

P-5 STEAM Education as an Engine for Equity

Racial, ethnic and socioeconomic inequities and gender stereotypes have persisted in STEM education for decades. They negatively impact high school STEM Advanced Placement course access, postsecondary persistence and entrance into STEM occupations.

STEAM education and arts integration present opportunities to improve access, equity, inclusion and outcomes. They're especially useful in pre-K through fifth grade, where they provide teachers with support to leverage engaging, inclusive and developmentally appropriate strategies.

Strategies for P-5 STEAM Education

Start Early and Focus on Foundational Skills

- Integrate science education into pre-K to address opportunity gaps early.
- Focus on foundational skill development, such as cognitive and interpersonal skills.
- Leverage children's rapid brain development and their natural curiosities to explore, observe, experiment and solve problems through play.



Support Teachers, and District and School Leaders Through Professional Development and Technical Assistance

- Create the classroom learning conditions for engagement, including fostering a sense of belonging, identity and self-discovery.
- Use instructional approaches and curricula that are developmentally appropriate and play based.
- Elevate equity by focusing on culturally responsive and inclusive practices.



Innovative STEAM Education Examples

futuremakers



FutureMakers designs and supports equitable, accessible, hands-on STEAM experiences that help P-5 learners build habits of confidence, collaboration and engagement while also developing social and emotional skills. Early mastery, combined with project-based work at home, lays a strong foundation for future success. FutureMakers also works alongside educators to build their confidence in enhancing student success.

CHAOS Learning Lab (Culture, History and Art Originating in STEM) emphasizes hands-on, arts-integrated STEM, social studies and computer science learning. Staff work with teachers to bring technology into classrooms to ignite student interest in STEM subjects. Part of the program's goal is to change preconceived ideas about who engages in STEM subjects.

Dramatic Results uses art, design and culture as entryways into STEM. Dramatic Results engages historically excluded groups in K-10 to provide classroom and out-of-school programs and professional development. They build equity through access to education that uses evidence-based programming and a hands-on approach to teach social and emotional skills and integrate art into STEM programs.

Additional STEAM Resources

[Research and Policy Implications of STEAM Education for Young Learners](#)

[Preparing Students for Learning Work and Life Through STEAM Education](#)

[Who's Who in STEAM Education State Governance](#)