

E-STEAM High School of the Future: Rising from the Ashes

On January 7, 2025, a devastating fire tore through the Pacific Palisades, reducing the local high school to ashes and leaving nearly 3,000 students without a place to learn. The destruction of Pacific Palisades Charter High School not only disrupted education but also left a deep scar on the community, forcing students, teachers, and families to navigate an uncertain future. Rather than simply rebuilding, we saw an opportunity for renewal—to create a state-of-the-art educational facility that would not only restore but elevate the region. E-STEAM High School is a symbol of resilience and progress, designed to bring the community back together, stimulate economic recovery, and provide students with a transformative learning space. In the wake of this tragedy, the need for a resilient, sustainable, and innovative learning environment became more pressing than ever, inspiring a vision for a school designed to withstand future challenges while fostering creativity and excellence. This future-focused institution not only rebuilds what was lost but also reimagines education for generations to come.

Research shows that many students graduate unprepared for the workforce. Nearly 40% of college students struggle to choose a major, leading to delayed graduations and student debt, while about 53% of college grads are underemployed. Although the STEM model supports critical thinking and technical skills, the demand for STEM jobs continues to rise.

To better align with evolving student and workforce needs, we expanded the STEM model to E-STEAM—Education, Science, Technology, Engineering, Arts, and Medicine. The “E” represents a holistic approach to learning that includes all core STEM elements while emphasizing real-world applications and career connections. By integrating hands-on experiences across disciplines, E-STEAM helps students develop the knowledge, skills, and direction needed for a smooth transition into college or a meaningful career and those of the future.

Our school mascot, the Phoenix, was selected to represent the strength and perseverance of the Pacific Palisades community. Like the legendary bird that rises from the ashes, our school embodies renewal, growth, and transformation. Our motto, "From the ashes we rise. Into the future we soar," captures our commitment to resilience and progress. E-STEAM is more than a school; it is a testament to the power of rebuilding, learning, and soaring into a brighter future.

E-STEAM is designed as a hub for the entire community. Partnerships with local businesses, healthcare institutions, and technology firms will mentor students and provide internships to ensure hands-on learning experiences. These collaborations offer

students valuable exposure to various industries while strengthening and rebuilding community ties.

At E-STEAM, learning is dynamic and immersive. A typical day is filled with project-based work, interdisciplinary challenges, and hands-on applications of knowledge. Our flexible classrooms and adaptable learning spaces cater to different learning styles, from medical simulation labs to multimedia studios for artistic expression. Our smaller learning communities and mentorship-based education model ensure that students receive personalized guidance, fostering critical thinking, problem-solving, and leadership skills.

Our design process began with a deep exploration of the educational experience we envisioned. We identified essential elements for an enriched learning environment and conducted research on the skills that graduates often lack. This analysis led us to create a school model that integrates rigorous academics with immersive experiences, bridging the gap between traditional education and real-world application.

We engaged in architectural exercises, including paper doll layouts, bubble plot diagrams, and schematic designs to understand spatial organization. Using SketchUp and digital design tools allowed us to transform our ideas into interactive 3D models, helping us visualize and refine every detail of our high school of the future with creativity and precision. With guidance from the architects at Hollis + Miller, we refined our vision, ensuring that the design was functional, engaging, and aligned with 21st-century learning needs.

E-STEAM is built with sustainability and fire resilience at its core. By repurposing elements of surviving structures and integrating innovative new designs, the school both preserves the area's history and embraces a forward-thinking vision. The campus is constructed using fire-resistant materials to help prevent future fire-related damage. Firebreak landscaping, advanced sprinkler systems, and robust emergency response infrastructure further strengthen the school's defenses against wildfires. Every aspect of E-STEAM's design reflects a commitment to honoring the past while preparing for a more sustainable future. Solar panels, green roofs, and energy-efficient lighting help reduce the school's environmental impact, while eco-friendly transportation options promote sustainable mobility. The use of recycled and locally sourced materials further lowers the campus's carbon footprint. To support a healthy and inspiring learning environment, the design incorporates abundant natural light, high-performance ventilation systems, and outdoor learning spaces.

Beyond sustainability, E-STEAM prioritizes accessibility and inclusivity, ensuring that all students can thrive in a welcoming and equitable learning space. E-STEAM is more than a school; it is a movement toward a brighter, more resilient future. By

integrating education, sports, technology, engineering, arts, and medicine, we empower students to lead, innovate, and contribute meaningfully to society. Through our commitment to sustainability, fire-resistant infrastructure, community engagement, and immersive learning, E-STEAM stands as a symbol of renewal—rising from the ashes of the past and soaring into the possibilities of tomorrow and beyond.