
Build Play Learn Labs

Annual Report 2024



Our Mission

Build Play Learn Labs (BPL Labs) empowers youth through hands-on, innovative STEAM education that promotes creativity, critical thinking, and community development.

Highlights from 2024

1. Expansion of Learning Tracks

We structured BPL Labs into four dynamic educational tracks:

- **Coding Track:**
 - Scratch Junior → Scratch → Snap Coding → Python
 - Introduced Python as a capstone for advanced students
- **3D Printing Track:**
 - Tinkercad → Fusion → Onshape
 - Students designed original 3D models and printed prototypes for robotics and personal projects
- **Robotics Track:**
 - Spike Essential → Spike Prime → VEX GO → DIY Drone Engineering
 - Hosted first-ever Cadrone drone challenge; introduced robotics competitions prep for VEX AI 2026

2. Community Events & Student Showcases

- **Hosted Demo Nights** where students presented robotics builds, Scratch games, and 3D prints
- **Community Coding Days** with Hour of Code and Intro to Scratch/Tinkercad for new learners
- **Parent + Funder Open House** with student-led tours and project presentations
- **Summer and Winter Courses** with full enrollment across multiple online and in-person cohorts

3. Curriculum and Program Innovations

- Launched Saturday School teaching African history, language, and culture using makerspace tools
- Introduced textile and artifact design (without laser cutters) connected to cultural learning
- Started development of a 3D platform for learning to design in 3D (like Scratch but for 3D models)
- Created custom LEGO-compatible pieces for advanced robotics projects

4. Instructor Development

- Empowered students to co-teach and lead workshops
- Recruited volunteers to support Scratch and 3D printing labs
- Hosted staff training in new technologies including Cadrone and VEX AI platforms

5. Media & Content Creation

- Launched TikTok accounts:
 - Filmed content with Lumix S9 camera for our future YouTube show “Adventures in the Makerspace”
 - Built green screen studio for filming tutorials and STEM storytelling
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8. Fundraising and Outreach

- Pitched Build Play Learn Labs programs to schools in East Palo Alto and Menlo Park
 - Secured partnerships and sponsorship interest for youth programs and tech education
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Looking Ahead to 2025

- **Launch our television show** “Adventures in the Makerspace”
 - **Start our first maker camp in Africa**
 - **Publish first BPL Labs textbooks**
 - **Compete in the VEX AI League 2026** with our student-built robotics team
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