Visions of Science Network for Learning Inc. (VoSNL) is a charitable organization that aims to advance the educational achievements and career aspirations of youth from low-income and marginalized communities through meaningful engagement in science, technology, engineering and mathematics (STEM) fields and research.
It has been another incredible year for Visions of Science. We continue to actively engage over 500 youth across several communities all year-round and learn and grow with them!

Our ability to consistently engage the youth and communities that we serve has opened the door to expand our reach with new interventions such as the STEM Community Leaders program. To see youth who were once in our Community STEM Clubs contribute to developing and participating in this program has been incredible and is a testament to our desire to make a long-lasting impact. The sky’s the limit for our youth!

This year we continued to build our organizational capacity through strengthening our fundraising and partnerships. We are so grateful to have supporters who deeply care about making an impact in communities and supporting the people behind the work! Our evaluation capacity increased as well with the submission and acceptance of our first (and not last!) publication. We cannot wait to continue to share more information about the efficacy of our program approach over the next few years.

I cannot talk about this year without mentioning our dream team of staff and volunteers. Their enthusiasm and consistent dedication to this organization and our communities is so inspiring and we would not be anywhere without them!

As I reflect on all of the impact and growth that Visions of Science has had in such a short amount of time, I cannot help but feel encouraged for the future. The best is yet to come!

I began volunteering with VoS in 2012. At the time, I was in my second year of undergraduate studies at UofT Mississauga, studying chemistry. Wanting to branch out and explore new opportunities, I had been looking for ways to get involved in my community when I stumbled across the organization’s webpage. I was immediately intrigued! What really stood out to me about the Community STEM Club program was the idea of empowering young people. Having actually grown up in one of the low-income and marginalized communities VoS serves, I could recognize first-hand the importance of the work that they do. Currently, I work as a professional in a STEM field but STEM wasn’t always a major part of my life. In fact, I didn’t have a lot of exposure to science growing up and it wasn’t until my last few years of high school that I realized my passion for it. That was all because of a teacher—seeing her be excited about science made me excited about it too! Had it not been for her dedication and commitment to exciting young people about science, I may never have realized my passion. So, when I was presented with the opportunity to potentially be that force in someone else’s life, I could not have been more excited! It has been five years now since I first began my volunteering journey. Each year brings a new group of wide-eyed youngsters full of potential and each year I am excited to share my passion with them. If there is anything I want them to walk away with, it is the belief that they can do anything they set their mind to and the courage to pursue their passions—just look at me!

EUGENIA DUODU, PH.D.
TWITTER: @EUGENIADUODU

FAWZIA YUSUF, STEM CLUB VOLUNTEER

HOOLEY MCLAUGHLIN, PH.D.
BOARD CHAIR - 2015-2017

MESSAGE FROM THE CEO

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MESSAGE FROM THE CHAIR OF THE BOARD OF DIRECTORS

It has been an honour and my great pleasure to serve as Board Chair for Visions of Science Network for Learning from 2015 to 2017. During that short period of time, we have seen the organization grow with exponential force and vitality as it defines its mission to stimulate curiosity and creativity in young people living in our diverse communities of Toronto and surrounding districts. Extraordinary dedication and leadership from Dr. Eugenia Duodu, along with unparalleled originality and involvement by focused and caring staff and volunteer, give the promise that we will prevail and grow into an increasingly vital part of the educational framework of public science awareness and practice in the Canadian society of the future. It is clear to me that we can count on the critical thinking skills, and the agency of the young people who participate in VOSNL, as we look forward to their leadership, in many fields and in many pursuits, over the years to come.

EUGENIA DUODU, PH.D.
TWITTER: @EUGENIADUODU

HOOLEY MCLAUGHLIN, PH.D.
BOARD CHAIR - 2015-2017

MESSAGE FROM THE CHAIR OF THE BOARD OF DIRECTORS

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FAWZIA YUSUF, STEM CLUB VOLUNTEER
Our mission is to intentionally support youth from low-income communities through eliminating common barriers to engagement. We do this by providing free and consistent opportunities to access fun, hands-on STEM learning directly within their communities.

The Issue

Youth require a strong foundation in Science, Technology, Engineering and Mathematics (STEM) skills and education

At least 70% of Canada’s future top jobs will require STEM-based literacy and skills

Youth from low-income communities often face multiple barriers to meaningful engagement in STEM

The Barriers

Limited financial capacity

Negative perceptions about STEM

Limited access to meaningful STEM opportunities

As a result, there has been persistent underachievement and underrepresentation of youth from low-income communities in STEM fields and research.
Since incorporation (2004), Visions of Science has demonstrated a strong commitment to supporting economically disadvantaged youth across the Greater Toronto Hamilton Area (GTHA). We have engaged over 10,500 youth in STEM activities and our impact is growing across communities and age groups. We are still one of the only STEM-based organizations in Southern Ontario that delivers consistent programming directly within low-income communities in collaboration with social housing partners such as Toronto Community Housing and Peel Housing Corporation.
The Community STEM Clubs are designed to “sustain the spark” of STEM learning by providing youth with on-going opportunities for exploration, directly within their community. The weekly program brings hands-on STEM learning in the form of experiments, workshops and trips to youth from grades 3 to 8.

**Consistent and caring staff and volunteer facilitators**

**Visions of Science curriculum experiments and workshops**

**Network of partners**

**Increased interest and engagement in STEM learning, and improved positive youth development**
Bringing STEM to the Community

This year youth had the opportunity to explore a wide range of experiment workshops from DNA extractions and building hydraulic mazes to making ice cream. Along with this, the clubs also had amazing visits from guest speakers such as TREC Education who taught our youth about renewable energy through building wind turbines. The year was full of engaging trips for many sites as participants visited Evergreen Brickworks, the Royal Ontario Museum and of course, The Ontario Science Centre! With over 300 participants across 19 communities, this was our largest year yet. A huge thank you to the staff, volunteers, partners, and the participants for making it possible!

STEM Day

In collaboration with University of Toronto Mississauga (UTM) we held our first annual “STEM Day” bringing together Peel and West Toronto community STEM clubs. Over 100 youth from 9 of our Community STEM Clubs visited UTM to gain a first hand look at what science looks like at a university and its application to the real world. Participants travelled across the campus and engaged in hands-on workshops held by UTM faculty and students, including working with fossils and insects. The day’s keynote, Dr. Ulrich Krull, Vice-President and Principal of UTM, encouraged participants to always ask “Why? because if you can understand it you can make use of it.”

Visionary Expo

Our annual Visionary Expo end of year celebration brings together Community STEM clubs from across the GTHA to showcase their learning to parents, community supporters and partners. Our 5th annual celebration was held at the Ontario Science Centre with the keynote speaker, retired CSA astronaut, Dr. Dave Williams. The main event showcased various presentations on STEM-based modules that clubs prepared and delivered to their peers, guests, and community members. Their presentations reflected their hard work and dedication and five clubs took home top category prizes. A special thank you to our amazing judges who had the tough task of narrowing down the final winners. In the end, all participants walked away with the success of completing another great year of STEM clubs!
Program Overview

With the success and high retention rate of the Community STEM Clubs program, there arose a need to extend and expand STEM engagement opportunities for youth in grades 8 to 12. In response to this need, we—along with our youth community ambassadors, developed and implemented the STEM Community Leaders (SCL) program.

From STEM Club to STEM Community Leaders

This program provides youth with advanced and immersive STEM-based experiential learning opportunities directed towards the pursuit of postsecondary education and enhanced career aspirations. The program also provides a forum for community-based leadership and skill development by giving youth an opportunity to engage as leaders and facilitators within their own community.

“Visions of Science empowers me by pushing me out of my comfort zone and encouraging me to take risks.”

MARQUES, STEM COMMUNITY LEADERS

Marques is a STEM Community Leader who started off as a STEM club participant. He has been exploring STEM learning and leadership with us for over 5 years.
The launch of STEM Community Leaders program was kicked off with a 7-week summer term with 19 youth from 9 of our target communities—many of whom were past Community STEM club participants! Youth participated in engaging workshops and experiences including:

- Hands-on experiences at Ripley’s Aquarium of Canada, Apple Canada, and the Inventorium at the Ontario Science Centre
- A two-day immersion camp at The University of Toronto Mississauga
- A two-week internship (The Harriet Brooks Internship) at Ryerson University
- The Da Vinci Engineering Enrichment Program at UofT Engineering
- Workshops at The Dunlap Institute of Astronomy & Astrophysics as well as the Institute of Biomaterials & Biomedical Engineering (IBBME) at The University of Toronto

Throughout the whole experience, the participants grew as leaders, developed long-lasting relationships, learned about STEM fields and careers, and had an incredible time doing it.

The fall term of the STEM Community Leaders engages youth as youth facilitators in the Community STEM Clubs program. This provides youth from our communities with meaningful opportunities to contribute to community development and build leadership skills through targeted training, consistent coaching and modelling as well as mentorship. The youth facilitators also lead several community based activities and initiatives and are involved in outreach for the CSC program. They are the future of this organization and we are already excited about what lies ahead for them!
As part of our commitment to sparking STEM interest in communities, we engage youth that normally would not attend our community STEM clubs program through outreach initiatives and summer learning camps. This year we returned to partner with the Lay-Up Youth Basketball program which provides free, high-quality basketball programs to youth throughout Toronto.

“Empowerment is providing someone with the tools to succeed. Visions of Science empowers me to be a leader.”

— JOHN, STEM COMMUNITY LEADERS

Throughout the year, we also host various outreach events in different communities. These events are in the form of pop-up booths with interactive STEM experiments. Our outreach enables us to connect with communities that we haven’t yet reached and also deepen our connections in existing communities!

“With Visions of Science I learned stuff that I didn’t learn from school.”

John is a leader who started off in our STEM Clubs program—he has been exploring STEM learning with us for over 4 years.
**Impact & Metrics**

**PROGRAM RESULTS**

**Community STEM Club Program**
As a result of the program...

- **82%** of participants cited an increased interest in STEM
- **79%** of participants cited an increased understanding in STEM
- **70%** of participants experienced an increase in confidence in their ability to learn
- **66%** of participants experienced an increase in leadership skills

**PARTICIPANT QUOTE:**
“It’s helped me. My science grades have gone up too and then also helped me to see science like not even in school but in a lot more places now. Before I came to Visions of Science, when I saw science I just thought that’s so cool and when I came to Visions of Science I started understanding what’s happening behind the scenes and why something is happening.”

**VOLUNTEER FACILITATOR QUOTE:**
“Students who were hesitant to participate become increasingly comfortable with guessing answers to questions and asking questions about concepts that were unclear. One specific student went from not participating very often to answering questions about DNA extraction for a parent at the end of year event, which was awesome to see.”

*Based on post-survey feedback from 116 participants, Likert-type scale

**STEM Community Leaders Program**
As a result of the program...

- **94%** of participants cited an increase in knowledge of STEM careers
- **53%** of participants cited an increased interest in pursuing a STEM career
- **76%** of participants experienced an increase in confidence in their leadership skills
- **94%** of participants experienced an increase in willingness/confidence to pursue post-secondary education

**PARTICIPANT QUOTES:**
“[The STEM Community Leaders Program] has made me more interested in science, specifically how the brain works and neurology, I think I’m more interested in that because of this program.”

“I got to meet a lot of people doing fantastic jobs and they taught us how they got to that step in their life and why they chose that field.”

*Based on post-survey and focus group feedback from 17 of participants, Likert-type scale
Last year we launched a partnership with the Youth Research and Evaluation Exchange (YouthRex) through the Customized Evaluation Support program. This partnership enabled us to improve our evaluation methods in order to measure whether program outcomes amongst youth were being met as intended. Through this, we developed a deeper understanding of the efficacy of our community-based approach and the youth’s experiences with the program. With their support we published our very first publication, “Understanding the delivery of a Canadian-based after-school STEM program: a case study” in the International Journal of STEM Education. A huge thank you for YouthRex for their support in building our capacity!

Our volunteers are the backbone of our organization. Without their passion and commitment to empowering youth, our programs would not be possible. They serve as facilitators, mentors, and leaders in communities. Through their consistent involvement, volunteers become integral parts of the communities we serve. They are responsible for bringing our vision to life each week! In 2016-2017 program year, we had over 95 volunteers. On average, volunteers commit three hours per week, adding up to over 7000 hours annually!

Staff
Eugenia Duodu, Ph.D.
Chief Executive Officer
Trisha Hosein, Programs Manager
Camilo Garay, Program Coordinator
Hamna Awan, Program Coordinator
Turfah Tabish, Program Coordinator
Jeff Ng, Program Coordinator
Chivaun Payne, Volunteer Coordinator
Yusuf Yusuf, Outreach Coordinator
Yi Lu, Admin Coordinator (Programs)
Destiny Shaw, Co-op Student

Board of Directors
Hooley Mc Laughlin, Ph.D.
Winston Klass, Ph.D.
Adnan Syed
Keddone Dias
Annelies Groen
Financial Summary

Revenue

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<td>Government of Canada</td>
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<td>Toronto Arts Council</td>
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<td>Foundations &amp; Partnerships</td>
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Revenue Growth

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Net Assets, Beginning of Year

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<td>2015</td>
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Net Assets, End of Year

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For a full copy of 2015 our audited financial statements with notes please contact: eugenia.duodu@vosnl.org.

Funding Partners

Visionaries

- NSERC CHNG
- The Counselling Foundation of Canada

Innovators

- AMGEN
- University of Toronto

Ambassadors

- Service Canada
- The E.W. Bickie Foundation

Builders

- Toronto Arts Council
- TD Bank

Catalysts

- Rotary International
- The McLean Foundation

Key Program Partners

- Meridian
- Raymond James

Visions of Science gratefully acknowledges the support of our funders and program partners.

Charitable BN# 861044470 RR0001

Thank you to our individual donors and in-kind sponsors who supported anonymously throughout the year. For more information about contributing to Visions of Science, please visit www.vosnl.org/donate or contact us at info@vosnl.org, 416-266-6464.
The future looks bright for Visions of Science! We plan to expand the reach of our programs, continue to build our capacity, and further develop our evaluation methods. We will continue to support youth through STEM learning and leadership and look forward to the future!