

Expand student opportunity through computer science



10 reasons TEALS might be a good fit for your school—plus 3 signs it isn't.

On a recent day, high schooler Isabel Silva brought home her schoolwork. But this was not a typical project; she had coded a video game in her computer science (CS) class.

"What excites me the most about computer science is sharing the projects I've made with my family," says Isabel, who took a TEALS CS class in Brooklyn, New York. She translated the game into Spanish for her mom. "She was really impressed, and I was proud."

Technology Education and Literacy in Schools (TEALS) is a Microsoft Philanthropies program that connects classroom teachers with tech industry volunteers, through remote and in classroom learning, to create sustainable CS and technology education programs. Teachers learn to teach CS independently over time to ensure all young people—including those who are least likely to have access to CS, like Isabel—are equipped to thrive in the future.

"Bringing together someone who has a teaching credential with someone who has worked in the field, it's a great combination," says Rita Skyers, assistant principal of Oakland High School in Oakland, California. "Kids get the best of both worlds."

We know that you want the best for your students, too. TEALS might be able to help you in that goal.

Consider partnering with TEALS if:

1. You want to offer computer science at your school.

You already know about the many advantages CS offers to students: The problem-solving skills learned in CS can be applied to any career; most jobs young people will compete for involve using—and in many cases, creating—technology; and the US economy is expected to add more than 500,000 new computing jobs by 2028, according to research from Code.org.

The opportunity for all students to learn CS can provide upward mobility, interrupt intergenerational poverty, and increase equitable representation in influential jobs.

"I tell my students about all the job opportunities for people who know computer science. That need is not going anywhere. Having strong technology and computer science knowledge will help them in the long run—and the TEALS class gives them the confidence to try it out."

-Shobha Shivaiah, software engineering manager and TEALS volunteer, Atlanta

2. You do not have the resources to do it alone.

With limited resources and access to qualified instructors, many schools struggle to offer classes beyond core subjects.

If a teacher at your school is willing to learn and teach a new subject, TEALS can provide the training, support, and volunteers to make the rest happen.

"We found a teacher with interest in computer science and expertise in how to teach. TEALS brought the support to teach it. We wouldn't be able to do this without this partnership."

-Aaron Watson, Gateway High School, San Francisco

3. Your teachers are eager—and need support

New TEALS teachers do not need previous experience in CS; in fact, most don't have a technology background. What they do have: a willingness to try new things and learn as they go.

TEALS guides teachers step by step. The program begins with training in the summer before the TEALS class starts. Then a teacher is matched with between one and four professionals who use CS in their career. These volunteers can lead classes, offer real-world examples and applications of what students are learning, help with grading, answer student questions, and more.

TEALS builds teachers' capacity, so they take on more CS instruction every year.

"TEALS made me feel comfortable taking a chance on a totally new subject matter. Having a volunteer expert helped fill in the gaps, especially my first year of teaching computer science. I was learning as I was teaching."

-Lauren Wells, computer science and science teacher, Brooklyn College Academy, Brooklyn, NY



4. You're not sure which curriculum to choose

Teachers are already busy; many struggle to teach a new-to-them subject if they have to build out lesson plans and curricula from scratch. That's why TEALS works closely with schools to understand their priorities, then helps them choose the right provider to meet those needs. This vetted curriculum ensures that teachers and volunteers receive the training and resources they need to support students every step of the way.

"With TEALS, I have a road map. TEALS saves you from stressing about what to teach next."

-Lauren Wells, computer science and science teacher, Brooklyn College Academy, Brooklyn, NY

5. You want students to be exposed to diverse careers

Students don't all have equal opportunity to interact with people from a wide range of background and careers. Yet direct exposure to professions that once seemed out of reach can expand their idea of what is possible.

"If we don't show them what types of jobs they can get after high school or college, they just don't know. It's important for them to see diverse careers so hopefully they can see themselves in that job, too."

-Rita Skyers, assistant principal, Oakland High School

6. Your students thrive with hands-on, project-based learning

The TEALS program includes both instruction time to teach concepts and projects that give students an opportunity to apply what they've learned.

From coding a video game to creating a knock-knock joke program, students use their ideas and problem-solving skills to create—not just use—technology.

"Sometimes my students come in going, 'Why am I in this class?' Then something switches and they get so excited—like, 'Look what I just made!'"

-Catherine Bronikowski, math department chair and TEALS teacher, North Division High School, Milwaukee, WI

7. Your students need skills that apply to post-high school opportunities

One benefit to learning from professionals: Students see a direct example of how they could apply CS to the "real world." The concrete application of a school subject can excite students, especially because CS can be used in just about every field—from fashion design to medicine and banking to mobile app development.

"Student learning doesn't just happen in a traditional classroom. The skills students learn in a TEALS class are relevant to what they need in the real world."

-Sarah Tenorio, principal, Brio College Prep, Los Angeles

8. You want to build excitement about STEM

By now, many students have heard why they should learn STEM (science, technology, engineering, and math) subjects; providing hands-on opportunities to use what they learn gets them excited to dive in.

By word of mouth, TEALS students often act as grassroots recruiters for STEM classes and extracurriculars. Their friends hear them talk about developing an app or programming a robot and pretty soon, interest and enthusiasm spread throughout the school.

"When you build engaging programs in computer science and STEM, you see more enthusiasm from students. A program like TEALS can get students excited, and it becomes part of the school culture."

-Aaron Watson, Gateway High School



9. You want more direct instruction time

With volunteers in the classroom—whether it’s in-person or virtual—teachers have more time to work with students one-on-one and in small groups. With more adults in the classroom, students get more individualized instruction.

“Usually, teachers simply don’t have enough hands. Working with my volunteers is literally like having two extra teachers. They grade, they teach, they come up with awesome additions to the curriculum. They help make sure everyone is getting face time with a teacher.”

-Lauren Wells, Brooklyn College Academy

10. You think big—and want to develop a CS pathway

TEALS doesn’t aim to turn every student into a technologist, but the program does strive to make it possible for any student to discover a new passion. That’s one reason why TEALS is designed to grow with your school.

Teachers can start out with a lot of volunteer support, then gradually take on more of the course instruction. They, or other teachers in the school, can also begin to teach additional CS classes—with the support of TEALS.

In this way, students can take a sequence of CS classes that build on one another, which deepens their knowledge of a vitally important subject.

“Partnering with TEALS has allowed CS4All to offer schools an expanded selection of introductory courses, like TEALS Intro to CS, which is a popular course with schools preparing students for AP CSP.”

-José Olivares, CS4All’s Director of High School Academics, New York, NY

Not the right fit?

Not every school is a good match for the TEALS program. The factors that suggest TEALS isn’t for your school:

Your school serves only K-8 students. That’s great if you want to bring CS education to younger students! However, TEALS is designed for high school students and teachers.

Your school already has a built-out CS pathway. The TEALS program helps schools build a robust CS program, so it is not the right fit if you already have a pathway—including both AP courses.

You want support in a specific CS topic. TEALS helps bring introductory and advanced CS education to classrooms but does not support targeted topics such as web design or app development.

Learn more about bringing TEALS to your school by visiting Microsoft.com/TEALS.

###