Joey Lavalley is a born scientist. The Valparaiso High School sophomore is keenly interested in how and why things work the way they do. And he wants to share that knowledge with others.

In recent months, Lavalley has parlayed that interest and enthusiasm into national Science Olympiad competition with his school team, an appearance in a promotional video for Ace Hardware and attention from a scientist well known in pop culture.

Lavalley was a member of the Thomas Jefferson Science Olympiad Team all three years of middle school, and in May participated in the 2015 Science Olympiad National Championship at the University of Nebraska in Lincoln.

The Science Olympiad is considered one of the premier science competitions in the nation. For the past 32 years it has challenged both teachers and students to delve deeply into all aspects of science with hands-on experiences.

And Thomas Jefferson is "the winningest school in history in the Science Olympiad national competitions," according to Jenny Kopach, vice president of marketing and communications for Science Olympiad.

"We had to do a demonstration recorded by a film crew," Lavalley said. "We did experiments that could be done with common materials you could buy at Ace Hardware."

The filming was part of the Ace Hardware Science STEM (science, technology, engineering and math) Expo. Six students from the more than 2,000 who participated were selected to appear in a
promotional video for Ace. They won monetary prizes for their Science Olympiad teams and Bose SoundDocks for themselves.

The video created at the expo may be viewed in a few weeks at www.hardwarescience.com

"We did a lot of different experiments," Lavalley said. "We demonstrated making a battery out of vinegar and pennies and a nickel, making LEDs, balance and inertia with a bicycle helmet that had two heavy balls on a stick. These are all relatively simple things you could buy at Ace.

"When you do the experiments, they don't always turn out as you might expect. Many of them are incredibly counterintuitive."

While in Nebraska, Lavalley caught the eye of Steven L. Jacobs, the chief scientist of Faraday Studios. Jacobs is best known as the present-day Mr. Wizard and for his work on the show "MythBusters."

In an email, Jacobs said, "Joey has 'it.' Although he's a young man, I could see the wizard twinkle in his eye ... something that is grown from a presence of honesty, kindness, patience and dedication to truth, plus a very strong presence of curiosity, wit and a dash of genius ... all dusted with an urgency to be ornery or make a stink bomb.

"He is brilliant for his age. His communication skills are good and growing."

In August, Lavalley and three other Science Olympiad winners participated in an Ace Hardware trade show at McCormick Place in Chicago. They performed demonstrations similar to those at the Science Olympiad National Competition.

Kopach, with the Science Olympiad organization, was impressed with Lavalley's poise and presentation at the trade show.

"Joey is a dynamo," she said. "He is so knowledgeable about so many scientific principles. He not only knows the 'book facts' but he knows the backstory, the science behind the experiments, and he can explain it so that others can understand it. He is bursting with a genuine, 'I need to know this and show this' mentality. As people were walking by the demonstrations, they were saying, 'He needs to have his own TV show.'"

Lavalley exemplifies the ideal Science Olympiad member, Kopach said. "He is excited, engaged and he worked well as part of a team. He just has that fire. He loves information, wants to share it and loves to solve problems."

Besides keeping up with his academics and the Science Olympiad team, Lavalley, the son of Amy and
Andy Lavalley, also is busy working on his Eagle Scout project.

He is working with city horticulturist Steve Martinson, of the Valparaiso Park Department, to turn a large wooded area near Valplayso Playground into a massive perennial flower garden. He plans to include two benches and a scale model of the solar system.

*Linda Lemond is a freelance reporter for the Post-Tribune.*

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