

# PROJECT FACTS

UNIVERSITY OF KENTUCKY CENTER FOR APPLIED ENERGY RESEARCH

## PARTICIPANTS

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## Development & Community Engagement

### Educational Outreach (K-12)

#### K-12 Outreach

##### *Elementary School Level*

- **Scientists in the Classroom:** We partner local elementary schools to strengthen science curriculum by introducing hands-on experiments and demonstrations. CAER scientists go into the science labs and lead experiments that complement the science curriculum being studied by Fayette Co. students. We developed cross disciplinary experiments, where results are charted and graphed.
- **Energy Fair:** The CAER holds an annual Energy Fair for fourth grade Fayette County students, which features displays by energy-related organizations. These students are from traditionally underrepresented populations. Their school scores are the lowest in town. About 300 attend.
- **Science Fairs:** CAER scientists are available to judge local science fairs in Fayette County and do so for at least three schools per year.
- **Outdoor Classrooms:** Scientists have participated in the creation of an outdoor classroom and rain gardens at local elementaries.

##### *Middle School Level*

- **MathCounts Energy Night:** State finalists (from every Kentucky county) come to Lexington every other year for the state math finals. The night before the finals, they interact at CAER with Kentucky Energy Club students, performing engineering-type activities (e.g., Ping-Pong catapults, edible car races, paper airplane designs, etc.)

##### *High School Level*

- **Pre-engineering Program:** CAER helped start the Lafayette High School Pre-engineering Program many years ago, as part of the educational outreach portion of a National Science Foundation grant. We now provide senior research opportunities for these students.
- **Experience-Based Career Education program (EBCE)** of Fayette County public schools. High school students are assigned to a Resource Person at CAER, who monitors and evaluates the student's activities for the internship at the Center. Students see firsthand how adults successfully incorporate their careers into their lives. Mentors create laboratory experiments that offer experience beyond the classroom and provide insight into the scientific field.
- **MSTC:** High-achieving students from the Paul Laurence Dunbar Math and Science Technology magnet program do final year research projects at the CAER.