This project will address the partner districts’ identified need to increase and enhance their teachers’ content knowledge and ability to use scientific instrumentation in their teaching. This need stems from both local and global demands that students have an understanding of the various roles of scientific technology.

The goal for partnering SINIs is to enhance the participating teachers’ familiarity and comfort with a variety of scientific equipment to the point that they can engage their classroom in student-driven inquiries using the instrumentation. As a result of their participation, we expect teachers to be able to accomplish the following objectives:

1) understand how the instrument works and the type of data it provides;

2) understand how to operate the equipment, how to optimize its performance, and recognize when the instrument is not functioning correctly;

3) operate the equipment autonomously (assistance is always a phone call away as necessary);

4) understand the typical range of applications for the equipment; and

5) develop one or more lesson plans (for their specific classroom settings) integrating the equipment and inquiry-based instruction.

This project adapts the existing Leitzel Center Advancing Science equipment loan program, which hosts three-day summer training workshops, and instead brings the workshops to partnering schools. This new model addresses a concern of partnering districts that essential equipment and content training are not always accessible to teachers without easy access to colleges or universities.