

Littleton Public Schools

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FOR IMMEDIATE RELEASE

Thursday, March 14, 2024



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Littleton High School Students Recognized for Excellence at Massachusetts Science and Engineering Fairs



Littleton High School students at the MSEF Region IV Science and Engineering Fair at Tufts University in Medford. (Photo Courtesy Littleton Public Schools)

LITTLETON — Superintendent Kelly Clenchy is proud to share that several Littleton High School students were recognized for excellence in their research at the Massachusetts Science and Engineering Fairs (MSEF).

[Massachusetts Science and Engineering Fairs \(MSEF\)](#) holds high school and middle school-level science fairs that allow students to explore and manage an experimental project of their choosing. Students must follow a set of guidelines when choosing a topic and conducting their research. At the Fairs, they must present written lab reports, engaging visual displays, and a journal that outlines their research process, and they must demonstrate their knowledge of their project and scientific field to a panel of judges.

LHS students attended the MSEF Region IV Science and Engineering Fair at Tufts University in Medford on Friday, March 1. This was the 2nd year that LHS had students participate in MSEF.

Six groups of LHS students presented their experiments at the Fair:

- Grade 9 students Lasya Muthyala and Caitlin Stimpson presented "An investigation into how aqueous solutions of garlic, onion, and cinnamon influence the growth and viability of *Escherichia coli*"
- Grade 10 student Anika Jacob presented "A Study on the Effect of Caffeine on the Growth and Development of Zebrafish Embryos Using Automated Quantitative Assessment of Morphological Changes"
- Grade 11 students Finn Canning and Finley Pletcher presented "A study of water quality in Littleton, Massachusetts"
- Grade 11 students Isabel McCurdy and Keira Rowe presented "Effect of a high sodium diet on the lifespan of *Caenorhabditis elegans* with and without a Marfan syndrome mutation"
- Grade 11 student Michelle Muddasu presented "Exploring Piperine's Potential: A study on its effects on the lifespan of a *C. elegans* model of Alzheimer's disease"
- Grade 11 students Areen Panda, Aum Patel, and Cainan Pletcher presented "A *C. elegans* Model for Heart Disease: How caffeine can affect the cardiovascular system"

A total of 193 students from 25 Region IV schools presented 127 projects. The top 40 percent from the Region IV fair are eligible to move on to present at the state fair in April.

Finn Canning and Finley Pletcher received the award for Outstanding Environmental Science Project. Canning and Pletcher, along with Anika Jakob, will be presenting their projects at the Massachusetts Statewide Science and Engineering Fair, which will take place on April 5 at Gillette Stadium.

Two additional groups of LHS students will also be presenting at the state fair. Grade 10 students Siddarth Padamati and Arohan Pathak will present "A study of the effect of greater wax moth larvae (*Galleria mellonella*) on the decomposition of

plastic shopping bags," and Haaris Khan, Grade 10, and Samuel LeDoux, Grade 11, will present their engineering project "Magnetic Orthosis."

Dr. Valerie Finnerty is the STEM Research Club faculty leader and has mentored students conducting original science and engineering projects at the middle and high school levels for the last 23 years.

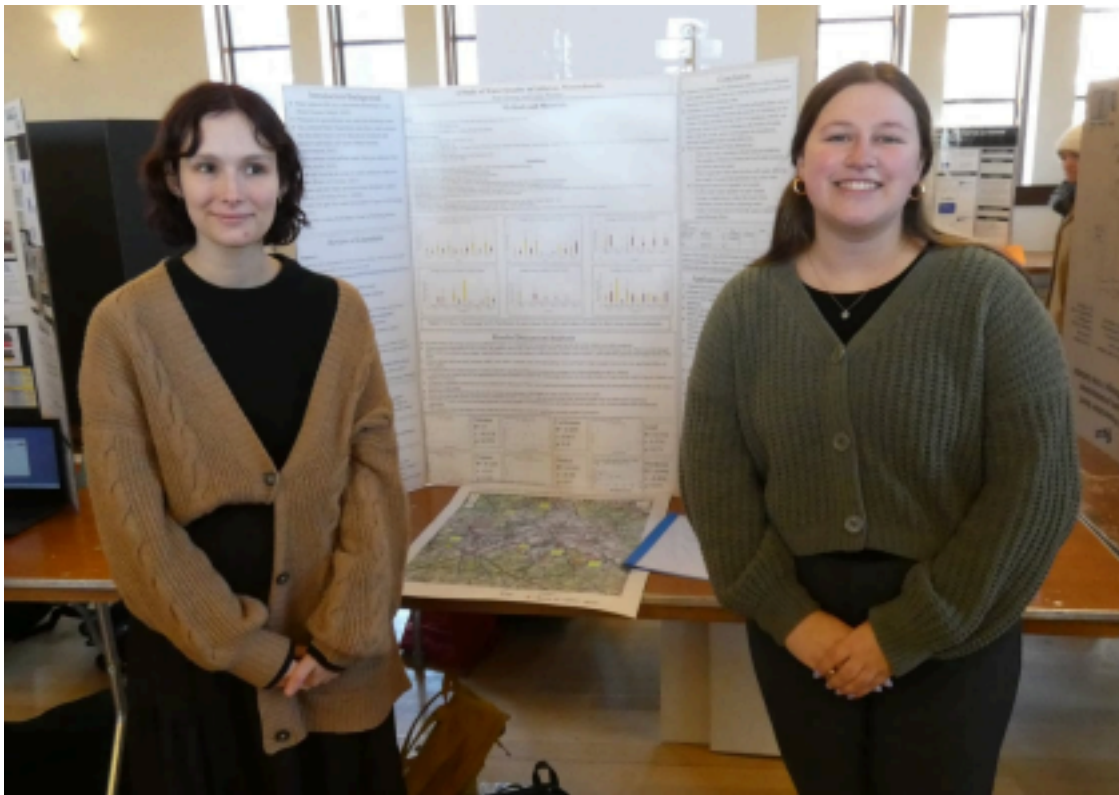
Students have been working on their projects since mid-fall, conducting and writing up background research, designing projects, and conducting and analyzing experiments. Many of them stayed after school and came in on weekends and during February break to work with Dr. Finnerty on their projects.

Dr. Finnerty noted that she believes the opportunity for students to conduct their scientific research helps them explore their interests in science and identify possible future goals while still in middle and high school.

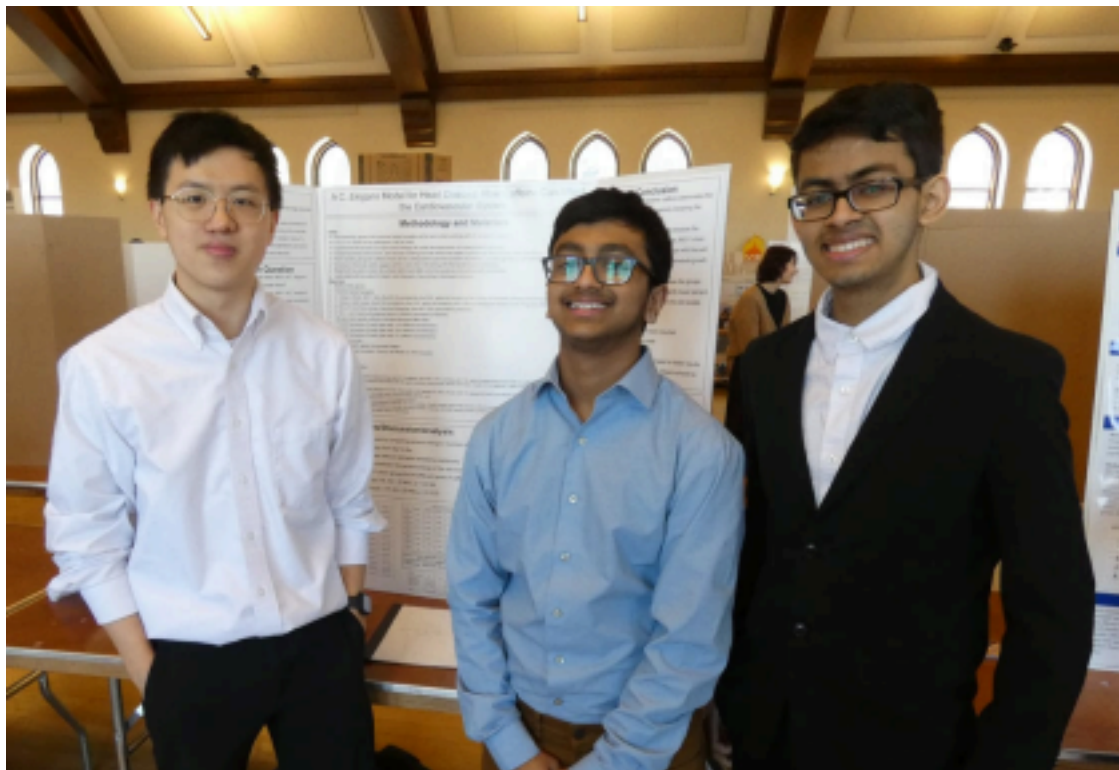
"These students are dedicated to pursuing scientific knowledge," Finnerty said. "They came up with original ideas for exploring real-life problems and learned a lot about the process of science during their projects. Each of these students is a scientist in addition to being a science student."

The projects were financially supported by grants from the Littleton Education Fund and the Littleton PTA.

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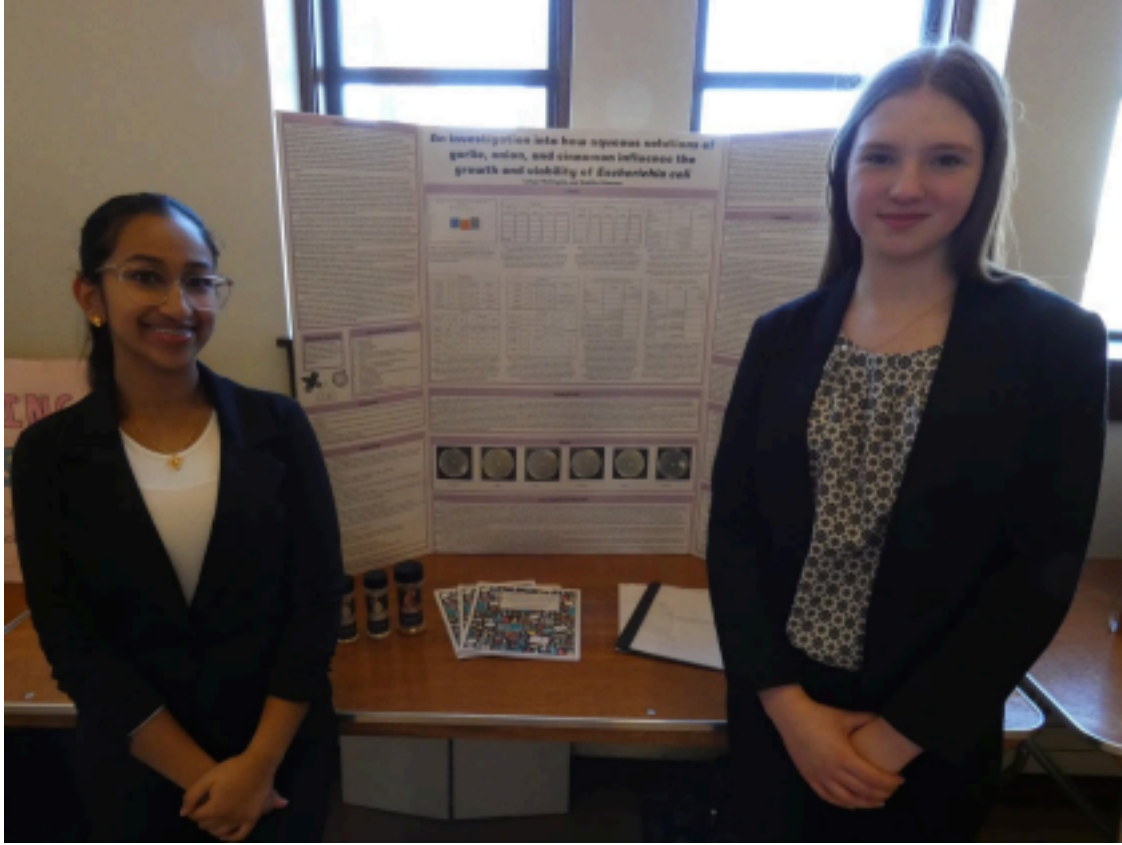


Grade 11 students Finn Canning and Finley Pletcher received the award for Outstanding Environmental Science Project for their project "A study of water quality in Littleton, Massachusetts." (Photo Courtesy Littleton Public Schools)

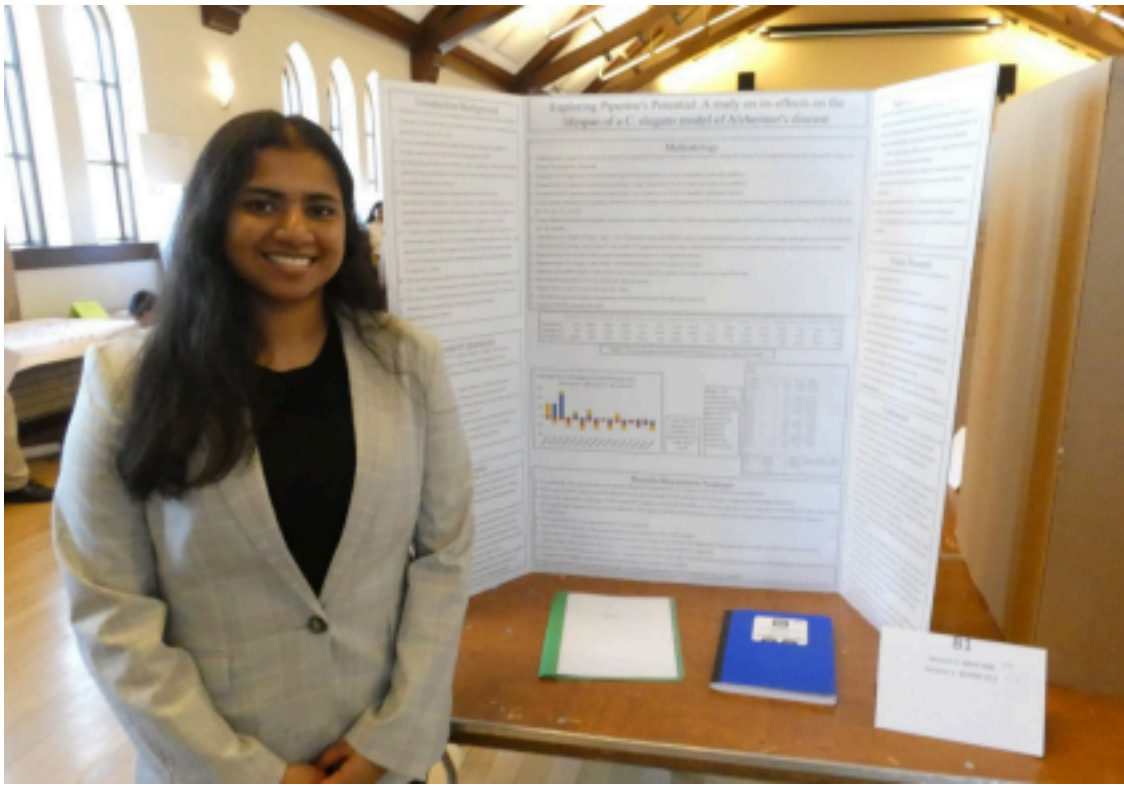


Grade 11 students Areen Panda, Aum Patel, and Cainan Pletcher presented "A

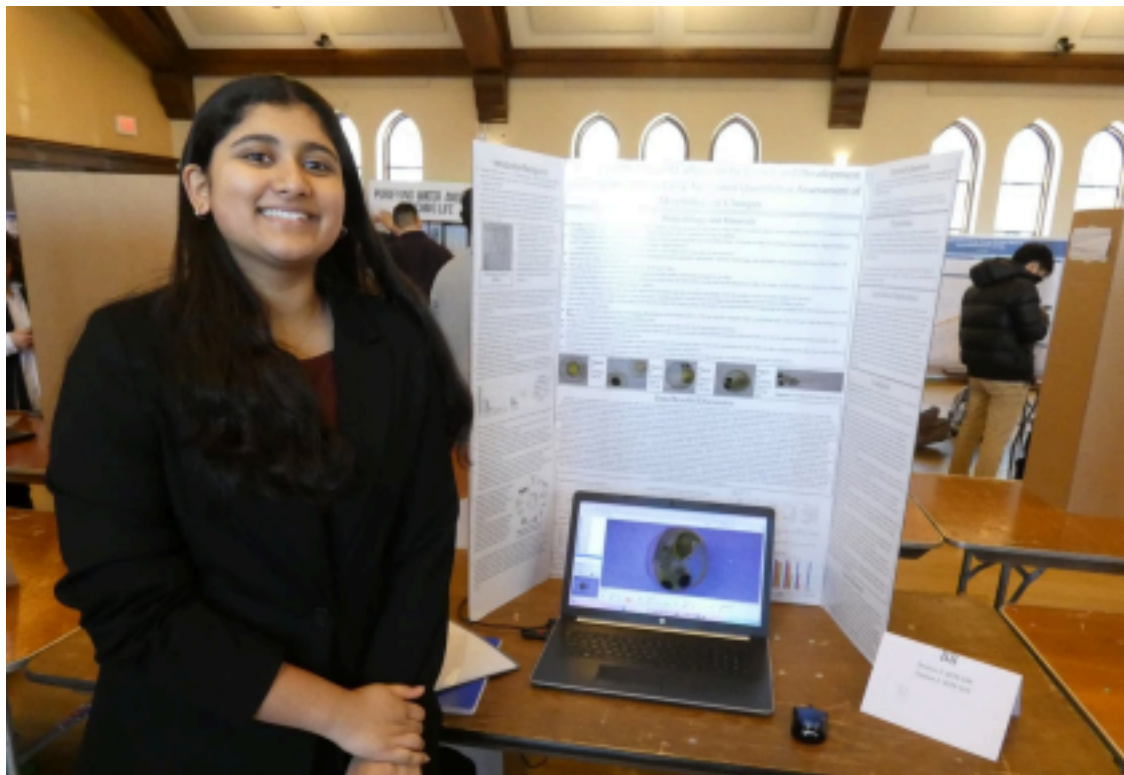
C. elegans Model for Heart Disease: How caffeine can affect the cardiovascular system." (Photo Courtesy Littleton Public Schools)



Grade 9 students Lasya Muthyala and Caitlin Stimpson presented "An investigation into how aqueous solutions of garlic, onion, and cinnamon influence the growth and viability of Escherichia coli." (Photo Courtesy Littleton Public Schools)

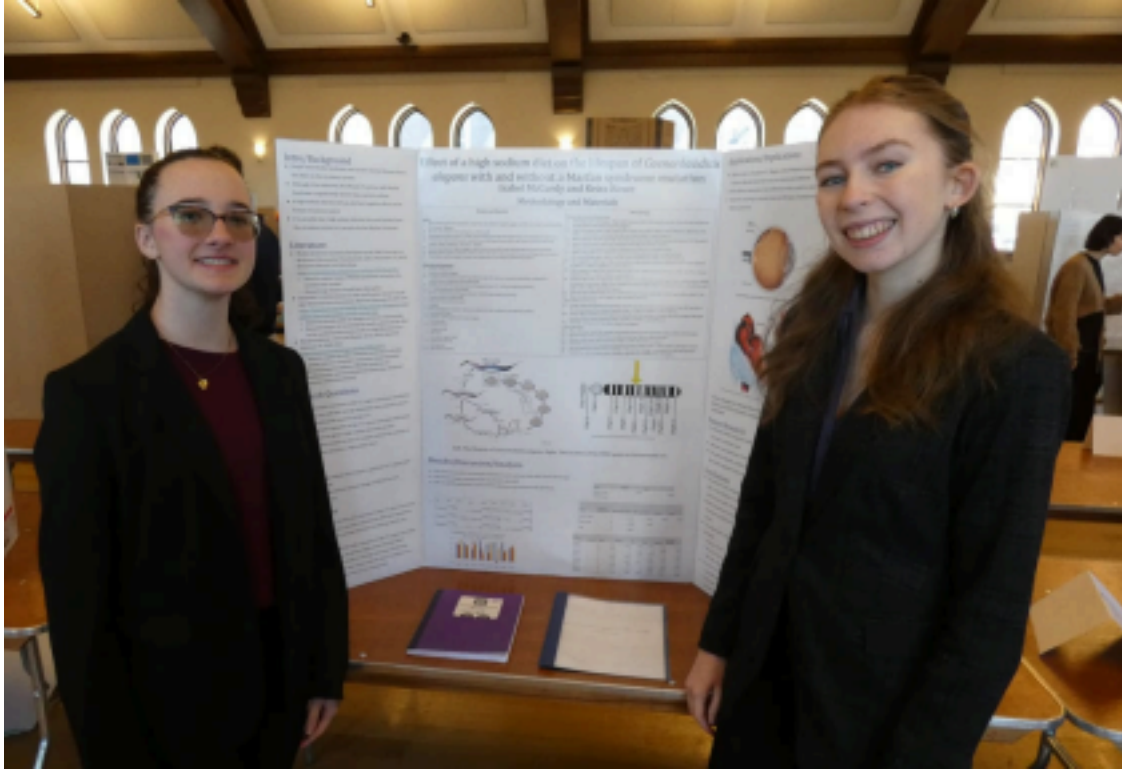


*Grade 11 student Michelle Muddasu presented "Exploring Piperine's Potential: A study on its effects on the lifespan of a C. elegans model of Alzheimer's disease."
(Photo Courtesy Littleton Public Schools)*



Grade 10 student Anika Jacob presented "A Study on the Effect of Caffeine on"

the Growth and Development of Zebrafish Embryos Using Automated Quantitative Assessment of Morphological Changes" (Photo Courtesy Littleton Public Schools)



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A message from Littleton Public Schools