

Visions of Science Internship: Making Science Accessible to Toronto Racialized Youth

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Leadership in Action

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When I came to university in Canada, I was sure I wanted to find ways to keep on creating social impact. Being a Biology and Political Science student, I wanted to find ways to bridge health and society. In my second year, I was honoured to receive the Laidlaw Scholarship, and I instantly knew I wanted to use it to create an impact. For my first summer, I decided to conduct a project focused on the social aspect of Carrion's disease in Cajamarca, Peru. It was amazing going to my home country to do this type of field work and being exposed to different realities than mine. However, I realized all my life I had been giving a big focus to my original community and compared to it, I knew very little about the realities in the Greater Toronto Area (GTA). Oftentimes, Canada is depicted as a socially advanced country, but in these statements, impoverished communities are overlooked. For my Leadership in Action summer, I decided to go the independent route and work for a charity which would allow me to work with an underserved community in Canada. I saw my second summer with Laidlaw as an opportunity to learn from the communities in Toronto and work to create an impact. In a way, I saw this as giving back to the country that has given me so much.

In the search for non-profit organizations, I found Visions of Science (also Visions). They are a charity organization which provides science workshops to racialized youth in low-income communities across the GTA. They offer support to students starting at middle school, all the way even after graduating high school. I initially became familiar with the organization a couple of years ago after researching science communication opportunities, so when it came to thinking about working with a charity to create impact, I instantly thought of Visions.

Visions of Science's focus is extremely relevant today. They provide quality education to communities in the GTA, in their missions of breaking the systemic exclusion of black and racialized students in science careers. Moreover, by partnering with communities, they advocate for sustainability, by providing visibility to resources and tools. These points overlap almost seamlessly with the United Nations Sustainable Developing Group (UNSDG) goals, specifically goals 4 — quality education —, 10 —

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reduced inequalities —, and 11 — sustainable cities and communities —. Additionally, their approach and transparency to communities are crucial characteristics of the organization, which can be seen by their publicly available yearly reports found on their website.

After accepting my internship request, my supervisors and I started working on the goals that we wanted to achieve during my time at Visions, which were all based on the company's mission to provide equitable access to STEM (science, technology, engineering, and mathematics) to racialized youth in the GTA. My three main goals were to reach out to communities, lead STEM workshops to students, and conduct the Community Asset Mapping project. Over the course of the internship, I was given an additional goal, which was to visualize a future project.

In this report, I will expand on the work I performed during my stay at Visions of Science, as well as the impact this created. Furthermore, I will reflect on my experiences with working with children in low-income areas in the GTA, where access to science is one of the many challenges they face.

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The role I was assigned to during my journey at visions was Community Engagement Intern. This meant that I was responsible for creating community engagement and outreach initiatives for youth. However, I like to say I took on many other roles; I was a workshop facilitator, a working circle member, a bubble maker, a researcher, and a project manager. The roles I fulfilled and the projects I took part in had no specific order. I was a different role at different times of the week, throughout many weeks. I had to adapt to my different duties every day and I had to keep track of the work assigned to each role every week.

During the internship, I carried out a hybrid schedule. On Mondays and Wednesdays, I biked to the office at Reagent Park. This office is strategically placed in the heart of the biggest community. Here, along with the Visions' crew, I would prepare for our road shows and workshops in our core communities. From the 10 communities, I got to work at Reagent Park, Dazing, Warden Woods/Cataraqui, Lawrence Heights, Falstaff, and Driftwood. On preparation days, we would also pilot our new activities with the community. For example, when making bubble solution for our roadshows, we would try it out outside of the office, inviting children and parents to play with it and get some taste of fun science! Sometimes during the weekends, I would take part in events in collaboration with communities, namely the Reagent Park fair. The remaining days of the week, I worked from home, attending numerous meetings, working on presentations, and continuing the research on the Community Asset Mapping project.

My very first role was a bubble maker and, as silly as I thought it would be, it granted me the possibility to be one of the kids and enter their world again. One of my supervisors, Cristihan, asked me to be one of the Visions representatives at The Toronto Metropolitan University's Science Rendezvous. This, according to him, would help me dive into engaging with the community through the Super Bubbles module. At the event, I created enormous bubbles by mixing soap, powder lubricant, glycerine, and water. We became the most visited booth, having not only children, but their parents want to participate in blowing these bubbles. Our activity, although simple, brought great joy to participants, and made the content in the other booths easy to digest. We were providing a break from the theoretical part of science to

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the more hands-on, get-messy type of science. Producing these gigantic bubbles not only made me connect with my inner child, but also sensitized me to tailor the content I was going to produce in the following weeks to the wants and needs of my clients: the Toronto youth.

On Mondays, I would visit elementary schools in the core communities north and east of Toronto. Here, my coworkers and I conducted the allocated science module for the summer: slime. During our after-school workshop, we caught the attention of 15 participants from ages 6 to 8, our youngest scientists. They learned about the importance of order or reactions when performing an experiment, while diving into their creative skills. Our workshops were also a great way to promote our summer camps, which were just around the corner, starting in July and ending in August.

Every Wednesday at 2 PM, we had a core community waiting for us at a central location for our summer roadshows. For example, my first roadshow at Dazing, Scarborough, was held right outside the community centre. In preparation for these roadshows, during my first week at Visions, I took responsibility of the new activity, the Wheel of STEM. It is a trivia game, where participants spin the wheel, and are asked questions according to the level of difficulty the wheel lands on. The three levels of difficulty corresponded to the three programs the company offers: inspire, elevate, and empower. Lastly, there was a general trivia category called “visions”. I was in charge of decorating the wheel, of creating the multiple-choice questions, and of being the presenter! Because we were filming the games and the participants for our new social media content, it felt just like being on a TV show. We even had Visions’ themed prizes! I made sure to use my engaging communication skills to attract and entertain the children and their families. The game was welcomed warmly by the participants in the communities. Children would line up to put their STEM knowledge to the test. Sometimes, they would even team up, practicing their soft and team-building skills.

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On Saturdays, and sometimes Thursdays, I visited fairs hosted in elementary schools mainly in the North York area, as well as Scarborough. Here, I continued the Wheel of STEM contest or led the Circuits of Care module. Circuits of Care consists in creating a card that lights up by connecting a small LED bulb to a battery through an electric circuit made from copper tape. Here, because children of a wide age range would participate, I explained concepts in different levels of difficulty and depth, making sure they were understanding what project they were performing as well as why electricity was conducted.

Furthermore, I was part of weekly parent outreach. The Visions crew and I would go to the communities to look for new participants for the Visions' summer camp. I learned the programs and their corresponding ages, becoming ready to pitch our camps to parents and guardians. Most were very happy to learn more about a summer camp that did not involve just sports, and that provided academic knowledge through play.

On the days that I worked from home, I worked on administrative duties. It felt like being behind the scenes of the grand production known as Visions of Science. My Tuesday mornings were reserved for my weekly check-in meetings with my supervisor, Cristihan Rios. We would discuss expectations and project work. We would set goals and tasks to be completed by the end of the week, as well as just checking in with how I was feeling in the company. The company has a weekly check-in culture. Everyone has a mentor and gets to talk to them about their goals and concerns. Being in a place that fostered strong connections and prioritized individuals was crucial to me.

Later in the day, if needed, I would bike to the office and prepare the material required for our Wednesday roadshows. Otherwise, I would work on the assigned projects. I was also invited to participate in the weekly working circles on Wednesday mornings. These focused in project prospects and parent interaction. Here, I was able to share my opinions and ideas and contribute to the future of visions. A novel project was introduced in one of the meetings, and I was thrilled to be assigned to take it over. I

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made the idea come to life: I made a precursor model for the project, where I put in my creative skills of imagination and idea generation, problem-solving, and storytelling. The key to find the best way to convey this project, I find, is to become one of the kids; imagining how they would react when interacting with it and what they would like the most, all the while staying on brand with the company. I worked day and night, preparing the most efficient presentations for this project, eager to have staff across departments share their thoughts and ideas. Contributing to this initiative positioned me as a key player within the company, despite being relatively new. Unfortunately, I cannot disclose too much about this concept as it is still in the early stages, but I can say it is a great step for the company.

I worked on the Community Asset Mapping project, which involves researching the resources and facilities within our 10 core communities. The categories for the resources would include community centers, mental health facilities, Toronto libraries, and youth advocacy programs. The information retrieved serves as the main source that feeds the company's database with the information about the communities they serve. Taking charge of this project meant better understanding the needs of the communities and our participants. The data serves as the primary tool to find who Visions should partner with in the communities. For the company, forging partnerships with local resource hubs is of utmost importance to promote sustainability and empowerment. The Community Asset Mapping project was initially assigned to me as my main at-home work; however, in the second half of the internship, I shifted most of my at-home work effort into the innovative project outlined previously.

The work done at Visions of Science is rewarding not only because of the long-term impact, but also because of the immediate change they are able to create. During the first days at the office at Reagent Park, my supervisor took me on a walk to show me the area. He explained the changes gentrification has brought to this part of Toronto; many communities alike share the same story. Reagent Park has gone through a lot of modernization, which on the one hand has brought new resources to the communities living there, as well as improving the Toronto Community Housing situation. Nevertheless, in the process

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of this happening, many families were displaced to other areas, far from where they used to reside.

Visions focuses on these areas, from which most of them have an elevated crime rate. The process of displacement due to gentrification affects children, their personal lives, and their education. And this a factor we can see from research data, statistics, and personal experience.

In my experience, I have been able to see how children from these areas of Toronto put up a strong front. They had to stop being children, trying to imitate their adults or what they see is “cool” online. When we would visit the communities and play the Wheel of STEM, I could personally witness this. The younger children were excited to play from the start, but the older ones were a bit hesitant as they did not want to be labelled as childish or “uncool”. Taking part in STEM meant that. One of the many important goals of Visions of Science is to teach children that science *is* cool. One of the questions I had for the Wheel of STEM was “describe how a scientist looks”. This question had no right answer — a scientist can look many ways; they can have any skin colour, they can dress however they want, they are much more complex than just someone with a white coat.

The older children, after seeing how much fun the younger ones were having, would give up on that stance and become children again. It was amazing seeing them be true to their feelings and experience excitement so freely. Visions was not only a way for them to learn, but it was also a place of safety and play.

The work that I have done at Visions was only a piece of the puzzle. I am more than happy that my work here is something that did not end when I left. It will be carried forward and built upon after my departure. The Wheel of STEM will continue to be promoted at our events and soon on the Visions’ social media. The Community Asset Mapping project will serve as a guide for the company’s outreach team, as it will maintain the community resources’ contact information for the years to come. In terms of the innovative project I was leading, I left the project after making sure it was shared with different

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departments (mainly outreach) and a plan to execute it was made. I am aware Visions has been continuing the work. I cannot wait for them to share it with everyone!

Working with Visions of Science has been more than a rewarding experience. I truly felt like I was creating impact every day of the internship. At all times, I felt supported by the team. The people that make up Visions have the children in mind all the time. I was able to meet workers who were once students in the Visions programs and followed a career to come back to visions to give back to the communities. Here, I confirmed that being a leader is not about standing out. Rather, it is about making others stand out, helping others and letting others help you. I saw this in the staff, but most importantly in the participants. It is crucial to reflect on the work I did here. It was not only about science, but it was also about fostering a sense of community and identity.