



27 Feb 2028 – Webmaster and Region 5 Educational Activities Coordinator (REAC) Report for PPS EXCOM Meeting

Dr John Santiago

Activities

Section Meeting Notes <https://r5.ieee.org/pikespeak/section-meeting-minutes> (see **About** dropdown menu in Main Menu Navigation)

▶ STEAM-TEAMS Monthly Meetings

- 11 Feb, 17 Mar, 21 Apr, 12 May
- 17 Mar (Flyer): [STEM Demos, Hands-on Activities, Sample of AI-assisted Image Generation, Intro to IEEE's Industry Content Platform](#)
- Schedule posted at: [Squishy-Circuits Minisite | IEEE Pikes Peak Section](#)
- STEAM-TEAMS Meeting Notes

▶ Other Mini websites within PPS websites

- [YP Professional](#) (News)
- [YP News/Calendar](#) (found in left side of home page as well)
- [LMAG Stories and Contributions](#) (Career Path bios) – serve as mentorship & examples of various career paths)
- [STEAM-TEAMS Strategic Plan](#)
 - *For each year, each of the current active and engaged members, recruit one IEEE member and mentor the recruit to be an active and engaged member of the IEEE Pikes Peak Section. By your leadership example, have your recruit who is now an active and engaged member do the same as you did by recruiting one member.*

▶ In-Person EXCOM Meetings?: STEAM/TEAMS Strategic Planning (grant for STEAM/STEM kits for active members plus 5-10 multimeters for classroom visits, storing of STEAM kits, etc), Reserve ENT Meetings at 21st Century

▶ STEAM-TEAMS Strategic Plan

- Use PPS Website as briefing tool for other sections in Region 5 (create a ripple effect)
- Aligns with Region 5 priorities and PPS Strategic Goals [2020,2022 (update)]
 - Example: Kansas City Section Education volunteer contacted me on STEAM/STEM activities
 - Example: Kansas City Section – 2025 Education Week ([6-12 April 2025](#))
 - Tools and proof-of-work to Nominate awards, scholarships, recommendations

▶ Invited Editor for the IEEE Region 5 Industry Content Platform ([Examples at PPS](#))

▶ Posted over 10 news articles at [Region 5 News Articles](#) (also at PPS website leadership, blockchain, mentorship, strategic planning etc.)

▶ Developed music videos for STEAM-TEAMS meetings and instilling patriotism for founding of US Constitution (George Washington also first agricultural engineer)

KICKOFF MEETING: STEM/STEAM WORKSTATIONS AND PREPARATION EVENTS FOR SEPTEMBER 2025 'WHAT-IF' FESTIVAL

Dr John Santiago
11 Feb 2025
21st Century Library
5:30 pm to 7:00 pm



Today's Roadmap, 11 Feb 2025

- ▶ Introductions
- ▶ IEEE Pikes Peak Section (PPS) STEAM/STEM Background & Past Activities
- ▶ Squishy Circuits Demo/Activity
- ▶ Questions
- ▶ Future Plans & Other Topics: Leadership, STEAM/STEM awards, STEAM/STEM activities
 - What-If Festival
 - Cool Science
 - Space Foundation – Summer of Discovery
 - AI-Assisted Multi-media Content Generation
 - Technical Leadership Philosophy
- ▶ Survey

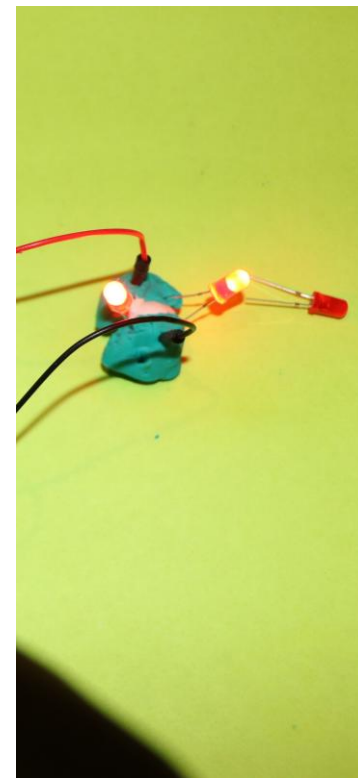
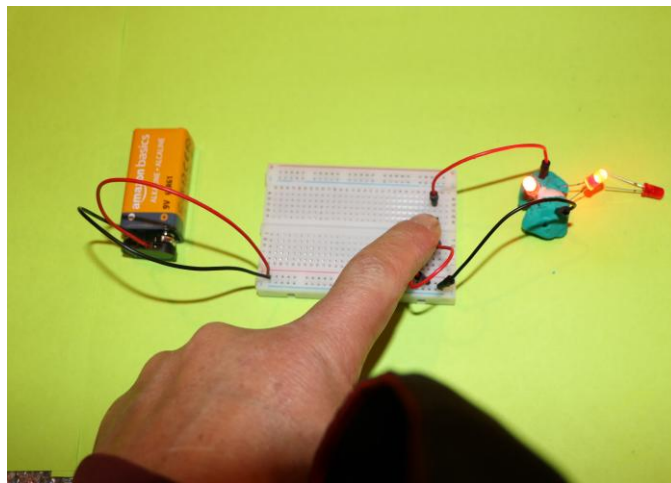
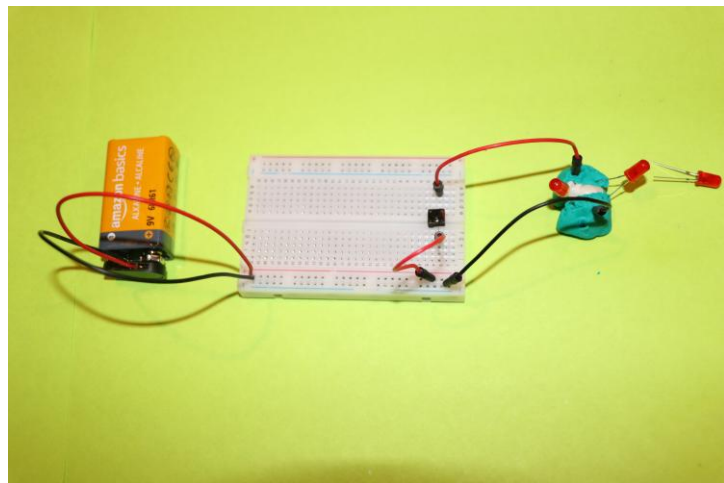


Introductions

- ▶ Name
- ▶ Work
- ▶ Your Interests in STEAM/STEM topics
- ▶ Other
- ▶ Ask near end of session (feedback/survey form)
 - If you decide to participate, what STEAM/STEM role would you like to fill in?

IEEE Pikes Peak Section (PPS) STEAM/STEM Background

- ▶ [Student Activities | IEEE Pikes Peak Section](#)
- ▶ Sample Setup Demo of Squishy Circuit



Future Plans

- ▶ Refine rotating workstation concept
- ▶ Potential Workstations that have been done in past or for future plans
 - Squishy Circuits
 - Snap Circuits: Electronic, Motion, Light Demos, Arduino (Snapino)
 - Breadboard Circuits
 - Electromagnetics: electromagnet, demo (doorbell, motors, power transmission), simple motor demo, electronic gyroscope, balancing robot, power transmission
 - Solar Demos
 - Arduino Demos and Projects: 3D-Cube LED Demo, Tracking Scarecrow
 - Raspberry-Pi Demos and Projects: Microcontroller Demos
 - Lego Projects
 - Hacking Projects: Wireless Toys, Nintendo Wii, Microsoft Kinect (Sign Language Recognition)
 - Drones/Robotics Arena
 - Vex & WowWee Robotics: Combination of Robotics and AI
- ▶ LONG TERM - STEM/STEAM Trailer: Remote locations in Pikes Peak Section



Building the Squishy Circuit and Snap Circuits





More Requested STEAM/STEM Demos Per Feedback

How to Scale to Wider Colorado Audience

Survey/Feedback, 11 Feb 2023, Ranking

Rank (will be updated with more feedback)	Proposed STEAM/STEM Topic
1	Develop more STEAM/STEM Demos
2	Multi-media Content Generation for STEAM/STEM and Improved Productivity Using AI
3	See more STEAM/STEM Demos
4	Community Outreach with Squishy Circuits and other demos: Participate in STEAM/STEM Events (What-If Festival, Cool Science, Space Foundation – Summer of Discovery, Career Day with K-12, Science Fair Judge, Future City Competition)
5	Mentorship
6 (tied)	Leadership: Self-Leadership, Team Leadership, and Organizational Leadership
6 (tied)	Entrepreneurial Mindset: To work in tandem with the technical skillset (Kern Entrepreneurial Engineering Mindset – KEEN, Framework)

Other Comments

- ▶ School District Planning and Engagement
- ▶ It was very enjoyable!
- ▶ Can help with female engagement and ideas
- ▶ Want to get more involved but with work and doctorate dissertation...time is limited.



