

WHAT DO SECOND GRADERS LEARN IN STEM?

STEM FLUENCY ♦ CAREER EXPLORATION ♦ ROBOTICS, CODING, & COMPUTATIONAL THINKING

NISD's STEM Program is Unique



NISD's STEM curriculum is based on the Technology Applications TEKS, Career and Technical Education alignment, Texas Career Clusters, and Texas Education Agency's STEM Fluency Skills and Computational Thinking documents.

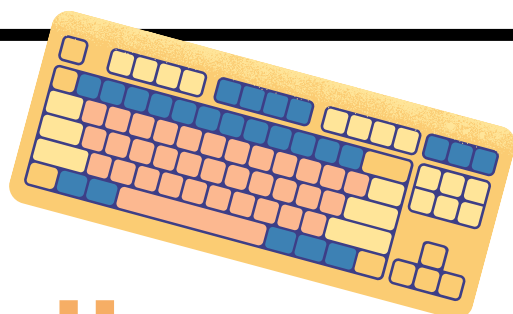
STEM Fluency Skills



You may have heard people talk about the need for employees to have “soft skills” to be successful in a job. The Texas Education Agency provides educators with descriptions of “STEM Fluency Skills” rather than soft skills. STEM Fluency Skills include: Collaboration, Communication, Critical Thinking, Creativity, and Resilience.

They say this about STEM Fluency Skills: "STEM education also includes a fluency in the skills associated with career readiness and workforce development."

Keyboarding

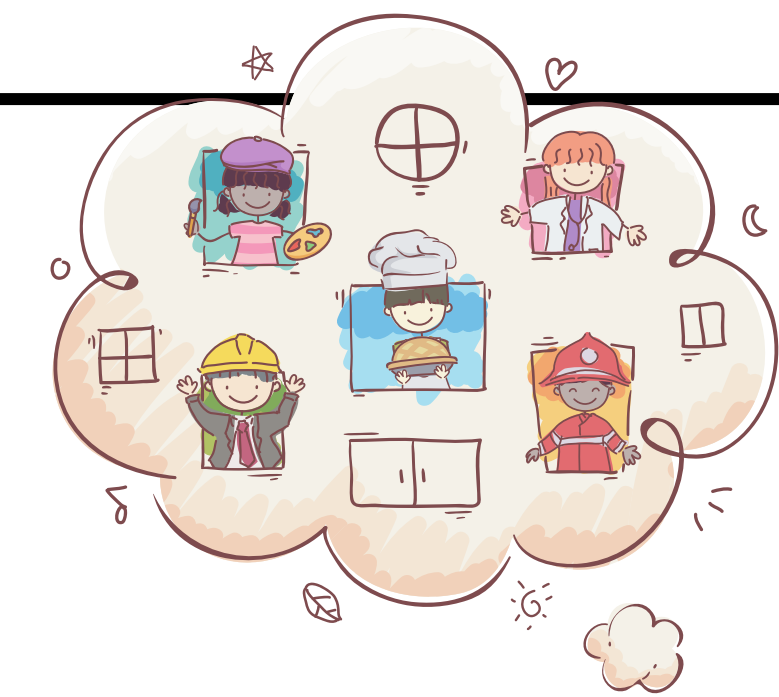


STEM Teachers introduce keyboarding to second grade students, so that they can locate keys and their secondary actions.

Robotics, Coding, and Computational Thinking

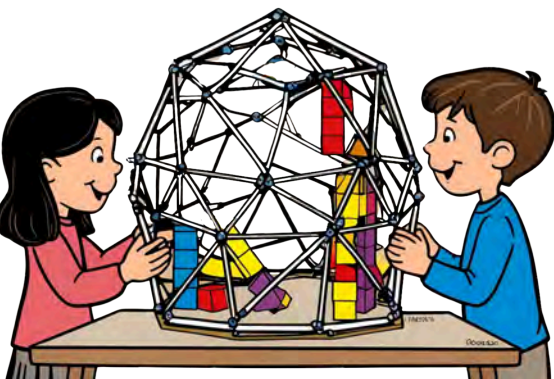


Each year during STEM class, students practice the computation thinking skills to logically solve problems when coding and programming robots. These skills get more complex each year.



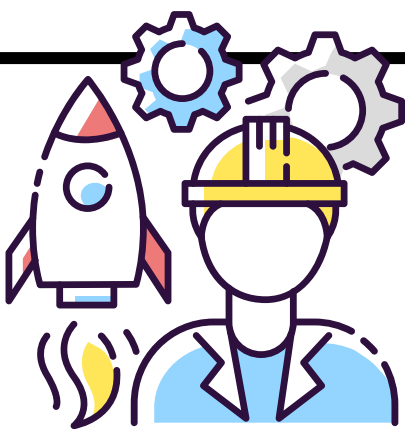
Career Explorations

During Career Explorations units each year students learn about and explore a variety of STEM careers. These careers align with CTE courses in middle and high school.



Structural Engineering

More than building with blocks, students learn about design principles to construct solid and safe structures. This unit includes experiences such as building geodesic domes and/or testing the amount of weight a student-designed cantilever can hold.



Aerospace Engineering

Aerospace Engineers impact the community through several industries including defense, transportation, communication, and space exploration. Students learn about basic flight principles and design of simple plane and rocket design challenges.