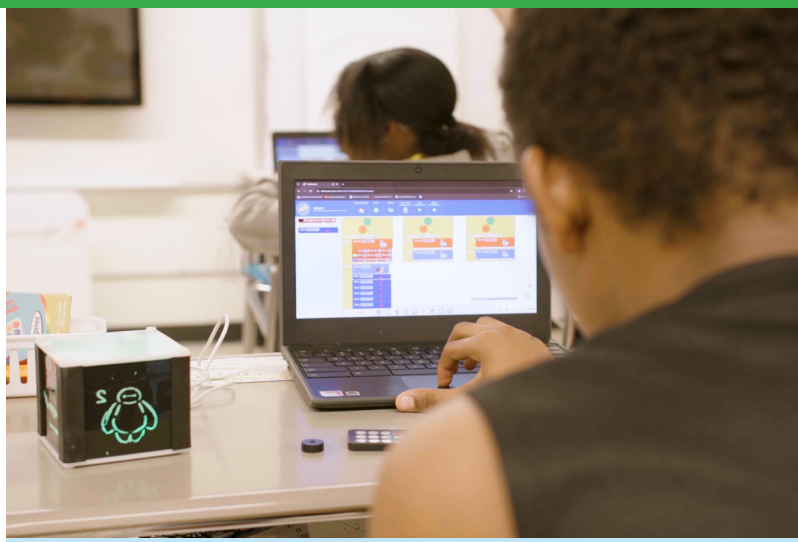
Specialized School System Partners with TinkRworks to Expand STEAM Education



A trailblazing, zero-tuition public school system dedicated to serving students in grades K-12, the Career and Success Academy Network of Public Schools (CANOPS) in South Bend, Indiana empowers students to reach their full potential.

"Our vision extends far beyond just education," says Aaron Esper, Ph.D., director of CTE and special projects. "It's about giving students everything they need to succeed and accomplish their academic goals."

This network of schools was formed by community members and is authorized by Trine University's Education One. They primarily serve students from the South Bend Public Community School Corporation's (SBCSC) Empowerment zone, which was formed by SBCSC in response to a potential state takeover of the five schools. The organization formed an "empowerment zone" and focused on serving a community that was largely disenfranchised and struggling as a result of the near-failure of its schools.

Improving Computer Science Pathways

With five schools and 1,750 students, CANOPS wanted to improve and integrate its high school computer science pathway by giving students more opportunities to earn certifications and expose them to career opportunities. This would also align well with

Career Academy Network of Public Schools

- Located in South Bend, Indiana
- 5 Schools
- 1,750 Students
- 60% free and reduced lunch

Key Takeaways

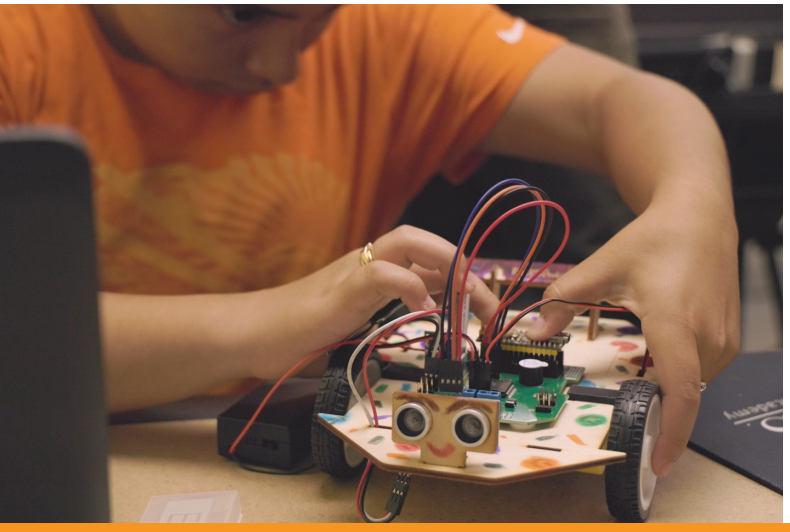
- CANOPS experienced a 30% drop in disciplinary referrals after implementing TinkRworks, significantly boosting student engagement.
- Teachers praised TinkRworks for its ease of use and quality training, which enhanced classroom effectiveness and student success.
- The platform offers students valuable career exposure, aligning with CANOPS' mission to prepare students for future opportunities in technology fields.

the school system's overall mission of providing more exposure to real-world careers.

According to Esper, about 40% of graduates attend college, another 40% go into the trades that they focused on in high school and the rest join the job market. "Those who go into a trade may start as certified welders who earn $60,000 to $70,000 a year," he says, noting that CANOPS advocates "as much dual credit as possible" in order to give students more post-graduation choices.

CANOPS' curriculum director recommended TinkRworks after learning about the K-8 STEAM curriculum provider at an educational conference. TinkRworks balances teacher-led instruction with personalized student practice, allowing teachers to do what they do best: teach. It offers ready-to-teach project kits, high-quality instructional resources, and flexible implementation options that help schools integrate STEAM objectives, augment core instruction and meet essential standards.

"We invited TinkRworks to visit and talked to them about our unique school setup, which includes some innovator makerspaces and other cool stuff," says Esper. That was in February 2023, at which point CANOPS already had laser cutters, 3D printers and other tools used in the commercial manufacturing process.



Everyone is on Task

Ready to give its students even more advanced tools, CANOPS obtained a grant and implemented the TinkRworks curriculum, which is now being used in grades K-8. The positive impacts were almost immediate. For example, Esper says classrooms using the platform at the elementary level saw a 30% decrease in disciplinary referrals thanks to increased engagement.

"When I go into classrooms now, 80%-90% of the kids are on task," says Esper. "It's loud and active in there because students are collaborating and having productive conversations."

One teacher in particular expressed relief over no longer being "overwhelmed" by the thought of needing a tangible, systemic way to teach students STEAM subjects.

"TinkRworks doesn't require a lot of preparation, and in a very good way," says Esper, whose team did see an uptick in test scores and STEM attributes some of the lift to the STEAM platform. TinkRworks has also given the school system a new way to introduce students to potential careers in the technology sector.

Cross-Curricular Connections

The platform has also helped CANOPS strengthen its general science curriculum. Students in grades K-5 use TinkRworks for 45-60 minutes per day as part of their computer science rotation, with every grade working on a different special project. A project on how to grow plants, for instance, will include a TinkRworks lesson on how to build a hydrometer that shows when it's time to water those plants.

"The science standards for that grade are learning about living plants," says Esper. "TinkRworks provided an integration that enabled a cross-curricular

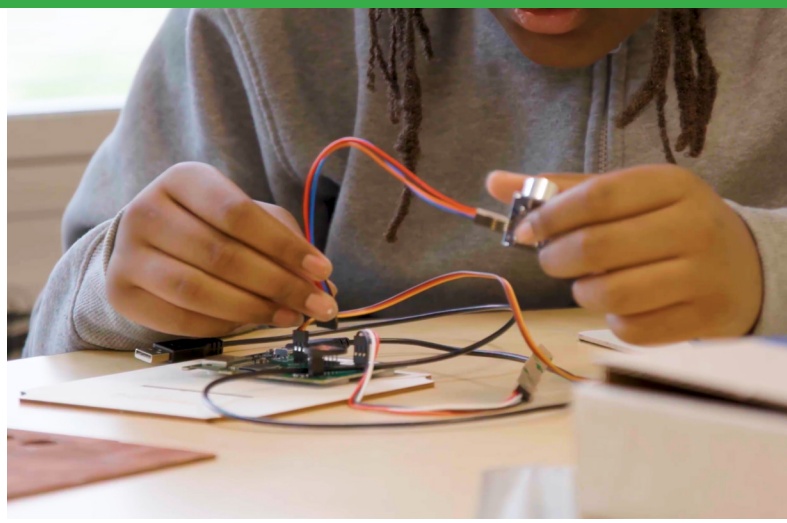
connection between science and computer science."

Teachers Love it

At the middle school level, about 30% of students have additional support plans that are implemented by teachers. For example, some students may be two to three grade levels behind in math and reading. Esper says TinkerRworks' hands-on, interactive STEAM platform has given many of those students the confidence they need to be able to overcome challenges and tackle complex topics.

Teachers really like the platform and say the vendor's training is "one of the best they've ever experienced," according to Esper. This is an important win for a school system that believes in the value of professional development. "Our teachers have been trained on a lot of different products," he says, "and they really like the pacing guide, PowerPoints and other tools that TinkRworks provides."

CANOPS also used the "train the trainer" approach with its TinkRworks implementation, knowing that once it got a couple of "coaches" trained that it would make the broader rollout even easier. "Also, if a teacher was out for a day, the coach could then step in to help out in the classroom," says Esper, who sees the platform as being appropriate for K-8 students who are at any learning level.



"The freedom of the projects lets your high achievers soar, but the platform builds in differentiation so everyone can benefit from it," says Esper, who especially likes how TinkRworks helps students envision future careers in computer science and other technology fields.

"With computer science, we often think of somebody sitting behind a computer and typing away," he says. "That's certainly a part of it, but it's also important for kids to recognize the connections between learning about computer science and the potential STEAM career paths."