Learn through experience

STEAM INTEGRATION

curiosity
Propel Schools provides a STEAM-integrated learning experience that encourages a natural curiosity, increases scientific literacy and applies the sciences to everyday life through comprehensive community partnerships and inquiry-based instruction.
What is Propel STEAM Integration?

Propel Schools integrates Science, Technology, Engineering, Art and Math (STEAM) into all of our classrooms. Educators across different core subjects work together to plan and teach projects. These projects build on students’ existing interests while encouraging them to explore new subjects. This STEAM integration is an essential part of students’ K-12 classroom experience as they apply cutting-edge technology through partnerships with over 40 local professional organizations.

Through STEAM integration, we encourage our students’ natural curiosity, increase their scientific literacy and help them understand how science applies to their everyday life.

Why STEAM Integration?

STEAM education creates a deep and meaningful learning experience as it builds confident problem solvers. Students develop critical thinking skills as they investigate different perspectives and connect ideas. Through trial and error, students learn from their mistakes and collaborate with their classmates to find solutions. They become flexible learners, comfortable with taking risks and trying new things. Students let go of the need to be in complete control as they learn how different components and perspectives fit together to solve a problem.
Inside the Classroom

Meaningful STEAM instruction is guided through student inquiry, discussion and critical thinking.

Starting in kindergarten, students are exposed to computer science concepts. They may find themselves coding to build Lego robotics, sorting paper airplanes by flying directions or leading Bee-Bots — small, programmable robots — through a maze.

In our middle and high schools, elective courses give students the opportunity to decide their own paths. Whether they choose to focus on computer science, media arts or engineering and design, our students are challenged to think critically, collaborate, communicate and creatively solve real-world problems.
Memorable Experiences

Our students take pride in their schoolwork. With a Propel-wide community focus and our extended partnerships, we are able to provide opportunities for our students to share what they have learned with their loved ones and the community. STEAM integration empowers students to solve personal and community problems. Their classroom explorations get them involved in meaningful causes, community work and volunteer roles and encourage them to take action to support change.

• GTECH Strategies helped our students design, build and plant a school rain garden with local excess rainwater.

• Pittsburgh Parks Conservancy led our students in developing a deeper understanding of healthy ecosystems through real-time data collection.

• Bechtel Marine Propulsion Corp. engineers collaborated with our students to design and build a remotely operated underwater vehicle with a marine engineering theme.

• Carnegie Science Museum’s Mobile FabLab built contraptions with our students that would allow a raw egg to be dropped from the roof of the building and land unbroken.

Studio 4C

Our Studio 4C classrooms, open at Propel Braddock Hills and Montour Middle Schools, blend creativity, collaboration, communication and critical thinking into weekly skill-based projects. From creating graphic novels to launching social awareness campaigns led by our social studies and art teachers, students work together in all core content areas while using onsite, cutting-edge technology including laser cutters, 3D printers, drawing iPads and personal computers.
Partnerships

We want our students to understand that learning extends beyond the classroom. As we prepare them to enter a 21st-century workforce, we provide opportunities to bring real-world relevance to the knowledge they learn from textbooks. We currently partner with more than 40 organizations across western Pennsylvania that integrate students’ education into community projects.


For more information on Propel Schools STEAM Integration, contact Kristen Golomb, Director of Innovation, at kgolomb@propelschools.org.