STEAM for Creative Innovation: Integrating Wearable Technology in Fashion Design

List of Recommended Core and Alternative Activities

Category	Activity	Description	Rationale
Core Activities	Technical Skill-Building Workshops	Hands-on sessions focused on the foundational skills for integrating circuits or POF textiles (e.g., basic circuitry, soldering, sewing with conductive thread, fiber optic termination).	Essential for ensuring all students possess the minimum technical competency to successfully and safely create a functional wearable tech prototype.
	Guided Design Ideation & Prototyping	Structured studio time where students apply the design thinking process, from research and sketching to creating low-fidelity mock-ups of their wearable.	Provides a critical framework for transforming a creative idea into a feasible, well-planned design that meets the technical requirement.
	In-Progress Critique Session	A formal review where students present their unfinished work to teachers and/or peers for constructive feedback on both design and technical execution.	Fosters iterative improvement, problem-solving, and the ability to give/receive professional feedback before the final assessment.
	Final Project Exhibition & Presentation	A culminating event where students showcase their finished wearable technology and present their design process to an audience.	Serves as the summative assessment, building presentation skills and providing a tangible sense of accomplishment.
Alternative Activities	Presentation in fashion show format	Live showcase event where students model their completed wearable technology collections	Develops presentation skills and confidence while demonstrating technical and creative achievements in professional format
	Expert Masterclass	A specialized workshop led by an industry professional (e.g., a fashion technologist, materials engineer) on an advanced topic like soft robotics or interactive design.	Provides inspiration, exposes students to cutting-edge applications, and elevates the ambition of projects for more advanced learners.
	Industry/Facility Visit	An excursion to a relevant company, research lab, or museum (e.g., a textile innovation lab, a tech fashion startup, CHAT).	Connects classroom learning to real-world industries and applications, providing context and career inspiration.
	Collaborative Cross-Disciplinary Project	Partnering with students from another discipline (e.g., music, drama, computer science) to create a performance or installation using the wearable tech.	Broadens the application of the wearables, emphasizing interdisciplinary collaboration and user experience.
	Rapid Design Challenge	A time-constrained, intensive event where student teams compete to design and build a wearable tech prototype based on a specific theme or challenge.	Excellent for building teamwork, rapid prototyping skills, and creative problem-solving under pressure.