



220

students



63

judges

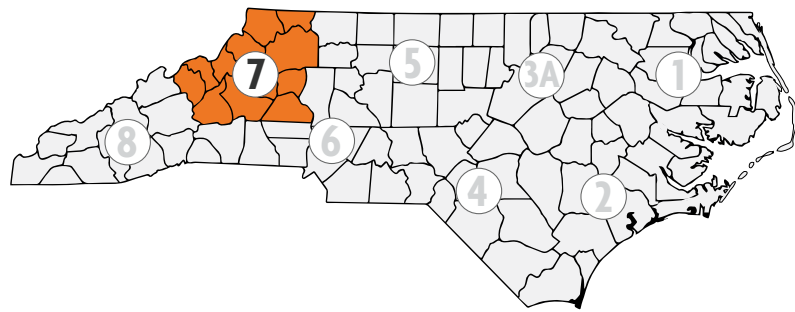


54

schools

Areas Served

Mecklenburg, Cleveland, Lincoln, Gaston, Rowan, Cabarrus, Stanly, Union, Anson, Iredell



Northwest Regional Science Fair



Regional Director

Dr. Coleman Bailey
reg7@ncsciencefair.org

Dr. Coleman Bailey is a school leader in Buncombe County Schools North Carolina. He is the longstanding regional director for region 7.

Partner & Host



By the Numbers



35

projects



43

students



2

judges

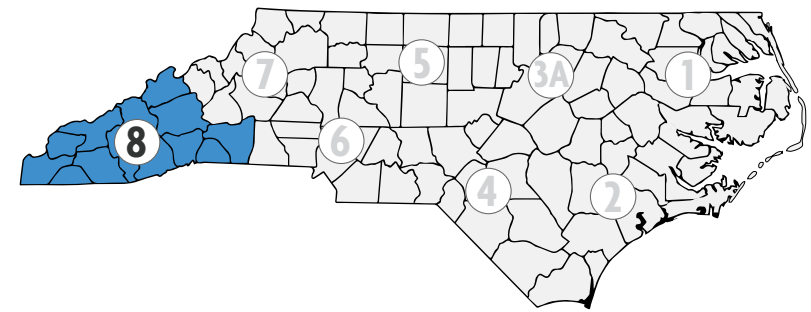


16

schools

Areas Served

Avery, Burke, Caldwell, Watauga, Ashe, Catawba, Alleghany, Wilkes, Yancey, Mitchell, McDowell, Alexander



Western Regional Science Fair



Regional Director

Dr. Frank Forcino

Dr. Frank Forcino is an Associate Professor & Science Education Program Coordinator in the Department of Geosciences and Natural Resources. He took on the role of regional director in the Summer of 2021.

Partner & Host



By the Numbers



48

projects



53

students



36

judges



9

schools

Areas Served

Cherokee, Graham, Clay, Swain, Macon, Haywood, Jackson, Transylvania, Madison, Buncombe, Henderson, Polk, Rutherford



STATE FAIR FINALISTS

NC SCIENCE AND ENGINEERING FAIR (VIRTUAL)



323
student
researchers



98
elementary division
researchers



124
junior division
researchers

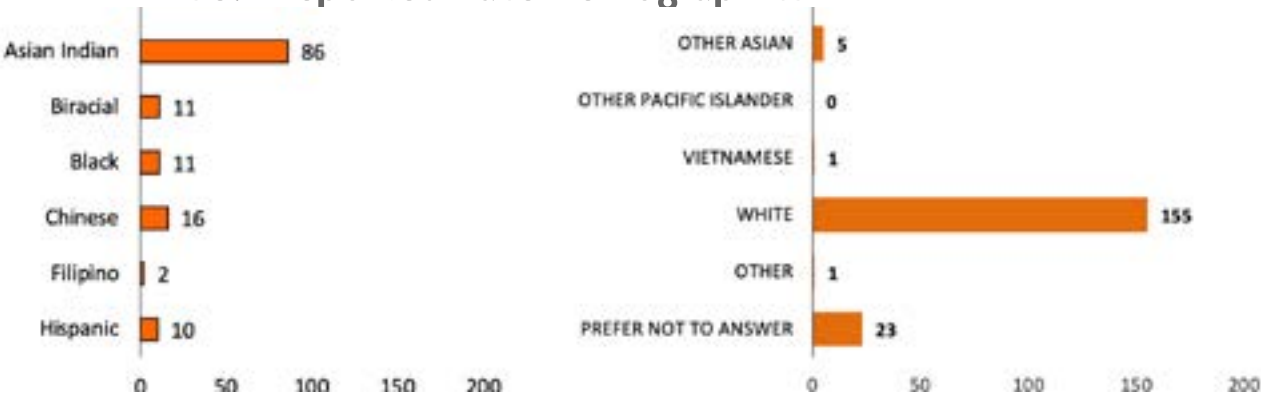


101
senior division
researchers

171 female

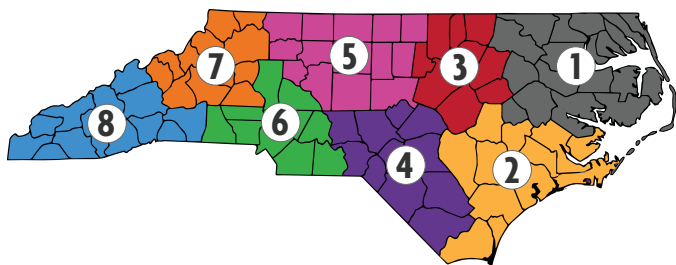
151 male

Self-Reported Race Demographics



Students Participating by Region

- 33** Region 1
- 38** Region 2
- 50** Region 3a
- 15** Region 3b
- 11** Region 4
- 50** Region 5
- 73** Region 6
- 29** Region 7
- 25** Region 8



In Spring of 2022, the NC Science Fair Foundation hosted their second ever Fully Virtual NC Science and Engineering Fair. With generous support from sponsors, we were able to host real-time virtual judging for the 323 state finalists, along with a series of live events which allowed the finalists to better engage with the full fair experience. Fairs were hosted on two separate Saturdays in order to allow time for all student researchers to engage with Judges and the opportunity to present their research publicly. The virtual format of this fair, pushed our thinking and resulted in a second year hosting a public facing platform for the presentation of every research project promoted to the State Fair. Through generous support from funders, we were able to adopt and populate the Symposium by Forager One platform where projects will remain publicly available through March of 2023.

2022 NCSEF awards can be reviewed at <https://ncsef.org/index.php/ncsef/winners> or by scanning the QR code to the right.



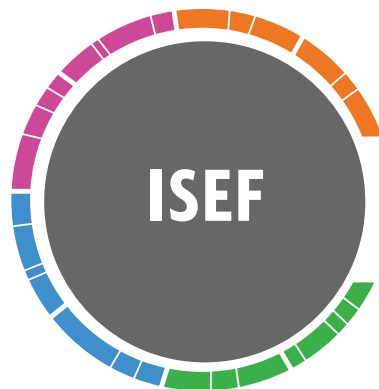
“An opportunity to judge at NCSEF is an opportunity to engage and motivate the innovators of tomorrow.”

- NCSEF Judge

“Interacting with our future scientists was amazing. It makes me so hopeful for the future!”

- NCSEF Judge Jacob Dum





REGENERON INTERNATIONAL SCIENCE AND ENGINEERING FAIR



ISEF BACKGROUND

From May 4 to May 23, 2022 nearly 1750 young scientists, engineers, entrepreneurs and inventors convened for a week of connecting 20 North Carolina high school students presented their research at the 2022 Regeneron International Science and Engineering Fair (ISEF)! 1,750 students from 49 states and 63 countries, regions, and territories competed for the nearly \$8 million in awards and prizes. From May 4 to May 13, 2022, these young scientists, engineers, entrepreneurs and inventors convened virtually and face to face to connect with their peers and global STEM leaders through a variety of events and the culminating Awards Ceremony.

North Carolina students advanced to ISEF from the state level NC Science and Engineering Fair (12 projects), the Central Region 3A NC Science and Engineering Fair (1 project), the NC School of Science and Mathematics Region 3B Science and Engineering Fair (2 projects), and the UNC Charlotte NC Science and Engineering Fair Region 6 (2 projects). A total of 17 projects and 20 students represented North Carolina.

REGENERON ISEF 2022 KEY STATISTICS



1750
total
finalists



63
countries, regions,
& territories



49
US states



17
projects from
North Carolina



20
students from
North Carolina

REGENERON ISEF 2022 AWARDS

Grand Awards are presented in each of the 21 ISEF categories:

- 1st Award: \$5,000
- 2nd Award: \$2,000
- 3rd Award: \$1,000
- 4th Award: \$500

Additionally, winners of the **Top Awards** are selected from among the 1st Award recipients:

- [George D. Yancopoulos Innovator Award](#) of \$75,000
- [Regeneron Young Scientist Awards](#) (2) of \$50,000 each
- [The Gordon E. Moore Award](#) for Positive Outcomes for Future Generations of \$50,000
- Craig R. Barrett Award for Innovation of \$10,000
- H. Robert Horvitz Prize for Fundamental Research of \$10,000
- Peggy Scripps Award for Science Communication of \$10,000

For more information about Grand Awards and Top Awards, please visit <https://www.societyforscience.org/isef/grand-awards/>. In addition, dozens of corporate, academic, government, and scientific organizations give Special Awards. For more information, please visit <https://www.societyforscience.org/isef/special-award-organizations/>.

2022 REGENERON ISEF CATEGORY GRAND AWARDS FOR NORTH CAROLINA STUDENTS

Animal Sciences | Fourth Award of \$500

ANIM052 — Collective Behavior and Coastal Health: How Individual Personality Influences Population Mortality in a Marsh Ecosystem Predator-Prey Interaction

- Regan Williams , John T Hoggard High School, NC, United States of America



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Biochemistry | Fourth Award of \$500

- BCHM035 — Computational and Experimental Design of a Novel Acetylcholinesterase Inhibitor: Silanediols for Alzheimer’s Disease Treatment
- Archita Khaire, North Carolina School of Science and Mathematics, NC, United States of America

Biomedical Engineering | Fourth Award of \$500

- ENBM051 — Development of a Bioactive, Biodegradable, and Variable-Density 3D Printer Filament for Patient-Specific Bone Reconstructive Implants
- Jacob Rose, North Carolina School of Science and Mathematics, NC, United States of America

Earth and Environmental Sciences | Fourth Award of \$500

- EAEV007 — Developing a Machine Model to Predict Wildfire Risk and Identify Key Wildfire Drivers in California
- Angela Chen, North Carolina School of Science and Mathematics, NC, United States of America

Environmental Engineering | Fourth Award of \$500

- ENEV021T — Sustainable Subsistence: A Low-Cost Method of Greywater Recycling for Hydroponic Agriculture, United States of America
- Mason Sufnarski, Marvin Ridge High School, NC, United States of America

Systems Software | Fourth Award of \$500

SOFT051 — Sustainability Scanner: Empowering

Consumers To Make Eco-Friendly Grocery Purchases

- Jay Nimbalkar, Green Hope High School, NC, United States of America

Translational Medical Science | Third Award of \$1000

- TMED056 — AutoFlow: A Novel Method for Assessing Minimal Residual Disease in Breast Cancer Patients by Identifying Bone Marrow Disseminated Tumor Cells Using Flow Cytometry Data
- Dheepthi Mohanraj, North Carolina School of Science and Mathematics, NC, United States of America

2022 REGENERON ISEF SPECIAL AWARDS EARNED BY NC STUDENTS:

AMERICAN METEOROLOGICAL SOCIETY

The American Meteorological Society (AMS) is the nation’s leading scientific and professional society advancing the atmospheric and related sciences, technologies, applications, and services for the benefit of society. Founded in 1919, the AMS has a membership of more than 14,000 professionals, students, and weather enthusiasts. AMS offers numerous scholarships and fellowships to support students pursuing careers in the field.

Honorable Mention of \$125

EAEV007 — Developing a Machine Model to Predict

Wildfire Risk and Identify Key Wildfire Drivers in California

- Angela Chen, North Carolina School of Science and Mathematics, Cary, NC, United States of America

AMERICAN STATISTICAL ASSOCIATION

[The American Statistical Association is the world’s largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical and data science through meetings, publications, membership services, education, accreditation, and advocacy. Our members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

First Award of \$1,500

- EAEV007 — Developing a Machine Model to Predict Wildfire Risk and Identify Key Wildfire Drivers in California
- Angela Chen, North Carolina School of Science and Mathematics, Cary, NC, United States of America

NATIONAL SECURITY AGENCY RESEARCH DIRECTORATE

The NSA Research Directorate is one of the most established research organizations in the U.S. Intelligence Community. As a world leader in science and technology, Research engages

with leading industries, universities, and national laboratories to both advance core competencies and to leverage work in overlapping disciplines. The ISEF Special Awards recognize exceptional research that demonstrates world-class skills in mathematics, computer science, cybersecurity, engineering, physics, and neuroscience while promoting research that can assure and protect cyberspace.

First Place Award “Material Science”

- ENEV088T — Further Studies on the Application of Novel Rapidly Degrading Bioplastics Derived From Upcycled Waste Products To Replace Polystyrene and Polypropylene in Single-Use Hard Plastics Like Cutlery
- Kaitlyn Lee Zuravel, Terry Sanford High School, Fayetteville, NC, United States of America
 - Lauren Gail Zuravel, Terry Sanford High School, Fayetteville, NC, United States of America

ORACLE ACADEMY

As Oracle’s global, philanthropic educational program, Oracle Academy advances computing education around the world to increase knowledge, innovation, skills development, and diversity in technology fields. The program engages with thousands of educational institutions and educators in more than 130 countries, helping millions of students become career ready. Oracle Academy is proud and honored to support the next generation of

STEM innovators through ISEF.

Award of \$5,000 for outstanding project in the systems software category.

SOFT051 — Sustainability Scanner: Empowering Consumers To Make Eco-Friendly Grocery Purchases

- Jay Omkar Nimbalkar, Green Hope High School, Cary, NC, United States of America

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

From nanomaterials a billionth of a meter in size to global climate dynamics, EPA scientists and engineers are investigating every scale of our environment and the links between environment and human health. EPA conducts research that addresses the highest priority science needs of the nation. The work performed by EPA scientists, engineers and their research partners improves the quality of the air we breathe, the water that sustains us, and the land upon which we live.

Honorable Mention

ENEV021T — Sustainable Subsistence: A Low-Cost Method of Greywater Recycling for Hydroponic Agriculture

- Josephine Anne Barber, Mercer Island High School, Mercer Island, WA, United States of America
- Mason Brandt Sufnarski, Marvin Ridge High School, Waxhaw, NC, United States of America

UNIVERSITY OF ARIZONA

Established in 1885, the University of Arizona is the state's land-grant university. Recognized as a global leader, Arizona is also a leader in research, bringing more than \$622 million in research investment each year, and ranking 21st among all public universities. Arizona offers over 300 undergraduate and graduate degree programs in 16 academic colleges. Arizona will award scholarships to outstanding awardees who have demonstrated robust research for the greater good of society.

Renewal Tuition Scholarship

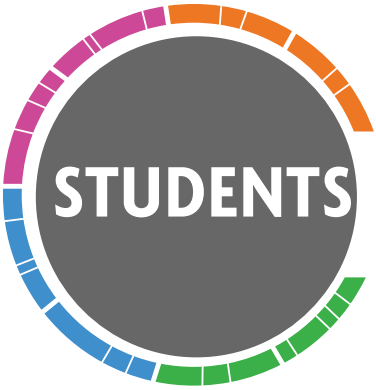
ANIM052 — Collective Behavior and Coastal Health: How Individual Personality Influences Population Mortality in a Marsh Ecosystem Predator-Prey Interaction

- Regan Catherine Williams, John T Hoggard High School, Wilmington, NC, United States of America

“Going to ISEF in person is just amazing!

Walking into the arena, I was overwhelmed - projects spanned as far as I could see in every direction.”

- Kaitlyn Zuravel NCSEF Alumni Region 4



SUPPORTING STUDENTS

NC COLLABORATIVE FOR ADVANCING STUDENT LED RESEARCH

In 2021-2022, NCSFF and partners piloted the NC Collaborative for Advancing Student-Led Research. The NC Science Fair Foundation (NCSFF), the North Carolina School of Science and Mathematics (NCSSM) Distance Education department, NC Student Academy for Science (NC SAS), and UNC-Charlotte Center for STEM Education (CSTEM) are the primary partners comprising the NC Collaborative for Advancing Student-Led Research. This critically vital Collaborative merges the forces and resources of STEM outreach and research organizations in order to support the development of K-12 student science and engineering practices with critical thinking and communication skills essential in STEM careers. During the pilot year the NC Collaborative for Advancing Student-Led Research worked to increase the number and diversity of students engaged in student-led STEM Research in North Carolina through offering a series of noncompetitive, virtual convenings for NC teachers and students. Support for The North Carolina Collaborative for Advancing Student-led Research is provided by Burroughs Wellcome Fund and the NC Science, Mathematics, and Technology Education center.

NCSFF VIRTUAL STUDENT MENTORSHIP PROGRAM

Through the support of the Biogen Foundation, the NCSFF has been able to launch a virtual mentorship program to support safe, student-led research during the COVID-19 pandemic. Navigating the pandemic with safety in mind has had the unintended consequence of reducing student access to professional scientists and engineers to serve as research mentors. In light of this arising need, the NCSFF has launched its first ever virtual mentorship program which matches student researchers with professionals to provide guidance for their research.

“We are extremely thankful for the online mentoring program organized to support the kids’ interests and encourage them to move forward.”

- Parent of a virtual mentorship participant



EDUCATOR SUPPORT

TEACHER WORKSHOPS

43 educators



The NC Science Fair Foundation, proud sponsor of the NC Science and Engineering Fair, shifted their traditional summer teacher workshops to fully online! Leveraging the online format we were able to accept registrations from 43 NC educators. The workshops were designed to support any NC teachers who are interested in supporting students in exploring their interest in scientific research and/or engineering design.

17 Elementary Level	11 Middle School Level
8 High School Level	4 K-12 Level
3 K-8 Level	0 Grades 6-12

“This was a very engaging series of webinars. It was powerful and informative. A teacher having homework helped me see it through my students eyes.”

- Participating teacher, online workshop

TEACHER OFFICE HOURS

Personalized, responsive support, was provided across the fall for educators. These sessions created a space for teachers supporting students in scientific inquiry and engineering design to have a conversation about how to offer this support as the school environment continued to shift.



NCSFF BOARD MEMBERS HONORED

VI HUNSUCKER AWARD

Congratulations to Judy Day on receiving the Vi Hunsucker award at the NCSTA Awards Ceremony in November 2022

“This award is named in honor of NCSTA’s founder and first president. Vi Hunsucker helped start the organization in 1969 and continued to provide leadership as it grew and expanded. The award recognizes an outstanding science educator who has gone above and beyond the call of duty to serve the students and teachers of North Carolina.” ([NCSTA website](#))

Judy Day

Director, NC Science and Engineering Fair

Judy Day recently retired from her role in the Department of Undergraduate Research at NC State University. She is a founding Board member, the long standing State Fair Director in North Carolina, and is serving as the Interim regional director for region 5.



HERMAN AND EMMA GATLING AWARD

Congratulations to Manley Midgett on receiving the Herman and Emma Gatling Award by the North Carolina Science Leadership Association at a ceremony in November 2022.

“The NCSLA Herman Gatling Award for Outstanding Science Education Leadership in North Carolina award goes to the person who has exemplified the high standards the late Herman Gatling of Durham County set in his job and in his life.

This award recognizes the recipient as the outstanding science education leader in the state of North Carolina. Herman was given the first award posthumously in 1989; his wife, Emma, accepted his award on behalf of the family. This annual award is sponsored by the Carolina Biological Supply Company.” ([NCSLA Website](#))

Manley Midgett

Board Member, Outreach Coordinator

Manley Midgett is a professor of Education and Geoscience at Meredith College in Raleigh, NC. He is a longstanding Board member and outreach coordinator, serving as a lead designer and facilitator of the Foundation’s teacher workshops.





NC SCIENCE FAIR FOUNDATION ACCEPTED INTO SECOND YEAR OF BOARDLEAD

BOARDLEAD BACKGROUND

The NC Science Fair Foundation was accepted into and participated in the BoardLead Raleigh cohort for 2 years running. BoardLEAD is a program provided by [Cause Strategy Partners](#). The program is designed to support industry professionals who are interested in a position on a nonprofit board. Candidates are supported through training on board leadership and diversity, equity, and inclusion. Participating nonprofits are also provided training on diversity, equity, and inclusion and asked to provide a summary document that articulates their mission, work, and requirement of board members. Across the year, candidates are provided information on the participating nonprofits and the BoardLEAD team facilitates potential matches. Candidate and nonprofit matches then take the lead, engaging in the board recruitment process of their nonprofit to determine whether the matched candidate(s) will be elected to their board.

The NC Science Fair Foundation has used this program to continue to build the internal capacity of the organization and to expand our networks and community partners. We have successfully elected three new board members through participation in BoardLEAD.

2021 Elected Board Members through BoardLEAD

Swarali Athavale

Credit Suisse
swarali.athavale@gmail.com
Cary

Karsten J. (Max) Benitz

The Clorox Company/Burt's Bees
max.benitz1@clorox.com benitzcom@gmail.com
Chapel Hill

2022 Elected Board Members through BoardLEAD

Pooja Basu

Fidelity Investments
basu.pooja1@gmail.com
Morrisville



PRIORITIES

The North Carolina Science Fair Foundation remains committed to reaching NC students to raise awareness and provide opportunities for engaging in scientific inquiry and engineering design research. We strive each year to increase our reach to youth from historically underrepresented populations in STEM and to model and extend diversity, equity, and inclusion in our organization, the families and students we serve, and the fields of science and engineering.

OPPORTUNITIES FOR STUDENTS

Priority 1: Host Opportunities for all North Carolina Students to engage in student-led research.

NCSFF provides opportunities for all students in NC to explore science and engineering through the inquiry and engineering design process. Through this engagement students develop conceptual understanding of concepts, and also develop college & career readiness skills including critical thinking, communication, and science and engineering practices used in the field. While we strive to reach students in every county in NC, to date we have served students in 63 out of 100 NC Counties.

RAISE STEM AWARENESS

Priority 2: Raise awareness of STEM and STEM College & Career Pathways.

NCSFF is dedicated to raising awareness of STEM fields & career pathways. We work to strategically represent stem professionals and alumni students from all regions of NC and from a diverse range of races, ethnicities, socioeconomic backgrounds, and career pathways. As we focus on raising awareness, we seek to positively impact diversity, equity, and inclusion in STEM.

PROFESSIONAL LEARNING

Priority 3: Provide Professional Learning Supports

NCSFF seeks to provide professional learning supports to all who engage with the Foundation. We continue to provide formal workshops on supporting student led research annually. In addition to teacher learning supports, the Foundation also provides training support for volunteers who engage as members of the Scientific Review Committee and Judges for the fair.



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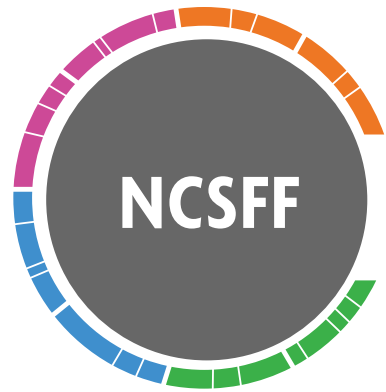
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RESOURCES

	NC Virtual Showcase: This collection of 2 minute research summaries includes student researchers who were promoted to the NC Science and Engineering Fair in March of 2020. While this Fair was cancelled due to the pandemic, many researchers chose to submit a video for the virtual showcase.
	NC Alumni Corner: This page includes a series of brief video interviews and accompanying writes up that include more details on NCSEF alumni researchers. The students provide great insight to their pathway through NCSEF, their personal interests, and a bit of advice that they would share with others.
	Researcher Spark Talk Series: This playlists includes all of the Researcher Spark talks which were offered during the 2022 NCSEF Live Sessions.
	Curious by Nature: This documentary, created by Alicia Carter for the S'well Bottle Company, features 3 NC Research Projects from this year and highlights their journey as they engage in research they are passionate about.
	NCSEF Live Playlist: This playlist is a compilation of all of the live events from the three divisions of the 2022 NCSEF.
	NCSEF Project Symposium: This project symposium includes all projects for NCSEF State Finalists from 2022. Projects will remain publicly available through March 2023.




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