

Papers, Presentations, and Posters

Project Activities

- We identified a *5th grade stepping stone*—a network of foundational ideas that are fundamental and general enough to be compatible with scientific ideas about energy, are within reach of 5th graders (with proper instruction), and could allow productive learning in middle school.
- In collaboration with teachers, we conducted clinical interviews and small group activities with 3rd, 4th, and 5th graders in urban after-school programs to identify precursors to the foundational ideas, obstacles to learning them, and promising interventions.
- We developed learning experiences consisting of 3-session sequences of activities. We piloted them with 25 third graders and 44 fifth graders and assessed student outcomes with pre- and posttests.
- We outlined a grade 3–5 learning progression for energy taking our findings into account as well as relevant standards, curricula, and science education literature.



Initial Findings:

We have prepared papers, presentations and posters to communicate our findings. Our work to date is posted here. We are continuing to analyze data and will post additional findings as they are available.