

STEM EDUCATION AND SOCIAL & EMOTIONAL LEARNING

STEM education and SEL share many common elements. When taught in alignment, students benefit from an integrated learning experience.

The competences that characterize Social and Emotional Learning (SEL) and STEM/STEAM (science, technology, engineering, art, and math) are key ingredients of success in the 21st century. SEL and STEM overlap in meaningful ways and have a profound impact on behavior, development, academic achievement, and professional success. They provide the foundational skills students need to be future-ready professionals and community members.

THE BENEFITS OF STEM AND SEL INSTRUCTION













THE OVERLAPPING COMPETENCIES OF SEL AND STEM		
COMPETENCIES	SEL	STEM/STEAM
SELF-AWARENESS / The ability to accurately recognize one's own emotions, thoughts, and values and how they influence behavior. The ability to accurately assess one's strengths and limitations, with a well-grounded sense of confidence, optimism, and a "growth mindset."	 Asks clarifying questions Shows awareness of strengths Asks for feedback Describes own feelings 	BrainstormsCreativeEngagedGrowth Mindset
SELF-MANAGEMENT / The ability to successfully regulate one's emotions, thoughts, and behaviors in different situations — effectively managing stress, controlling impulses, and motivating oneself. The ability to set and work toward personal and academic goals.	 Attentive Focuses on task despite distraction Performs steps of a task in order Organized 	 Uses research and evidence Investigative Scientific Goal-centric
RELATIONSHIP SKILLS / The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed.	 Compromises Expresses concern for another Communicative Team player 	ResponsiveCuriousPreciseCollaborative
RESPONSIBLE DECISION-MAKING / The ability to make constructive choices about personal behavior and social interactions based on ethical standards, safety concerns, and social norms. The realistic evaluation of consequences of various actions, and a consideration of the wellbeing of oneself and others.	 Accepts responsibility Shows good judgment Learns from experience Decides between right and wrong 	 Prioritizes Problem-solving focused Thinks critically and iteratively Ethical
SOCIAL AWARENESS / The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.	 Gets along with different people Acts respectfully in competition Respects another's opinion Resolves a disagreement 	 Empathetic Understanding Tolerant Respectful

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