Objective(s)

Students will use Easy Scan Simulation software explore parameters which leads to atomic resolution
Students will explain meanings of images produced
Students will use Easy Scan Simulation software tools to make atomic scale measurements

Materials

Computer with Easy Scan Simulation software – installed

Engagement

Teacher led discussion depicting high school students as an elite group who use the STM Technology
Teacher led demonstration of Easy Scan Simulation software

Exploration

Students will use Easy Scan Simulation software to explore and define the parameters that will give atomic resolution
Students will use Easy Scan Simulation software to explore the relationships between images and graph windows
Students will use Easy Scan Simulation software to explore the measurement tools used to measure specific STM images

Explanation

Teacher led demonstration of simulation software
Group discussion of the meaning of images produced by the software

Evaluation

Students will provide explanations of five different scale level images

Extension

Students will use the Easy Scan STM to obtain and discuss actual images produced