



## Hitting the Mark

Professional development coupled with research and design experiences provides middle and high school teachers an opportunity to develop interesting, cutting-edge science and engineering classroom connections.

The Northeastern University RET program is a summer experience that not only provides opportunity for authentic research by middle and high school teachers, but also provides effective inquiry-based professional development, opportunities for review of high-quality curricula, and connections to national, state and local educational standards. In addition to presenting an overview of their research, teachers develop units tied to their classroom curriculum and have opportunities to present these units to each other and content specialists for feedback before they introduce them to their students.

How might you engage a group of middle school students in a study of the problems related to hazardous waste identification and clean-up? One RET teacher, Mark Casto, after spending his summer using *Cross Well Radar for Detection and Imaging*, challenged his class with an outdoor exploration that hit the mark. (Mark had teams of students work outside to find a buried paint can — all came close but one group hit the mark.) Teachers like Mark maximize the RET experience by empowering their students to investigate important societal problems and encouraging them to consider STEM careers.

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Teachers work side-by-side with university researchers on innovative projects.



Students work with graphical data and transfer it to a grid that covers a parcel of land. Once students have identified where the spill is on paper, they will take the grid outdoors where a parcel of land, with the same dimensions, has been marked out with stakes. They are to then locate where the spill area and leaking drum are located.