

# Westlake City Schools

## News Release

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FOR IMMEDIATE RELEASE

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### **WESTLAKE HIGH SCHOOL STEM STUDENTS USE ROBOTICS AND GPS FOR SURVEYING**

GPS. Total Station. Data Collector. Robotic Surveying. AutoCAD Mapping.

These highly sophisticated and precision surveying technology instruments, software and devices were part of a demonstration experienced by students in Scott Kutz's advanced Technical Drawing/Design class, as well as the students in Duane Miller's Honors Geometry classes.

Christopher Dempsey, president of the Dempsey Surveying Company, and his assistant, Mike Stahurski, demonstrated how a property survey is marked and staked using robotic and GPS surveying equipment.

Using a Westlake Education Foundation grant, Kutz and Miller wanted students to engage in STEM (Science, Technology, Engineering, Math) as a transdisciplinary and thematic approach in their studies. The intent of the STEM activity was to deepen students' knowledge and increase their critical thinking skills of how geometry, measurement and basic algebra are applied in a practical manner. Students also worked together on the collaborative project through their geometry and engineering technology classes.

After the demonstration, students received additional instruction and

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practice. Students collected site data on distances, bearings, horizontal angles and elevations of the varsity baseball field, akin to conducting a property survey.

They took the data and created accurate CAD (computer aided design) scaled site plans and profile elevation drawings of the field with appropriate features, dimensions and notes. They will compare their findings with the OHSAA regulation high school baseball field book to check for accuracy.

In this STEM activity, students implemented several indicators from the Ohio Department of Education's Mathematics Academic Content Standards, as well as the Technology Academic Content Standards.

Additionally, students were made aware of the first steps in building any type of house, office complex, school, sports field, mall, road or bridge. They also learned that a property survey is one of the many responsibilities of an architect, civil engineer or contractor.

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