ASU Prep Poly: Spark Institute School profile

December 2020

Spark Institute serves about 250 7th and 8th graders at ASU Preparatory Academy–Polytechnic. The educator team includes 10 certified teachers: three core content area teachers for 7th grade, three core content area teachers for 8th grade, and four teachers — one core content teacher and three electives teachers — who work across both grade levels. The team is also joined by two MLFTC residents, and experts from the community who support students' project-based learning experiences.

Introduction

In the fall of 2020, ASU Prep Poly launched Spark Institute, a Next Education Workforce model for grades 7 and 8. The ASU Prep network's goal is for Spark Institute to serve as the launching place for school redesign across all network schools and to inform the larger educational field.

Teams of educators with distributed expertise

The educator team consists of 10 certified teachers, joined by two MLFTC teacher candidates and experts from the community. Read on about their roles.

Certified educators: Seven core content area teachers teach math, science, STEM and interdisciplinary ELA and social studies. Three of these teachers work with the 7th graders, three work with the 8th graders, and the STEM teacher works across both grade levels. Three electives teachers work with both 7th and 8th graders, offering courses in world culture and leadership, and a class that alternates between art and health.

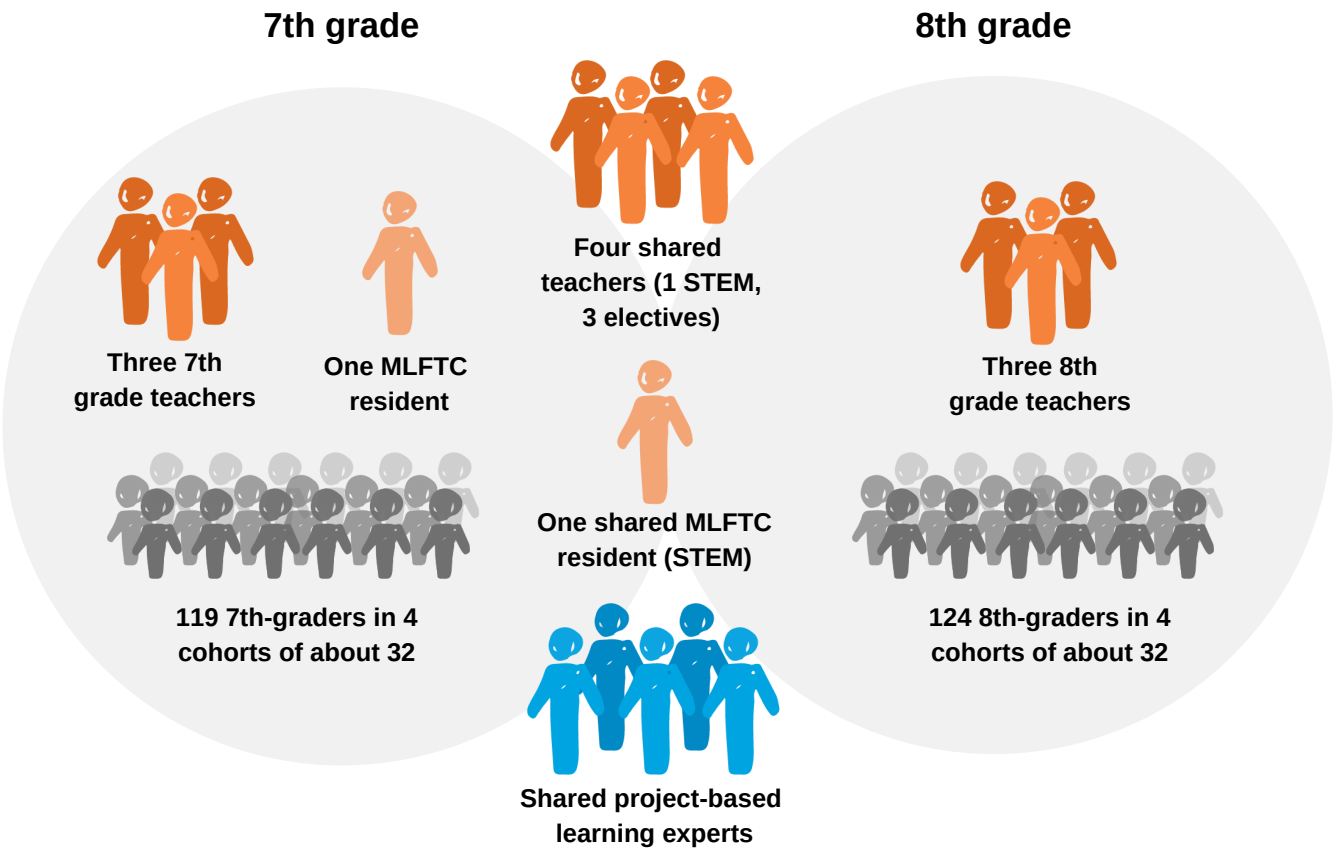
Spark Institute educators distribute expertise based not only on content knowledge (e.g., specializing in math, world culture, STEM) but also on their skills and passions. For example, one educator on the team serves as the project-based learning (PBL) coach, providing expertise and guidance in best practices for PBL and designing the rubrics the team uses for interdisciplinary PBL projects. Another team member with a background in project management serves as the PBL project manager for the team, driving PBL projects from inception through delivery, managing the varied tasks and deadlines. And a third team member with a background in space science, polar research and computer science serves as the team's technology specialist, supporting elements of instruction across all content areas when the learning experience might call for capturing drone video or working with the team's 3D printer.

All educators on the team plan lessons and learning experiences collaboratively, across content areas and grade levels. Specifically, the entire team engages in two-hour Friday planning meetings, the focus of which is two-fold: 1) planning the authentic, interdisciplinary project-based learning experiences students engage in during PBL time, and 2) collaboratively determining how to adjust the schedule for the coming week to best support students in their PBL work. Further informal collaboration tends to occur on a daily basis during educators' shared prep time.

Teacher candidates: Two MLFTC residents support the team; one whose program of study is ELA and another whose program of study is science. Both residents — seniors who spend a semester with the team — co-plan with and receive feedback from all members of the educator team, though they co-teach most frequently with the educators who match their programs of study, in this case, the 7th grade ELA teacher and the 7th and 8th grades

STEM teacher. The team understands that preservice teachers, though they are at the start of their careers in education, bring unique knowledge, skills and passions to the table, and the team is quick to use these assets to strengthen curriculum and instruction. For example, the team leveraged one resident's deep knowledge of novels in the psychological thriller genre to provide guidance in selecting young adult books with plotlines that would fit readily into an interdisciplinary unit on forensics.

Community educators: Community educators lend their expertise at strategic points during PBL time. For example, students are currently working on a PBL unit inspired by 10X ("10 Across"), "a platform for reviewing past decision-making, unstable present conditions, and the 'course corrections' required to achieve a more sustainable and inclusive society" along the Interstate-10 corridor. Specifically, students are proposing solutions (e.g., floor plans and budgets for small homes; proposals for reducing heat in the area) to problems identified through the platform and building the prototypes for those solutions. Community members affiliated with 10X — staff at University City Exchange at ASU — worked with the educator team to brainstorm possible projects, presented to students as part of the project launch, and are acting as judges for the final presentations and work products.



Deeper and personalized learning

The team at Spark Institute embraces project-based learning, cooperative learning structures and broader student outcomes in order to deepen and personalize learning for students.

Problem-based learning and cooperative learning structures

Students have two hours of project-based learning time in the afternoon every day, during which they engage in authentic, interdisciplinary learning experiences. Each quarter, the team introduces a new guiding question for PBL time, and students select project pathways related to the guiding question. Students then work in collaboration with their peers toward creation of final products aligned to their pathways. For example, students will soon begin work on an interdisciplinary unit in which they explore logic, deductive reasoning and inductive reasoning with the ultimate goal

of writing a mystery, creating a “choose your own adventure” story using hyperlinks or building an escape room. Throughout, students will leverage cooperative learning structures to test the logic of their projects and exchange peer feedback.

Project-based learning approaches aren’t confined to daily PBL time. Educators use PBL approaches and cooperative learning structures during content-specific learning blocks too — sometimes in ways that are directly connected to the project pathways students are pursuing during PBL time and sometimes in service of advancing learning goals that are separate from PBL-time projects.

Broader student outcomes

Spark Institute students have daily opportunities to engage in self-discovery and to practice developing collaborative skills with peers and adults. This occurs dependably during morning advisory, when students check in one-on-one with their advisory teachers and engage in reflection activities. During Friday advisory, students also engage in Spark Institute’s social-emotional curriculum, which includes goal-setting and activities to build a growth mindset. Additionally, Spark Institute recently adopted Mosaic by ACT, a student-centered virtual platform to engage students in five social-emotional learning strengths: grit, teamwork, resilience, curiosity and leadership.

Specializations and advancement pathways

The roles of the educators on the Spark Institute team vary. The team includes a combination of experienced educators, novice educators, preservice teachers and community educators. Educators fill the roles that match their current levels of knowledge and skill, and their responsibilities increase and differentiate as they grow and develop. For example, at present, a subset of the team engages in a leadership rotation, gathering leadership experience and building the team’s leadership bench depth. Looking ahead, the team aims to designate a lead teacher, thereby providing additional opportunities to distribute expertise and advancement pathways for team members.