sparkSTEM
Building STEM Identities Early

To build a strong foundation in STEM, it is crucial to introduce STEM early. Engaging students in project based learning activities that provide room to explore, experiment and solve problems logically promotes innovative thinking.

What is sparkSTEM?

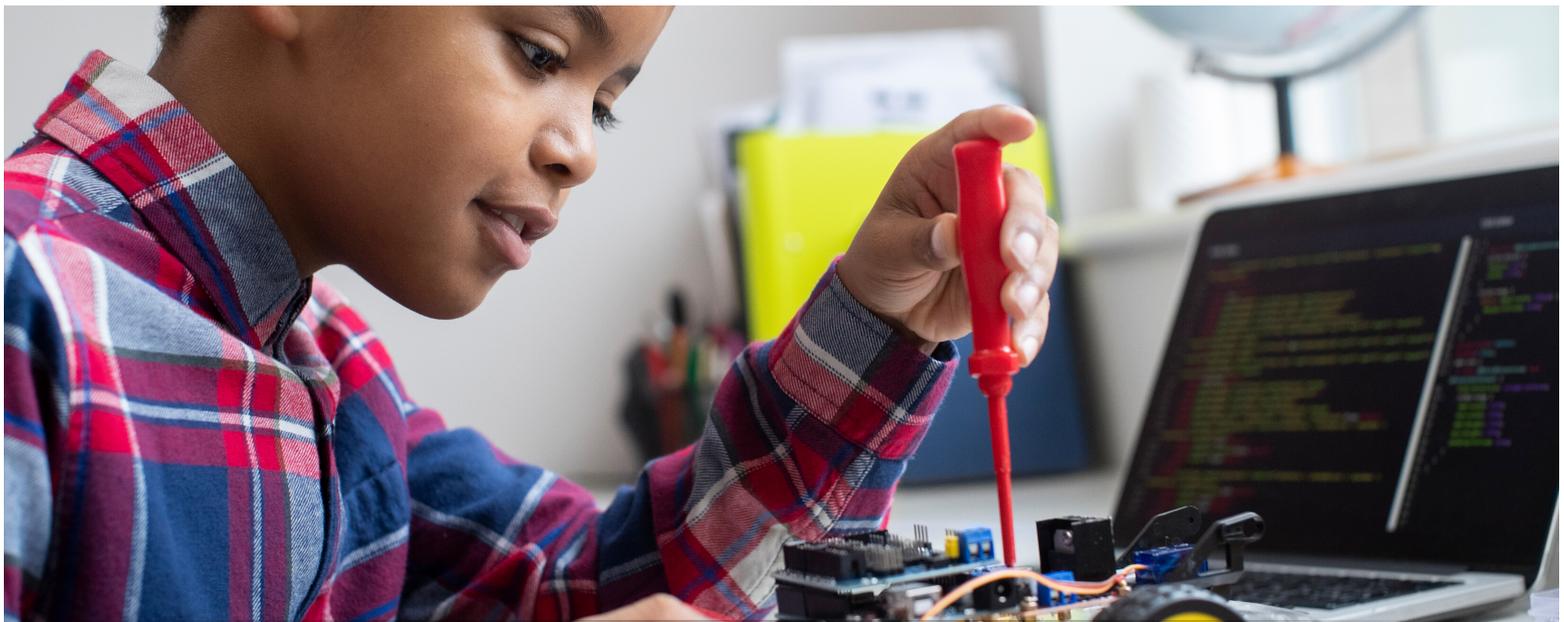sparkSTEM provides relevant and complete materials to assist educators in engaging K-5 students in STEM subjects.

Local businesses and organizations are aligned with lessons, allowing students to connect classroom learning with the real world and establish roots within their community.

Lessons and resources align with H.E.A.T. Academy programs, thus 'sparking' interest and providing a supportive, clearly defined path for exploration throughout elementary and into middle/high school.

- Teacher Professional Development
- Lesson Plans
- Resources
- Classroom Experiences
- Teacher & Student Competitions

Monthly Education Competitions

Each month, BNSTEM holds competitions to encourage students and teachers to demonstrate their excitement for STEM. Students are encouraged to show how they incorporate technology into their learning and can earn cool prizes. Educators create and share lesson plans that engage students in STEM subjects and/or share student experiences in STEM lessons in their classrooms and are rewarded with new classroom technology and supplies.

Making a difference in STEM Education   www.bnstem.org

BNSTEM
Connect • Develop • Innovate

sparkSTEM

Classroom STEM education infused with data science concepts at school or online for students PRE-K-5TH grade.

Why Classroom STEM Education?

- A classroom has 4 types of learners: visual, auditory, tactile and kinesthetic.
- Learning occurs by observing, listening, exploring, experimenting and questioning.
- A child first learns through meaningful play.
  - Meaningful Play....
    - Is a spontaneous, intrinsically motivated time where a child chooses to engage in the process of inquiry risk free.
    - Uses a child's schema and imagination to ask questions, problem-solve, collaborate, and experiment with new ideas.
    - Allows a child to develop the necessary social skills needed to thrive personally and professionally as an adult.
- STEM Education
  - Integrates science, technology, engineering, the arts and mathematics into cohesive learning based on real-world applications.
  - Is collaborative, student driven inquiry based learning which allows all types of learners the opportunity to engage.

Research Shows...

- Many U.S. students reach 4th grade with few science and technology skills.
- Girl interest and confidence in STEM declines around 4th grade.
- Middle school students, especially girls and minorities lose confidence in their ability to learn science, technology, engineering, and mathematics.
- Females are 1.5 times more likely than males to leave the STEM pipeline.

STEMpath Learning is...

- Interest based, hands-on, purposeful, play PRE-K-5th.
- Authentic, engaging, and personalized for each student.
- Connecting, implementing, and applying knowledge to impact the world.
- Preparation for college, career, and life readiness.
- A child's realization that he/she is a STEM student.
- Encouraging girls to have confidence and find passion in their STEM skills.
- Empowering students to explore their interest to pursue careers in STEM.
- Mentoring and collaborative partnerships linking industry and education.

Making a difference in STEM Education   www.bnstem.org

BN STEM
Connect • Develop • Innovate