

Feeding the STEM Tree

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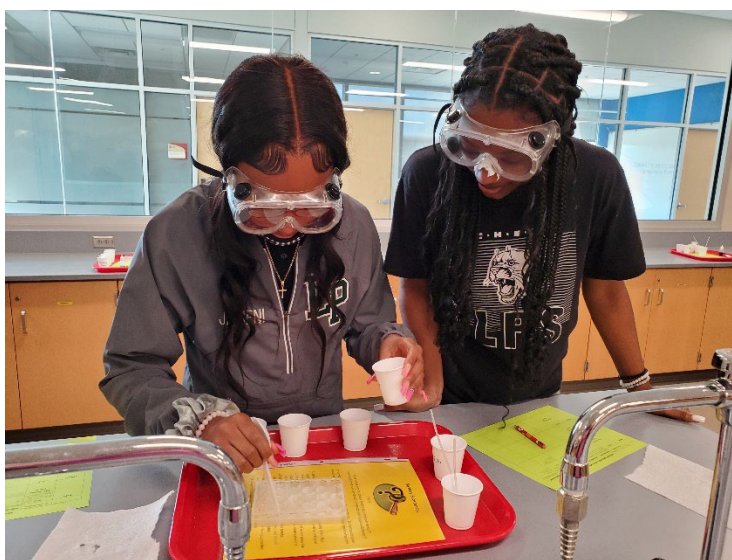
<i>Award Title:</i>	RII Track 1: Louisiana Materials Design Alliance (LAMDA)
<i>NSF Award Number:</i>	NSF OIA-1946231
<i>Principal Investigator:</i>	William C. Deese
<i>Lead Institution Name:</i>	Louisiana Tech University
<i>Award Start Date:</i>	August 1, 2020
<i>Award End Date:</i>	July 31, 2025
<i>Highlight Submission Date:</i>	February 28, 2024

What is the outcome or accomplishment? (1-2 short sentences describing it and why it is transformative; 50-word maximum suggested)*

Stimulating interest in physical science and generating excitement in inquiry based exploration is highly effective if it begins early in K-12 education. Dr. William Deese's team conducted "STEM Days," inviting groups of middle grade students and their teachers to Louisiana Tech University's campus where faculty and the Region 8 LASTEM Center staff provided highly engaging learning experiences to fulfill this mission.



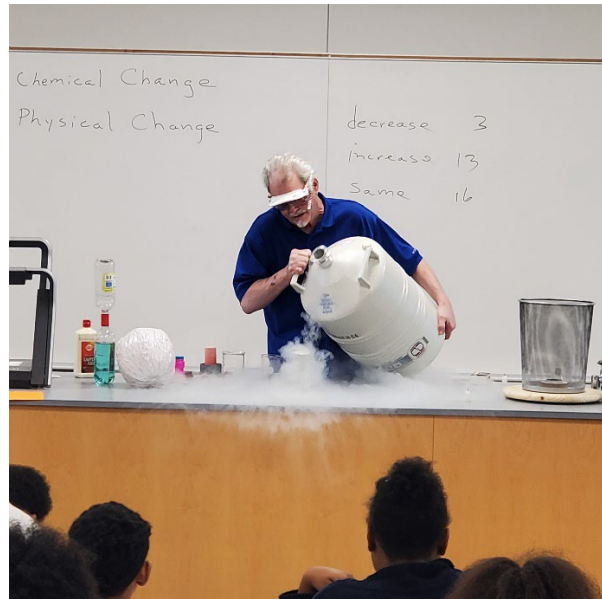
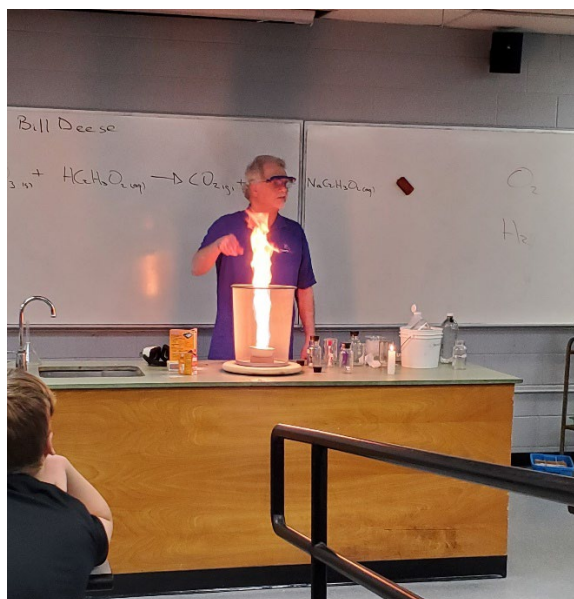
Dr. Ruddick assisting two students.



Two middle school investigators.

What is the impact? (1-2 simple sentences describing the benefits for science, industry, society, the economy, national security, *etc.*; suggested 50-word maximum)

Approximately 200 middle grade students improved their science literacy and critical thinking. They participated in an inquiry-based investigation of the properties of several solids and liquids and observed an hour-long demonstration program on the properties of matter. They also learned the process of applying for college admission with different opportunities for careers in STEM. The goal with these activities is to inspire students to pursue STEM studies. These efforts will help alleviate a shortage of STEM majors in the near future.



Exploring the properties of matter.

What explanation/background does the lay reader need to understand the significance of this outcome? (1-2 paragraphs that might include, for example, more on who, when, where; NSF's role; support from multiple directorates/offices; what makes this accomplishment unique; additional intellectual merits; or broader impacts such as education, outreach, or infrastructure improvement that are integral to this outcome; suggested 150-word maximum)

Our future depends on a public that can use science for decision making and meaningful participation in today's world. Science literacy and critical thinking are vital for careers in medicine, engineering, education, research and materials design. Middle grades students have a wonder about the natural world which often wanes in later grades. They are still at a position in their education that allows them the opportunity to become better informed about what they want their future to look like.

Through the NSF LAMDA funding, our team was allowed the opportunity to provide a world-class STEM day experience for each of the participants that we believe helps open their minds and prospective doors concerning science and scientific literacy. This initiative stimulates students' desire to pursue related fields as they move into high school and then post-secondary training, and prepares them to function within our world as confident, well-informed, problem-solving citizens.