14-year-old named America's Top Young Scientist for inventing an AI handheld pesticide detector

ST. PAUL, Minn. and CHARLOTTE, N.C., Oct. 16, 2024 /PRNewswire/ -- 3M (@3M) and Discovery Education (@DiscoveryEd) named Sirish Subash, a 9th grader at Gwinnett School of Mathematics, Science, and Technology inSnellville, Georgia, the winner of the 2024 3M Young Scientist Challenge, the nation's premier middle school science competition. Sirish set himself apart with an AI handheld pesticide detector. As the grand prize winner, he received a $25,000 cash prize and the prestigious title of "America's Top Young Scientist."

Sirish spent the last four months competing against nine other finalists and secured his win during final Challenge events at 3M global headquarters in St. Paul, Minnesota, on Oct. 14 and 15. Finalists navigated a series of interactive challenges and were evaluated on their ingenuity and innovative thinking, application of STEM principles, demonstration of passion and research, presentation skills, and ability to inspire others.

"This year's Young Scientist Challenge finalists have demonstrated an incredible ability to develop creative solutions to some of the world's most pressing challenges," said Torie Clarke, EVP & chief public affairs officer at 3M. "I am beyond impressed and inspired by their intelligence and their scientific minds. Congratulations to this year's Top Young Scientist, Sirish Subash, and all the finalists for their phenomenal work."

Sirish Subash's project, Pestiscand, is a handheld device designed to detect pesticide residues on produce using a non-destructive method. It employs spectrophotometry, which involves measuring how light of various wavelengths is reflected off the surface of fruits and vegetables. A machine learning model then analyzes this data to determine the presence of pesticides. Pestiscand consists of a sensor, a power supply, a display screen, and a processor. During testing, the device achieved an accuracy rate of identifying pesticide residues on spinach and tomatoes of greater than 85%, meeting the project's objectives for effectiveness and speed.

3M Young Scientist Challenge finalists are paired with a 3M scientist who mentors and works with them one-on-one over the summer to transform their idea from concept to prototype. This year's winner was paired with Aditya Banerji, Senior Research Engineer of 3M's Corporate Research Process Laboratory.

The second and third place winners from the Young Scientist Challenge each receive a $2,000 prize. These exceptional students are:

In second place, Minula Weerasekera from Beaverton, Oregon, a 9th grader at Mountainside High School. Minula developed a solution for storing energy for longer through organic compounds and a sulfur-based terhiophene.
In third place, William Tan from Scarsdale, New York, an 8th grader at Scarsdale Middle School. William developed an AI Smart Artificial Reef that encourages coral, seashells, kelp and other marine life to grow in a safe and controlled environment.

The fourth through tenth place winners each receive a $1,000 prize and a $500 gift card. These finalists, in alphabetical order by last name, are:

Ankan Das from Sanford, Florida, a 9th grader at Oviedo High School in the Seminole County School District
Steven Goodman from Lake Mary, Florida, an 8th grader at Milwee Middle School in the Seminole County School District
Aakash Manaswi from Orlando, Florida, a 9th grader at Lake Highland Preparatory School
Prince Nallamothula from Frisco, Texas, a 9th grader at Centennial High School in the Frisco Independent School District
Ronita Shukla from Acton, Massachusetts, an 8th grader at RJ Grey Junior High School in the Acton Boxborough Regional School District
Rithvik Suren from Ellington, Connecticut, a 9th grader at Academy of Aerospace & Engineering in the CREC School District
Hanna Suzuki from Bedford, Massachusetts, a 9th grader at Bedford High School in the Bedford School District

"Discovery Education is incredibly proud to support student innovation over the past 17 years through the 3M Young Scientist

Challenge," said Amy Nakamoto, Executive Vice President of Corporate Partnerships at Discovery Education. "It is more important than ever that future generations are given the tools needed to tackle real-world problems. Each remarkable participant has embodied the curiosity that will fuel these discoveries, and we congratulate them all."

In its 17th year, the 3M Young Scientist Challenge continues to inspire and challenge middle school students to think creatively and apply the power of STEM to discover real-world solutions. America's Top Young Scientists have gone on to give TED Talks, file patents, found nonprofits, make the Forbes 30 Under 30 list, and exhibit at the White House Science Fair. These young innovators have also been named TIME Magazine's Kid of the Year, featured in The New York Times Magazine, Forbes, and Business Insider, and have appeared on national television programs such as Good Morning America, The Kelly Clarkson Show, and more. In addition, a 3M Young Scientist Challenge Alumni Network was formed in fall 2022 and welcomed more than 100 former challenge finalists and winners for networking opportunities.

The award-winning competition supplements the 3M and Discovery Education program Young Scientist Lab, which provides free dynamic digital resources for students, teachers, and families to explore, transform, and innovate the world around them. All its resources are also available on Discovery Education Experience, the company's award-winning K-12 learning platform.

To download images from the 2024 science competition, clickhere. To learn more about the 3M Young Scientist Challenge and meet this year's winners and finalists, visit youngscientistlab.com.

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