kidscode jeunesse

July 2017 - July 2018
Annual Report

A letter from Kate

Kids Code Jeunesse turned 5 this year - and what a year it's been!

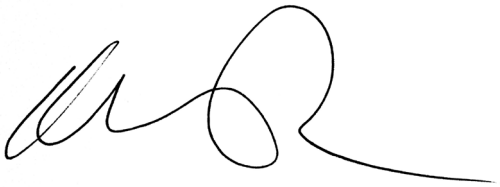
Thanks to amazing volunteers, educators, parents, sponsors, partners, and our hard-working team, we've introduced computational thinking, coding, and physical computing to over 150,000 youth and 6,000 educators across Canada.

With our 4 pillars - Code Create Educate, Code Create Celebrate, Code Create Play, and Code Club - we are building sustainable digital skills communities in schools, libraries, community centres, and festivals. These communities are engaging youth to innovate, create, and explore with technology.

This year, we received $6 million in funding from the federal Ministry of Innovation's CanCode program. This financial injection has enabled us to expand our services and reach every province and territory. In a 4 month span, our team grew from 10 employees and lots of very part-time instructors to a team of 60+ strong! And a big thanks to our long-time sponsors, Vigilant Global, Ubisoft, Microsoft, SAP, and Google who have funded KCJ every year so we can continue to reach more kids and teachers.

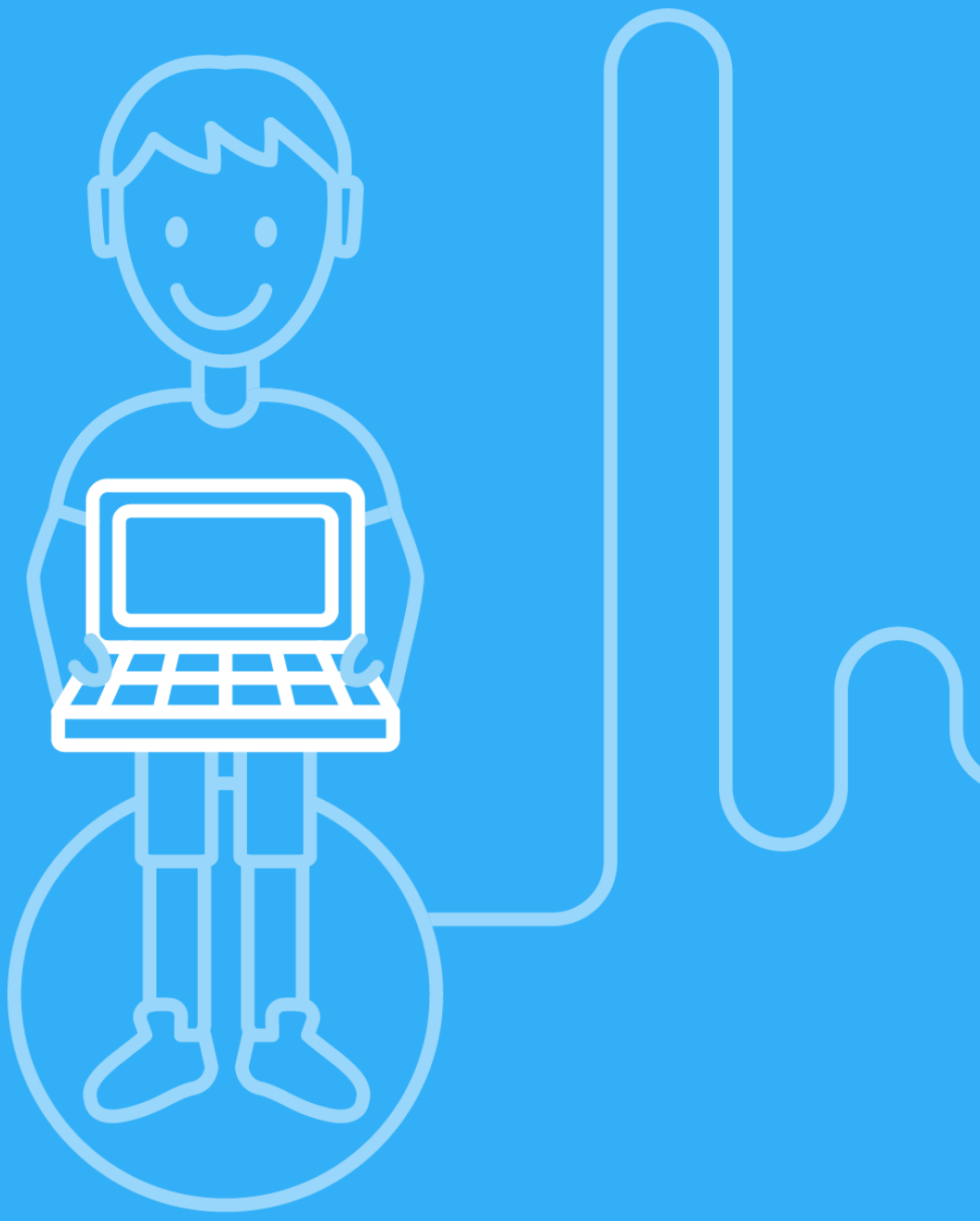
We now have a Community Developer in every province. These developers are helping communities start Code Clubs, train educators, and bring coding into the classroom. They also run physical computing workshops that celebrate space, arts, sports, and games. We're teaching homeless youth and youth with mental illnesses to communicate and create with code. Throughout 2017 and 2018, many of our instructors spent hundreds of hours in classrooms, working with teachers and students to integrate coding. And when summer approached, they headed outside to help community leaders integrate code into sports camps, outdoors camps, and arts festivals.

We have big plans in store for 2018-2019 - plans that will empower youth to use technology to tackle challenges within their own communities. As an organization, it's so important to us to strive towards making a long-term impact sustained by and for the community. Thank you to all of you who have helped us get this far. We can't wait to see what the next 5 years will bring! Stay tuned!



Kate Arthur
Founder & CEO

Code
Create
Educate



Our team works with all levels of education, including Ministries of Education and school boards. We train teachers, school directors and help them integrate computational thinking, coding, and physical computing into the curriculum.

code
create
educate

On any Saturday morning at Ottawa's recently reopened Canadian Science and Technology Museum, kids and parents can happily explore Bombardier aircrafts, a driverless rail car, an Iron Lung once used at the Ottawa Civic Hospital, and other historic Canadian innovations. But on Saturday, April 14th, some kids might have been surprised to spot their teachers dispersed throughout the museum, blindfolded and pretending to be robots.

There were 80 Ontario educators in attendance for the official launch of Code Create Teach. This hands-on learning experience allowed them to improve their teaching of computational thinking and code concepts - and to empower their students to change the future with their own innovations!

This workshop, which happened thanks to 6 million dollars received in 2018 through the federal government's Can Code program, was the first of 26 Code Create Teach workshops delivered across the country. The workshops were offered in both official languages, and took place in urban and rural areas.

Educators experiment with computational thinking and unplugged activities

At the Wendake First Nations Museum, just outside of Quebec City, teachers from as far as Port Cartier on Quebec's North Coast completed the same challenges. Benjamin Lille, one of KCJ's lead Code Create Teach instructors, explains how the workshop aims to go beyond teaching teachers to code - how, ultimately, the goal is to help educators understand how coding incorporates so many of the skills they already teach.

"Instead of seeing programming as another tool in their toolbox that's already full," Benjamin explains, "they start to see it as a different way of doing things."

Our Chief Knowledge Officer Juliet Waters designed educational materials drawn from her own experience creating and delivering similar workshops, including those developed for the B.C. Ministry of Education (2016-2018) and CodeMTL, a 2017-18 project based in Montreal, Quebec.

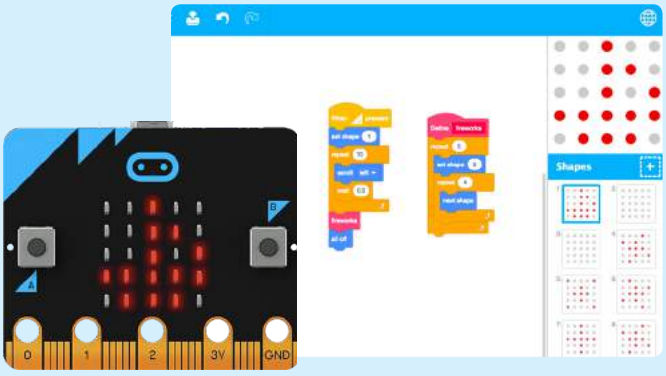
LIGHTING UP THE WORLD

art:bit

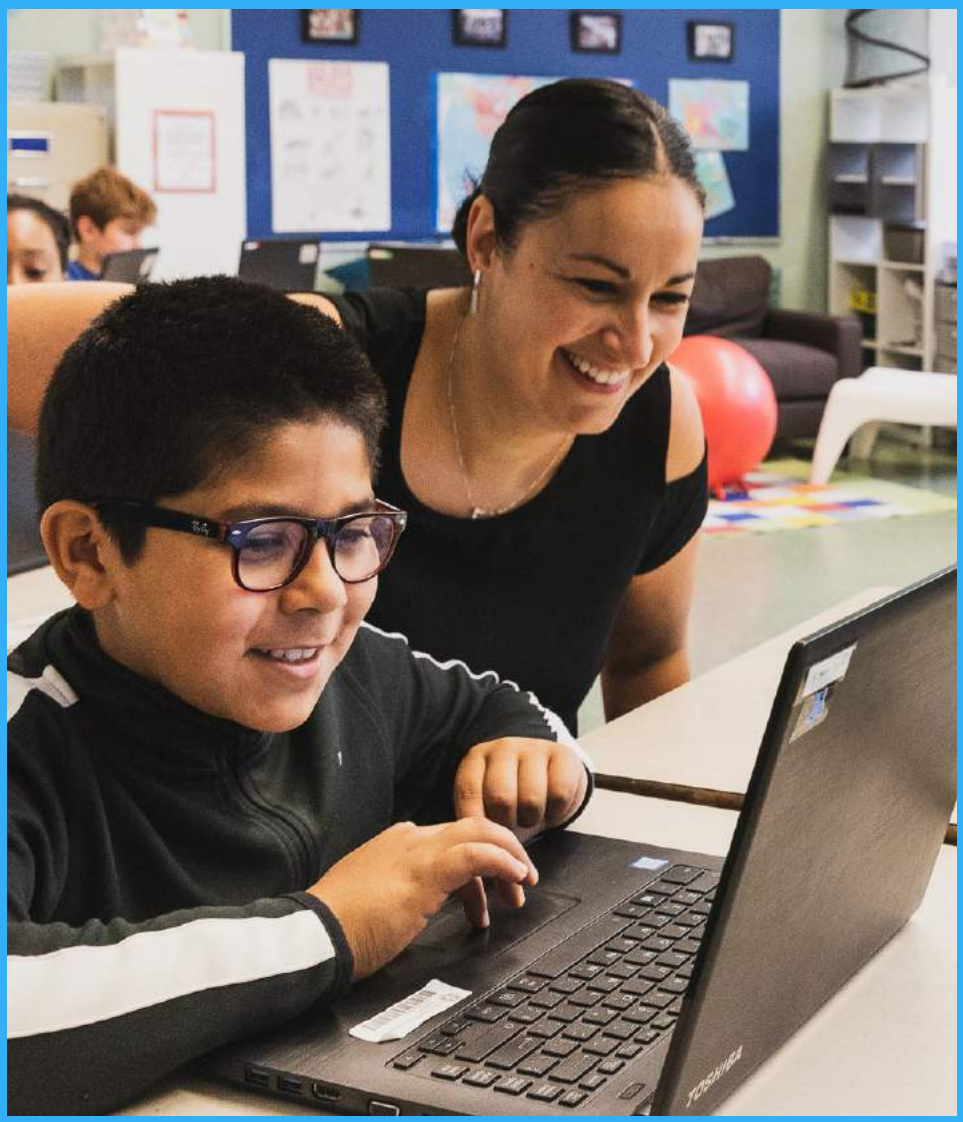
According to surveys and social media feeds across the country, the most popular resource in our Code Create Teach workshops has been the hands-on micro:bit workshop (physical computing).

With CanCode funding, Kids Code Jeunesse purchased 90,000 micro:bits, which are tiny, programmable microcontrollers that have a distinctive 5 x 5 grid of LED lights and allow kids to explore everything from animation and music to robotics and electronics. KCJ foresaw the micro:bit's popularity when we made the initial investment, but Code Create Teach further emphasized the need for an easy-to-use coding platform for younger kids, and a tool for teachers who are still a little intimidated by technology.

We realized soon after getting our hands on the micro:bits that we needed to build a coding platform that worked well in the classroom and worked with all their constraints. We partnered with two international leaders in education technology, Paula Bontá and Brian Silverman of Playful Invention Company to develop art:bit, an editor that makes animating with the micro:bit as easy as a child's flipbook. The art:bit had its global debut in June at the micro:bit booth at Chicago's prestigious ISTE edtech conference. In July, we were invited to present it as part of an "ignite" talk series at MIT Media Lab's international Scratch conference. And it's now a prominently featured app on the microbit.org site. Thanks to this amazing collaboration of home grown talent, international partnerships, and a significant federal investment, Canada is innovating and impacting coding education for all.



"Computational thinking helps students build and strengthen their natural intelligence so they can better understand and work with the innovations of the future."



A teacher reacts to a student's project during a CodeMTL workshop

CodeMTL, a project with La Fondation CSDM, was funded by Google, Desjardins, Ubisoft, EA Games, Warner Brothers, and le Ministère de l'Économie, de la Science et de l'Innovation (MESI) in Quebec. It was a massive (successful!) challenge where our trained instructors delivered 1500 workshops to 3200 students in their classrooms, with each class receiving 8 weeks of workshops to help teachers build confidence to continue throughout the years to come.

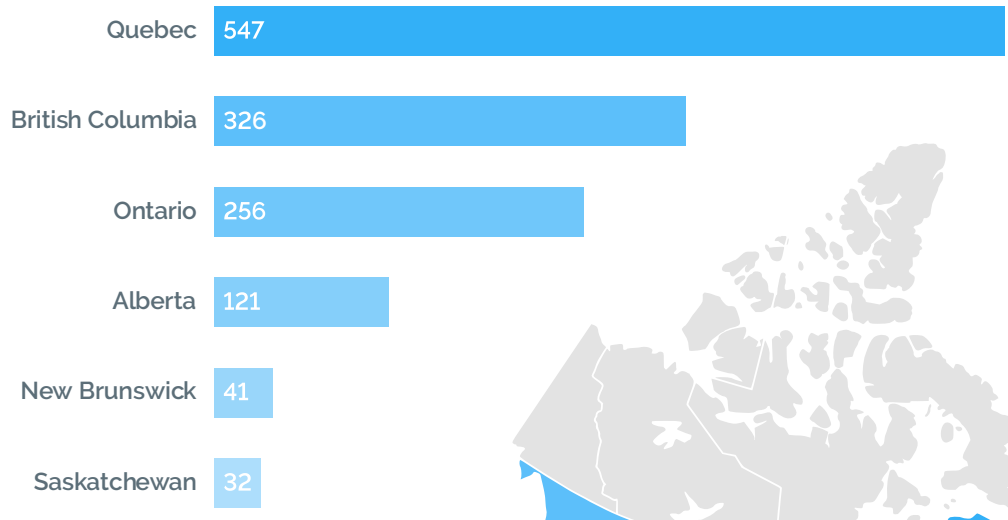
"Computational thinking helps students build and strengthen their natural intelligence so they can better understand and work with the innovations of the future," says Juliet. "This will become more important as the complex data systems involved in machine learning and artificial intelligence become a bigger part of all of our lives."

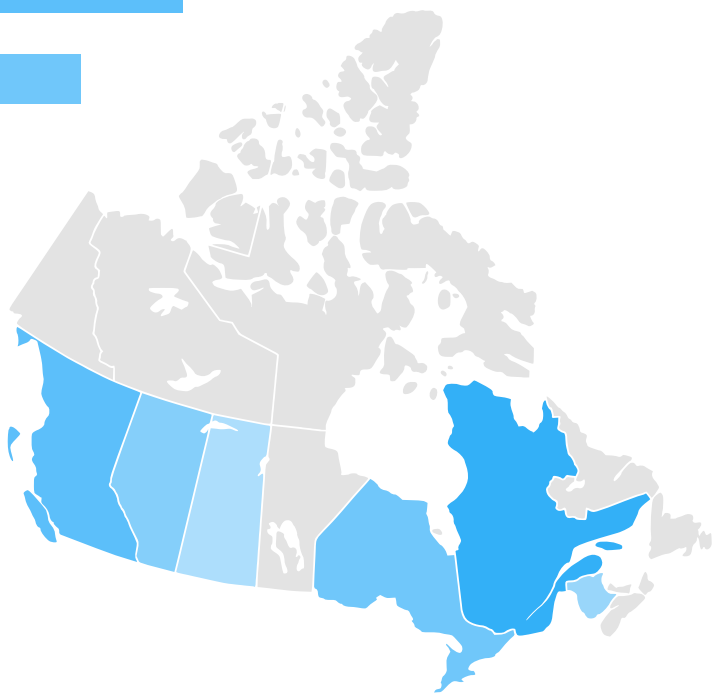
With the support of coding bootcamp Lighthouse Labs, who are our partners in both delivery and creation of educational materials for our Code Create Teach workshops, we have delivered workshops across the country and in both English and in French.

Our CCT workshops are full-day workshops that introduce unplugged activities, computational thinking, coding and physical computing to teachers in cities big and small, including Montreal, Vancouver, Prince Rupert, Calgary, Saskatoon, Toronto, St. John's, and Gander.

By spring 2019, we will have delivered over 28 CCT workshops to reach each province and territory, and 1800 educators.

Teachers Reached by Province





AT A GLANCE

Subjects Taught

Unplugged activities
Computational thinking
Scratch
Micro:bit
Javascript

Kids

6232

kids reached directly

44,836

hours kids spent coding

HERE'S WHAT PEOPLE HAVE TO SAY:

Aggregate of teacher survey comments

Code
Create
Celebrate

Our introductory coding sessions, which we offer in communities across Canada, are all free and open to the public. These sessions allow us to introduce code to children, parents, teachers, and community leaders alike.

code
create
celebrate

Space: the final frontier... and also the theme of our greatly expanded Code Create Celebrate program. Thanks to our sponsors and partners who made it possible for us to lead free workshops and events in every province. And this year, we took Canadian kids to some surprising places!

September 2017 welcomed the Natural Science and Engineering Research Council (NSERC)'s Science Literacy week. As part of this week, KCJ offered materials for workshops based on astronaut Chris Hadfield's book, The Darkest Dark, to libraries across the country. In November 2017, for the first time ever, the European Space Agency (ESA) invited Canadian kids to launch their code into space with Astro Pi's Mission Zero! Working with our U.K. partners, the Raspberry Pi Foundation, KCJ hosted free workshops in Montreal, Ottawa, Toronto, Waterloo, Edmonton, Vancouver, and Sudbury. Participants learned enough Python (a language popular in education and robotics) to write code that ran on the International Space Station (ISS) for 30 seconds. Now that's what you call far out!

National Initiatives We Participate In

Two learners help each other with Scratch in Montreal

By May 2018, as part of NSERC's Science Odyssey week and to celebrate David St. Jacques' mission, KCJ offered workshops in 20 locations across Canada.

These workshops were funded by the federal government's CanCode program, Microsoft, and NSERC. In these workshops, learners warmed up with an unplugged activity where they were blindfolded and searched for space junk with their "Canadarms." They then chose from a variety of space-themed Code Club projects, all of which worked with a custom KCJ "Canadarm" sprite. KCJ will be ready to fuel a second round of Astro Pi projects in the fall. Thanks to our growing network of volunteers and supporters, 2018 is seeing Canadian learners get the blastoff they need to be innovators here and beyond!

AT A GLANCE

Different Initiatives

Science Literacy Week
Astro Pi
Hour of Code
Science Odyssey

180

total workshops given

Kids

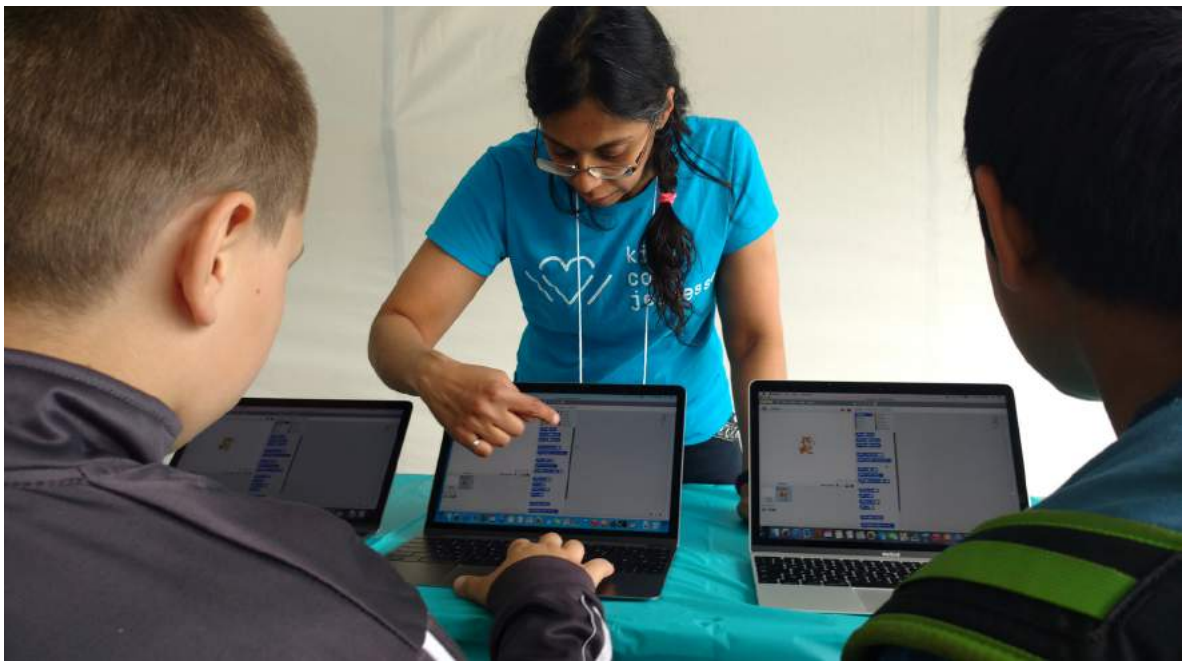
1870

kids reached

3740

hours kids spent coding

A volunteer offers advice to an Astro Pi 2017 participant



Kids try out Scratch outside the Montreal Science Centre during the Eureka Festival 2017.

Coding for Astro Pi 2017 at TheMuseum in Kitchener, Ontario.

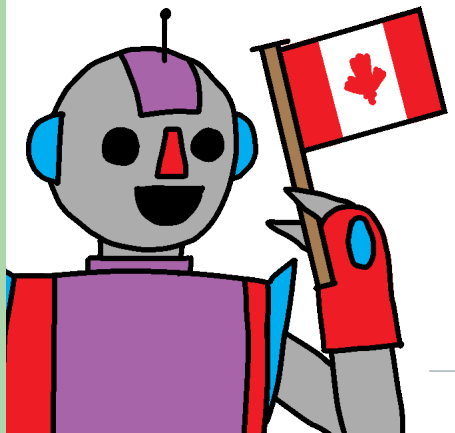
Code Club Canada

Code Club, powered by Kids Code Jeunesse, is a national network of free, volunteer-led coding clubs for children. We're on a mission to have a Code Club in every community across the country.

CANADA

In the fall of 2017, with support from Microsoft, SAP, Rogers, and NSERC, we launched **www.codeclub.ca**. Containing a bank of projects that have been translated into over 20 languages, this website was an immediate hit with librarians and educators across the country. We had 70 clubs when we launched, and by mid-summer 2018 had hit nearly 350, representing every province and becoming an integral part of Nunavut, Canada's newest and largest territory.

Albertan Code Club members and their micro:bits



INDRA'S STORY

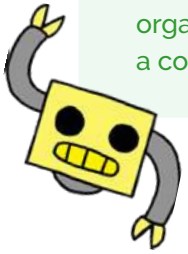
Code Club began in the U.K. in 2011, and made its way across the world - from Brazil to Bangladesh - due in large part to Indra Kubicek, formerly of the Raspberry Pi Foundation.

Indra, who's originally from Canada, oversaw the expansion of Code Club World. In January 2018, she returned to Canada to become Chief Operating Officer at KCJ.

"I heard the great news that the Canadian government was investing $50M in the CanCode program," she explains. "Discovering that KCJ would be a major part of this initiative made the transition even more exciting."

Building the Code Club World program gave Indra the good fortune to be part of a rapid progression of education programs that introduce and support key computational and programming skills around the world.

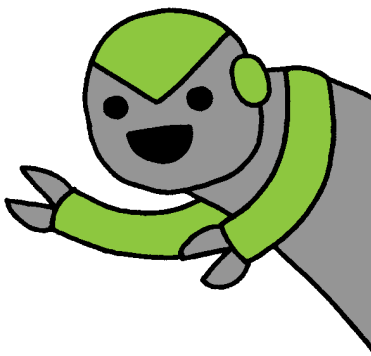
"I am very pleased to be bringing these learnings back to Canada and to KCJ, an organization at the heart of this movement with a core mission to support educators."



Kids get coding in Calgary

"[The Code Club] website was an immediate hit with librarians and educators across the country."

A Code Club volunteer helps a new member at the program's Canadian launch in Montreal



PINNGUAQ

"Nunavut is made of 25 very isolated communities. You can only get there by air, and it is really expensive to get in and out of," says Ryan Oliver, Director of Pinnguaq, an ed tech non-profit that takes its name for the Inuktitut word for play. "We cannot be in all those communities at once. So we go for a week, and for the first 2 days, we train the trainers."

Pinnguaq coaches small groups of youths aged 16-20 on how to teach the Code Club curriculum. For the final three days of the training, Ryan brings the whole community in for an introduction to coding, "so that we leave them with the skills they need, and coding can still go on."

Images courtesy of Pinnguaq

Pinnguaq started as a Code Club and has evolved into a sustainable tech community for Pangnirtung

Thanks to Cancode funding, we equipped new Code Clubs from Churchill Falls to Nanaimo with micro:bits, enriching already-existing free Scratch, HTML/CSS, and Python projects. These communities of practice now exist for thousands of children across Canada (56% of them girls!), providing the knowledge communities need to become innovators and creative participants in the digital future.

AT A GLANCE

Code Clubs Per Province

108	Ontario
81	Britsh Columbia
46	Québec
40	Alberta
27	Newfoundland & Labrador
13	New Brunswick
12	Saskatchewan
6	Manitoba
2	Nova Scotia
2	Prince Edward Island
1	Northwest Territories
1	Nunavut

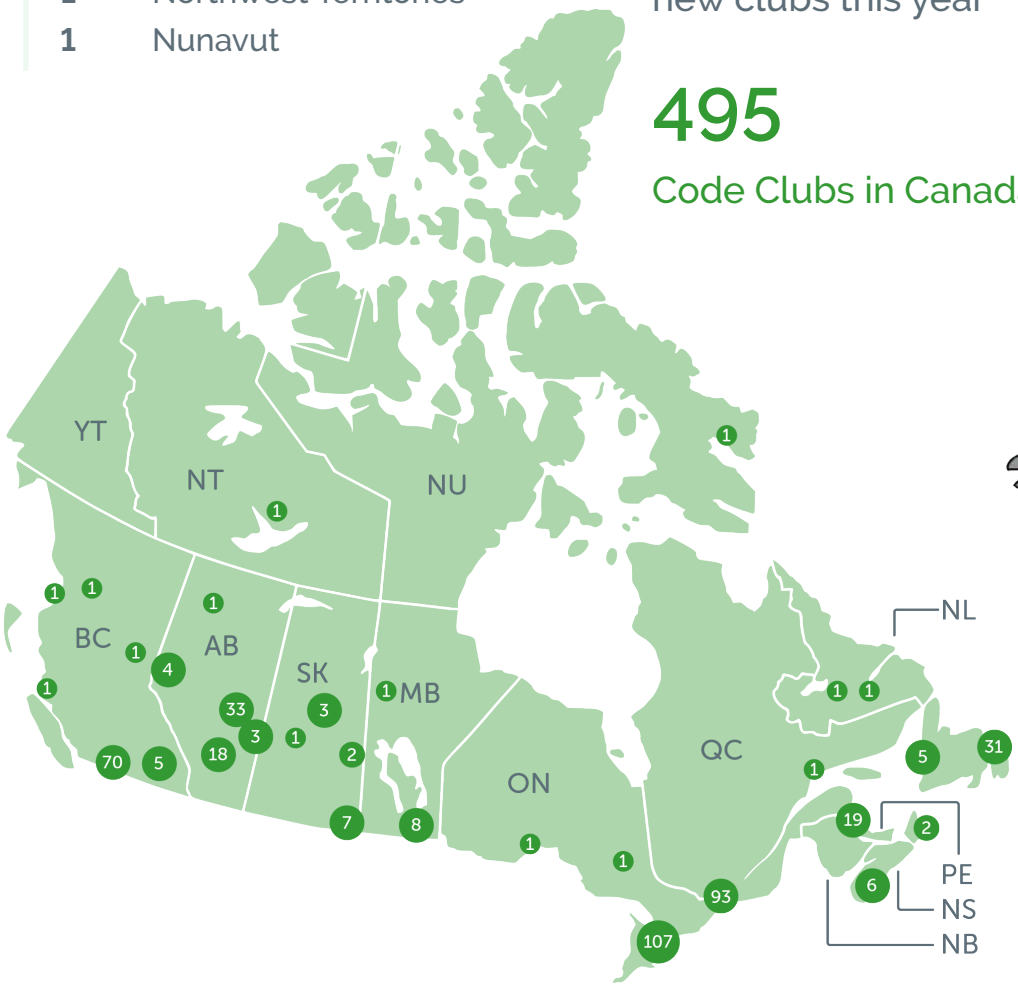
Kids

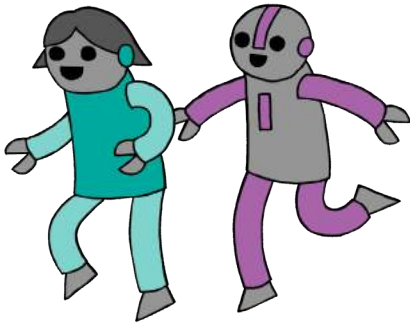
8157
kids in Code Clubs

191,448
hours kids spent coding

252
new clubs this year

495
Code Clubs in Canada!





Code
Create
Play

We engage with communities outside the classroom, using workshops where children explore code through art, music, games, and storytelling.

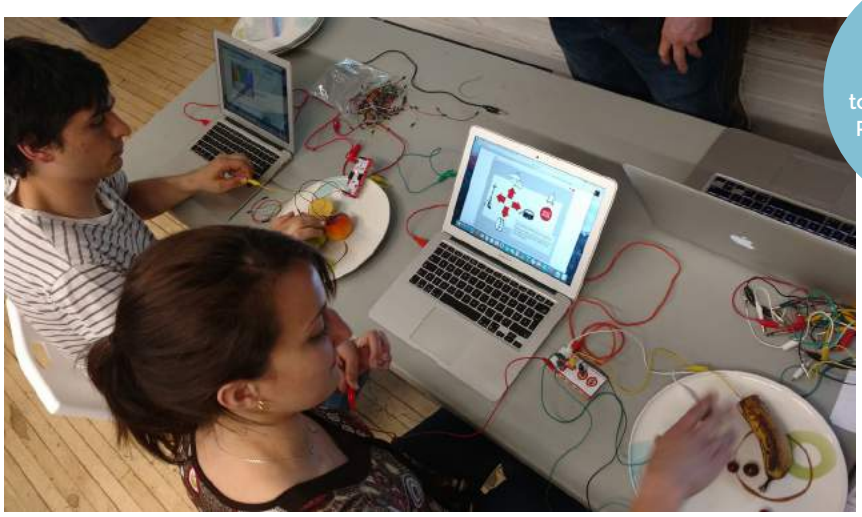
code
create
play

Alongside the many programs funded by our private and public sector partners, kids depend on activities and workshops that are either financed by individual contributions or contracted by venues like the Montreal Science Centre.

"The challenge for us is that we have little time and few human resources," says Jean-Daniel Doucet, Project Manager at the Montreal Science Centre.

Doucet was concerned that the Centre would not have the educators to facilitate fun, viable activities for visitors. But Doucet worked with KCJ Project Manager Yasmin Ahmad, and the two developed a coding activity suited to the 45 minutes they had with kids. The activity reproduces a virtual model of a beach.

"They have a lot of fun!" reports Doucet. "The feedback has been very positive from both teachers and students."

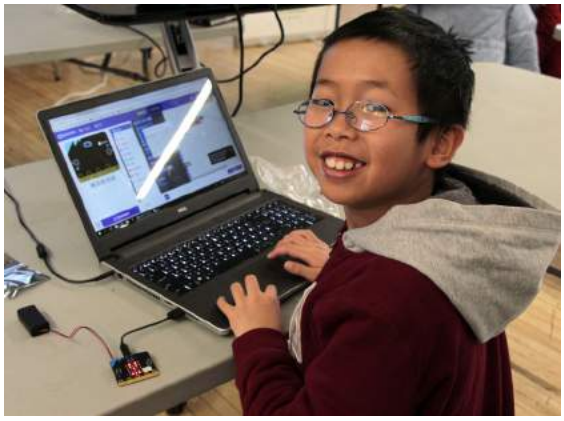


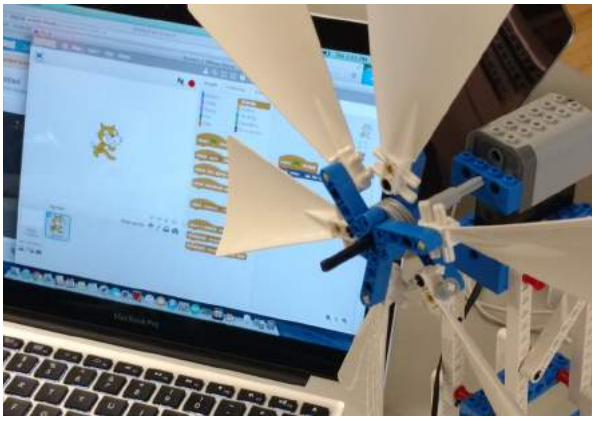
The creative possibilities are infinite with tools like micro:bit, Raspberry Pi, and Makey Makey.

Throughout the fall and winter of this past year, KCJ also offered 4 - 6 week bootcamps under the Code Create Play program. Thanks to our sponsors, Vigilant Global, Ubisoft, and SAP, we hosted three different types of bootcamps, offering each in French and English. Kids coded and animated a game of their own from start to finish at our Introduction to Scratch bootcamps.

Our Hardware bootcamps introduced them to the creative and interactive possibilities of Makey Makey, Raspberry Pi, and, of course, the micro:bit. And at our our App Development workshops, they got the opportunity to design and code their own app.

Hardware bootcamp participants discover code's many potential applications





Campers at the Trevor Williams Kids Foundation have fun with micro:bit and Scratch

AT A GLANCE

Subjects Taught

Scratch
micro:bit
Raspberry Pi
Makey Makey
App Development

Kids

209

kids reached directly

2500

hours kids spent coding

Workshop participants set up their micro:bits

KCJ 2017-2018
Global Data

The 2017-2018 school year has been an exhilarating one for KCJ.

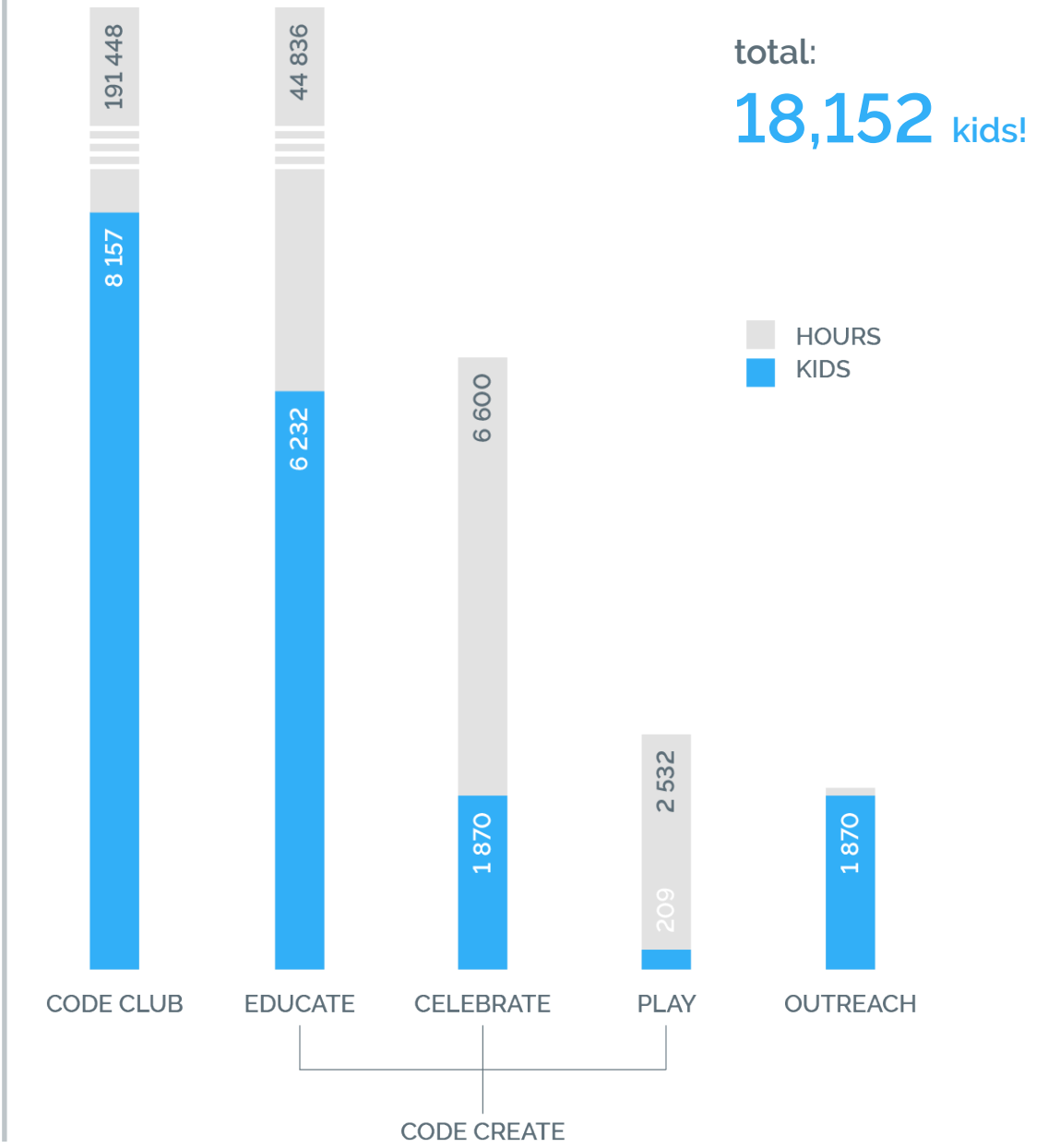
By refocusing our efforts on four core pillars, Code Create Educate, Code Create Celebrate, Code Club, and Code Create Play we have successfully reached more kids and educators than ever before.

This means more kids challenging themselves with new concepts inside and outside of the classroom, more teachers with the confidence to teach their students about powerful and versatile new technologies, and more Canadian communities with the skills to shape their digital worlds.

We know that this rapid growth is just the beginning of our mission to create sustainable digital skills communities where kids and the people who teach them can thrive, and we can't wait to see what the coming years will bring.

GLOBAL DATA

Kids Reached Directly (By Program)



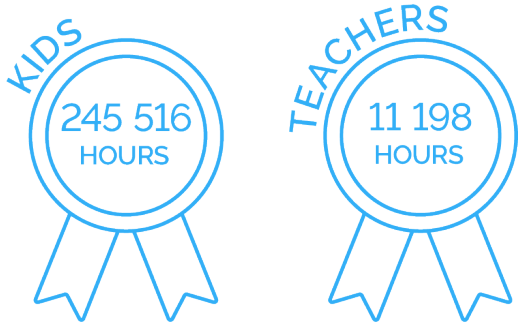
Kids Reached Through Teacher Training

23,285

Financial Distribution

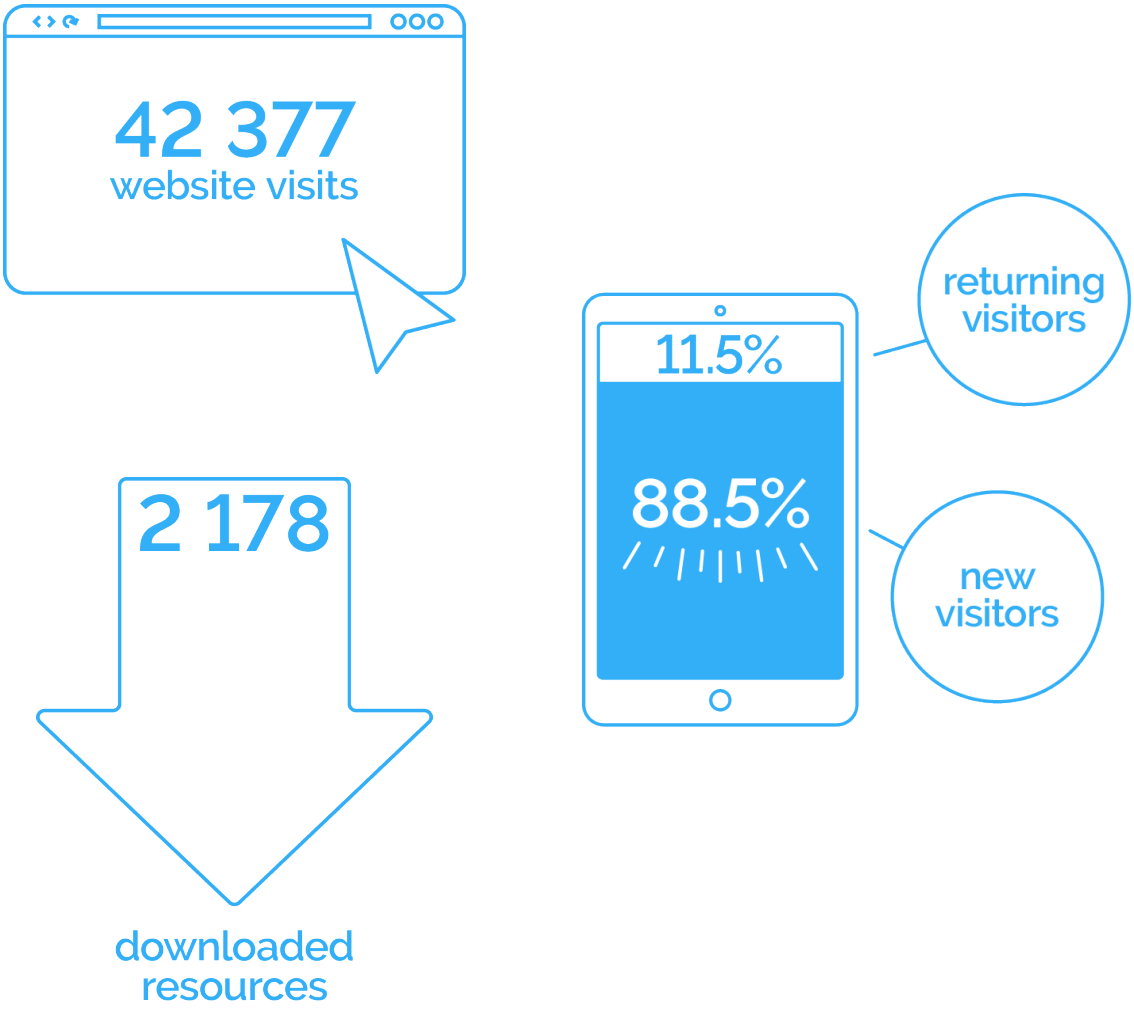
Grants	**87.5%**
Donations	**5.2%**
Service Fees	**7.3%**

Hours Spent Coding

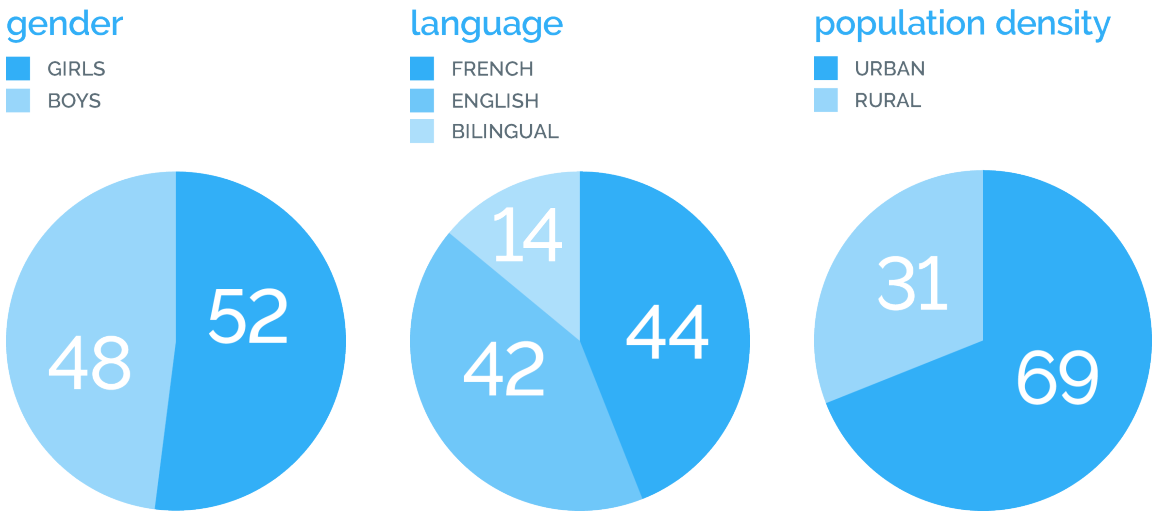


GLOBAL DATA

Website Traffic



Demographic Breakdown



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