Stations of STEM®

The **Stations of STEM®** — a TechTerra trademarked concept — refers to a system for understanding and organizing learning centers for the purpose of exploring the world of STEM and STEAM. Learning centers are used to **personalize learning experiences** and provide **independent exploration** for students. The learning centers offer benefits to teachers and students.

BENEFITS OF LEARNING CENTERS

Learning centers cater to students with **different learning styles and abilities**. With **hands-on activities**, learning centers **foster curiosity**, intrinsic motivation, and allow students to **develop autonomy** as they manage their learning time. With centers, teachers can provide individual attention in small groups while the rest of the class is highly engaged in hands-on exploration.

TECHTERRA'S APPROACH

Recognizing that well-structured centers contribute to a positive and productive classroom environment, TechTerra adopted this format for **hands-on integrated STEM learning**.

Each lesson and activity features a unique Station of STEM. These serve as a bridge to connect essential understandings of STEM concepts with engaging STEM tools.

COMPONENTS OF STATIONS OF STEM®

Stations encompass **fundamental components of STEM learning while integrating core subjects**. The result is a rich and multi-dimensional learning experience where students engage diverse skills, from mathematical and literacy competencies to written expression and visual-spatial reasoning.

STEM IN A BOX®

Our theme-based STEM in a Box programs take our popular year-round Stations of STEM to the next level. Students **get moving** and learning with Skillastics at the Physical Activity station. They dive deep into science concepts using portable microscopes and databot™ for hands-on discovery. **Math and reading skills are integrated** into STEM learning with engaging tools like the Owlet Cube and leveled readers.

STEM ACTIVATE™

Our line of STEM Activate™ Activity Cards provide **standards-aligned affordable curriculum** allowing you to utilize your own STEM tools within the Stations of STEM. The activities include a hands-on approach to exploring core content areas. Students **actively engage** with challenging concepts, ask questions, and deepen their understanding through critical thinking.

FUTURE GROWTH

STEM learning stations **will continue to grow and adapt** to the constantly shifting landscape of emerging technologies. The newest stations could include Artificial Intelligence and Machine Learning, Conservation Science and Sustainability, and even Cybersecurity.

Discover more!

Our website:
www.TechTerraEducation.com

Bonus Resources!

Connected Learning

Integrates hands-on activities with digital technology for an engaging, multi-faceted learning experience. Students interact with tangible objects while exploring corresponding digital content.

Recommended Tools: Osmo, Marbotic, Makey Makey

Circuitry

Develops foundational knowledge of electronic components, circuit fundamentals, and problem-solving skills through practical experience with electricity concepts.

Recommended Tools: Snap Circuits, Paper Circuits, Circuit Maze

Digital Storytelling

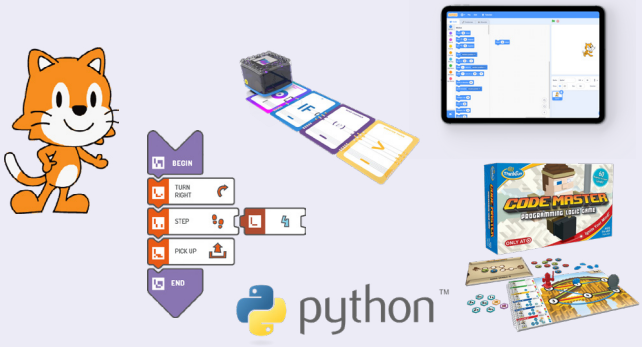
Empowers students to harness creativity and 21st-century skills to bring narratives to life through dynamic digital formats with engaging animations and storyboards.

Recommended Tools: Zu3D, Cloud Stop Motion, Sparkables Design Process Inspiration Cards, Storyboard That

Coding

Provides interactive games and challenges to build a strong foundation in programming and problem solving with screen and screen-free options catering to various learning styles.

Recommended Tools: ScratchJr, Scratch, Scottie Go!, Python, Code Master, KaiBot



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Engineering Design

Transforms complex engineering concepts into hands-on activities, allowing students to explore design principles and prototyping. Inspires creativity and guides students through problem-solving and invention.

Recommended Tools: Makey Makey, Sparkables Design Process Inspiration Cards, Flexistix

Augmented Reality

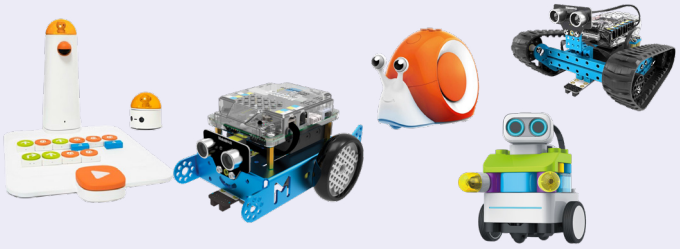
Unlocks a new dimension of learning, allowing students to directly observe scientific principles and phenomena beyond traditional methods. Utilizes student devices and immersive resources to create engaging learning experiences.

Recommended Tools: Curiscope Virtuali-Tee, Octagon Studio 4D+ Augmented Reality Flashcards, Merge Cube

Robotics

Offers versatile robotics experiences with screen-based and screen-free options for building, programming, and operating robots. Caters to both tactile learners and those interested in virtual coding challenges through a comprehensive introduction to robotics.

Recommended Tools: Cubetto, Matatalab, Makeblock mBot, Qobo, Botzees, Kai's Clan, Makeblock Ranger, Kaibot, Makeblock Ultimate 2.0



Drones & Flight

Bridges traditional and modern aviation, encouraging exploration of flight principles through hands-on experiences and cutting-edge technology. Collaborative drone and flight activities in a safe, indoor environment foster 21st-century skills and a deeper understanding of flight dynamics.

Recommended Tools: CoDrone EDU, PowerUP 2.0

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