



Design Brief

Client	N. Guzman
Target Consumer	Children age 3–12, with an emphasis on girls and underrepresented groups in STEM. Parents and guardians are the primary purchasers, as well as educators seeking classroom-ready kits.
Designer(s)	M.O.J.O. Team (MLKHS EDD 2025)
Problem Statement	Commercially available “girls’ STEM toys” often provide shallow technical depth, reinforce stereotypes, and underdeliver on authentic inquiry. Many rely on consumables or themed aesthetics rather than sustainable engineering challenges, leading to uneven value and reduced long-term engagement.
Design Statement	The team will design, build, and test a reusable STEM construction kit that emphasizes NGSS-aligned practices, authentic inquiry, and modular challenges. The product will avoid gendered signaling, instead presenting neutral, mechanics-forward branding with caregiver co-play scaffolds and identity-affirming materials.
Criteria	<ol style="list-style-type: none">1. Supports authentic inquiry: prediction, testing, data collection, conclusions2. Age-appropriate challenges (progressive complexity for ages 3–12)3. Gender-neutral packaging and branding4. Durable and reusable parts (no or minimal reliance on consumables)5. Clear, concise, bilingual-friendly instructions6. Encourages caregiver/child co-play7. Affordable within market range (\$20–\$120, with strong value at purchase)
Constraints	<ol style="list-style-type: none">1. Must be manufacturable with available classroom prototyping tools2. Limited to a school-year timeline for development and testing3. Materials must be safe and non-toxic for children ages 3–124. Design must remain within a budget constraint (target \leq \$200 per prototype kit)5. Must meet safety standards for children’s products