



KID MAKERS



AUSTIN CROUCHLEY

Austin Crouchley, a 14-year-old inventor from Garden City, New York, says his best advice to anyone who wants to be a successful innovator is to be open to new ideas and avoid making general assumptions.

"If you get too focused on one idea, you can miss a lot of the solutions," says Austin, who also was a finalist in the 2017 Young Scientist Challenge.

Austin's contest entry was the HELIO-Path, a water-powered pulley system for rotating solar panels from east to west so they constantly face the sun. The method generates 18 percent more electricity than fixed panels.

There were times when components of his design didn't work as planned, and he had to make adjustments. "For example, at one point my rotating drum on my mechanism was very stiff, and it wouldn't turn very well," he recalls. "I had to fix the ball bearing, fix the Lazy Susan and get in there with WD-40 and lubricate it all up. It took a long time to get it perfectly working."

Another challenge for Austin was sticking to his \$50 budget for the project. "I tried to keep it as simple as possible and as cheap as possible, which later played out into a real-world application," he says. "You'd want it to be as cheap as possible when people tried to buy it."

Austin now is working on an extension to his project, a cooling coil device that runs

water through a copper coil attached to the back of the solar panel. As the solar panels become overheated and less efficient, the cooling coil will transfer excess heat to the water, he says. Thus, the device is designed not only to improve solar-energy efficiency but also to serve as a source of hot water.

A sports enthusiast who plays on his school's volleyball team and once participated on the soccer and track teams, Austin — who is thinking about a career in economics or engineering — gets a regular brain workout as a member of the prestigious Institute of Creative Problem Solving for Gifted and Talented Students. Each Saturday, the group meets on the campus of the State University of New York College at Old Westbury, on Long Island, and spends two hours solving challenging math problems.

"It might not seem like the most ideal Saturday morning," Austin says, "but it's actually kind of fun."



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