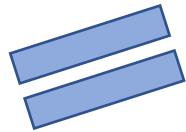




"Inspiring the Technologists of Tomorrow"

Beyond STEM - Volunteer Guide





“Inspiring the Technologists of Tomorrow”

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Introduction

Beyond STEM is a non-profit organization that is changing the landscape of tech by "Inspiring the Technologists of Tomorrow". We are working to ensure the next generation of technology creators reflects its consumers through in-school, after school and family-oriented programming that seeks to ignite curiosity and interest within students from traditionally underrepresented backgrounds.



We truly value the volunteers that enable the success of our programs in impacting students. We want to take this time to thank you for taking part in this mission - we take your time very seriously, and hope to give you as many opportunities as possible to improve yourself and your communities.

Below is a letter from the founder of Beyond STEM, Tanzania Sewell, addressed to all the new volunteers!



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Dear New Volunteer,

Welcome to the Beyond STEM volunteer community! We are both thankful and excited to have you as a new addition in our work to ensure "the next generation of technology creators matches its consumers."

I want to personally share that volunteers are at the core of our organization. Without volunteers, we would not be able to deliver the high quality, hands-on experiences of our Saturday Series and Summer Programming. Furthermore, volunteers are crucial to our ability to expose each student we serve to STEM enthusiasts and professionals (like yourself) that defy traditional stereotypes.

As a small non-profit looking to both accelerate and expand our impact, I want to encourage you to serve in the capacities that speak most to you. There are opportunities within the organization that extend from our hands-on work with students to nonprofit governance and strategic planning. If you have a skillset that you are willing to lend, but don't see a formal opportunity, please don't hesitate to connect directly.

Lastly, Beyond STEM is committed to creating volunteer community that is supportive. We commit to ensuring that you as a volunteer feel not only prepared, but also empowered to further the learning and exploration of the students we serve. Ask questions, be curious and most of all, open to engaging in STEM content in a new way.

I look forward to personally connecting.

Warm Regards.

Tanzania

Tanzania Sewell
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General Offerings

The following programs and associated volunteer opportunities are generally available around the year. For the most current list of programs and volunteer opportunities please see the [website](#).

- Fall/Spring Saturday Series
 - Description: 4-month-long series offering critical thinking exercises and activities regarding engineering and technology principles during Saturday mornings.
 - Goal: To encourage STEM learning and problem-solving in a myriad of different ways. To give underserved students more opportunities to engage with STEM content.
 - Timeline: Commitment generally lasts from 8:30-1:30, one Saturday per month, during the seasons of fall and spring.
- Afterschool Programming
 - Description: We bring hands-on, engineering focused programming to schools and organizations. Our approach is exposure to engineering through entirely hands-on sessions that are also designed to build curiosity while highlighting the impact engineering has on our daily lives.
 - Goal: To provide a needs-based curriculum to students, in order to match with their school's specific requirements and points of interest.
 - Timeline: Varies by school
- Summer STEM Camp
 - Description: Through hands-on projects, we explore the engineering marvels that make modern healthcare, infrastructure and manufacturing possible.
 - Goal: To promote understanding, and provide an accessible means to understand how STEM leads to real-world applications of the experiences learned in the camp.
 - Timeline: 8:30-4:30, one Friday per month, during the summer.
- For a more time-sensitive description of our offerings, you can sign up for the newsletter [here](#) - every month you'll receive an update as to the going-ons of our organization!



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Training and Resources

We appreciate you taking the initiative to support our programming. To ensure your volunteer experience goes smoothly, we have a FAQ (frequently asked questions) section.

- What does volunteering with Beyond STEM entail?
 - Volunteering with Beyond STEM consists of working with K-12 students excited about STEM. Specific volunteer responsibilities are dependent on the event you volunteer for.
- Am I required to volunteer for an entire series?
 - No. You are able to sign up for as many sessions as you are able to volunteer!
- How will I know what to do?
 - Before each event, every volunteer attends a meeting with coordinators!
- Do I need to have a STEM background to volunteer?
 - No. Having a STEM background is encouraged but not required.

Background Check

Volunteers can expect to receive an email request from TrueHire regarding their background check. Once the request is received, volunteers must complete the needed information within 72 hours. Background checks are typically completed within 7 days, we will follow-up via email with clearance to volunteer once that information is received from TrueHire.

Next Steps

The following steps are based on the volunteer role you will be holding.

1. Follow this link to check out our volunteer portal: <https://timecounts.org/beyond-stem>
2. Start by clicking the "Join Us" button which will lead you to an account sign up. You can choose to sign in with Facebook or with a new login.
3. Once signed up, you are able to view upcoming Programming.
4. Click the "Opportunities" Tab to see what upcoming events, shifts, and assignments are available.



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Past Volunteers

Our volunteers enable our programming to run successfully. Below are interviews conducted featuring several of our volunteers that have been involved with Beyond STEM.

Kelly Jones



What was your volunteer role with Beyond STEM and what did you do?

I had the opportunity to volunteer with Beyond STEM for their Virtual Saturday Series. I helped facilitate the Saturday session breakouts with several children as a program instructor. We worked on everything from coding to how to make data-driven decisions.

What inspired you to start volunteering with Beyond STEM?

Community and learning are very important to me and my employer, American Family Insurance. I heard about this opportunity through my employer and was excited to find out about virtual volunteer opportunities during the pandemic. With a background in education, I've missed working with children and seeing them learn and grow. Even with minimal coding experience, it took me out of my comfort zone, but Beyond STEM made volunteering very easy, rewarding, and always made me feel prepared.

What surprised you about volunteering with Beyond STEM?

Everything was extremely organized, from the prep-meeting to the agendas and lessons. This helped me focus on the children and facilitated the lesson rather than troubleshooting something in the background. I also was surprised to see how many children participated each Saturday. It was exciting to see them eager to learn and participate even during the weekend.

What was the most rewarding aspect of volunteering with Beyond STEM?

I loved seeing the children get involved, even if it was via chat or unmuting themselves. They were willing to speak up and share their thoughts and their creativity. Giving children the autonomy to collaborate, experiment, and make their own decisions is the best learning there is. It was fun to ask them the "why" behind their decision, one because I was always curious to know, but also it helped them critically think through why they made that decision. The children also felt comfortable sharing if they disagreed with a decision, which was great for seeing that diverse thought and avoiding groupthink.



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Rashaad Lay

What was your volunteer role with Beyond STEM and what did you do?

I volunteered as a program instructor to co-lead the Electrical Engineering sessions in 2018 through 2020. The activities that were completed were the following:

- Spring 2018: Building a Traffic Light
- Spring 2019: Building a Theremin Circuit
- Spring 2020: Building a 7-Segment Display Circuit and a LED Blinker Circuit

What inspired you to start volunteering with Beyond STEM?

I recall having a strong interest in STEM during my early adolescent years. There were many individuals who have helped me, throughout my time in high school and college, to pursue the career that I have as an Electrical Engineer. I knew that I wanted an opportunity to also provide that same support to other students that were interested in STEM. When I found out about Beyond STEM, it seemed as though this would be a great opportunity to "pay it forward" to the next generation of prospective students in STEM. After my first year of volunteering with Beyond STEM, I was very impressed with the curriculum and layout of the program. I knew that I wanted to be a recurring volunteer moving forward for as long as I am able to.

What surprised you about volunteering with Beyond STEM?

I would say that I was most surprised by the dedication of the students who participated in the program. This program required the students to wake up on Saturday mornings to learn more about several disciplines within Engineering. When I was a Middle School student, I was not interested in giving up my Saturday mornings for anything other than sports or playing video games. I was very



impressed to see the students arrive on Saturday mornings ready to participate in engaging and educational activities. In fact, seeing the dedication of the students was one several reasons why I became even more motivated to continue volunteering with Beyond STEM.

What was the most rewarding aspect of volunteering with Beyond STEM?

The most rewarding aspect for me as a volunteer has been seeing the students accept, complete, and excel beyond the challenges that each activity has presented. I know for a fact that several of the concepts that were taught in the Electrical Engineering sessions were challenging for me as a college student. Mostly because I was not introduced to those concepts prior to attending college. I believe that Beyond STEM is providing students with a tremendous opportunity to excel within STEM by exposing the students to concepts that they will likely encounter in future college courses and possibly throughout their professional careers.



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Amanda Breeden

What was your volunteer role with Beyond STEM and what did you do?

My colleague, Paige, and I were early curriculum coordinators and instructors. We partnered with Tanzania to help develop a session centered around Industrial Engineering and the applications in Manufacturing. During the ice breaker, we introduced the concept of design reproduction and challenged students to: design, produce, and walk in a pair of shoes made from materials such as cardboard and tape. We also introduced the concepts of customer demand, material flow, and production assembly lines. Students created and optimized assembly lines to make toiletry kits which were later donated to community organizations for distribution. I volunteered to assist other instructors and also help generate a student/parent personality test.



What inspired you to start volunteering with Beyond STEM?

I was inspired by the chance to pay it forward to the next generation. My parents were able to seek out camps, programs, and clubs for me growing up that helped shape my love for math and science. The volunteers and employees made learning engaging and also were a sounding board during transitional stages of elementary and middle school. I strive to do the same whenever possible.

What surprised you about volunteering with Beyond STEM?

Engagement of the parents during the kickoff session with the engineering-themed ice breaker activities and the continued engagement throughout the sessions was surprising. I was also continuously amazed by the level of preparation and thought-provoking activities presented each week.

What was the most rewarding aspect of volunteering with Beyond STEM?

Being afforded an opportunity to partner with colleagues and other engineers in the community to introduce many of the engineering disciplines to students and observe the interactions with the concepts was most rewarding to me.



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Anne-Marie Warren



What was your volunteer role with Beyond STEM and what did you do?

My volunteer role with Beyond STEM was a Program Mentor. I assisted students in the activities, team building, and ensuring the students were staying on track.

What inspired you to start volunteering with Beyond STEM?

Knowing that there were students who were excited about expanding their knowledge in STEM fields and knowing that I would be able to encourage students to be curious and learn more, inspired me to volunteer with Beyond STEM.

What surprised you about volunteering with Beyond STEM?

During my first volunteer session, I was surprised at how interactive volunteering with Beyond STEM is. Both in the virtual space and in-person, being a volunteer for this organization means being an active participant. Rather than the sessions taking on the feeling of a lecture, the sessions are interactive and create a space for both the students and the volunteers to explore interesting STEM topics in an engaging way!

What was the most rewarding aspect of volunteering with Beyond STEM?

The most rewarding part of volunteering with Beyond STEM is being able to help students accomplish something they did not think possible. During one session, I watched a group go from not liking STEM at all; having a lot of difficulty with the activity and genuinely not seeing themselves pursuing a career in STEM. By the end of the session, the group renamed themselves "The Future Engineers" and were so excited to come back the following week and learn more! Being able to help them realize their potential was extremely rewarding.