



WISE Kid-Netic Energy
ENGINEERING FOR SCIENCE



Annual Report

2012–2013



UNIVERSITY
OF MANITOBA



OUR MANDATE

WISE Kid-Netic Energy works to ignite an interest and life-long passion of science and engineering in all Manitoba youth.



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INTRODUCTION

Colleen Flather, P.Eng led WISE Kid-Netic Energy for the past 14 years. She passionately grew the program to the largest outreach initiative housed at the University of Manitoba. She has moved on to pursue a Master's in Civil Engineering and we wish her nothing but the best. She has left huge shoes to fill and I can only try to honour her efforts. I worked for WISE when I was an undergraduate student pursuing a Computer Engineering degree at the University of Manitoba. It was a meaningful experience for me. I saw Manitoba as I presented and developed my public speaking and I gained more confidence and poise with every classroom of students I won over. I have since completed a Master's degree and worked at a start-up company in Ottawa

and am happy and enthusiastic to be given an opportunity to come back home to Manitoba and lead WISE Kid-Netic Energy. This fiscal year was a transition year for us and we did amazing thanks to all of our student and full-time staff. I would like to acknowledge the support and guidance of Dean Beddoes from Engineering and Dean Whitmore from Science, both of whom are passionate about science and engineering outreach. I hope you enjoy our annual report and share it with others.

Nusraat Masood, BSc, MSc
Program Administrator
WISE Kid-Netic Energy

OUR VISION

We envision the youth of Manitoba inspired and empowered by the possibilities of science, engineering and technology. We envision a Manitoba where all youth, regardless of background, gender or socio-economic status are enriched in their science, math and technology education. The young people today will become Manitoba's vibrant and diverse workforce of leaders tomorrow; these youth will be empowered by their knowledge and appreciation for science, engineering and technology.



WISE is a very child friendly program that keeps the students engaged.

Meaghan Turpin,

Grade 1 teacher at Jack River School, Norway House, MB

OUR INSTRUCTORS

Our instructors are our champions. All of our instructors are pursuing degrees in science and engineering; most of our instructors are young women. We also hire men who are visible minorities or from northern communities. Each is trained to deliver all of our Manitoba science-curriculum based workshops. They also receive classroom management and Indigenous cultural training. We provide meaningful employment for our instructors to develop strong leadership and presentation skills.

During the fall and winter our instructors work part-time and deliver outreach close to Winnipeg to accommodate their classes and labs. In

spring and summer they work full-time and travel extensively to all corners of our province including northern Manitoba (Churchill, Dauphin, Flin Flon, etc.), southern Manitoba (Steinbach, Brandon, Morden, etc.) and First Nations communities (Hollow Waters First Nations, Skownan, Norway House, etc.). We consciously encourage small age gaps between our instructors and their grade Kindergarten to grade 12 audiences to help their audiences relate. We also believe having female and visible minorities as ambassadors of science and engineering in classrooms dispels barriers associated with underrepresented groups excelling in technical fields.





OUR WORKSHOPS

Showcasing a variety of science and engineering topics, our workshops are highly interactive, and bring technology and hands-on activities to classrooms.

wisekidneticenergy.ca/workshops

OUR WORKSHOPS

We offer over 20 different hands-on workshops and we had another tremendous year in workshop delivery. Between April 1, 2012 and March 31, 2013 we saw an outstanding 34,656 students. Our hands on, Manitoba science curriculum based workshops for grades Kindergarten to grade 12 are a hit in classrooms all over the province of Manitoba. Teachers have enthusiastically invited us in their classrooms and we could not be more excited to be working with passionate educators. We offer a wide variety of choices for budding scientists and engineers. We facilitate dissections, design-build-test challenges and plenty of fun educational games. We bring all the supplies and clean up

afterwards. We charge minimally and offer the same rates for schools within and outside the city of Winnipeg. We strive to spark curiosity and build momentum towards positive experiential learning. In fact, many schools fund our workshops using the Manitoba Experiential Learning grant. Please go to our website to view our current workshop catalogue in French and English.

FUN FACTS ABOUT WORKSHOPS

- Total audience of 34,656 from nursery school to grade 12
- 1,349 workshops delivered



Such a fun time!
The students really
enjoyed themselves

Julie MacKenzie, Grade 5 & 6 teacher at Kleefeld School, Kleefeld, MB



WORKSHOP DELIVERY BROKEN DOWN BY SCHOOL DIVISION

DIVISION	KIDS PER DIVISION	DIVISION	KIDS PER DIVISION
Garden Valley	385	Red River Valley	360
Hanover	3995	River East-Transcona	1246
Interlake	320	Seine River	340
Kelsey	500	Seven Oaks	2529
Lakeshore	210	St. James-Assiniboia	245
Lord Selkirk	470	Sunrise	1210
Louis Riel	1322	Swan Valley	500
Mountain View	1390	Turtle Mountain	160
Mystery Lake	2600	Western	565
Pembina Trails	2360	Winnipeg School Division	3956
Portage la Prairie	555	Other/Private in Wpg	2066
Prairie Rose	655	Other/Private out of Wpg	2450
		TOTAL STUDENTS	34656

Excellent presentation!
Students loved it.
They were motivated.

Rosalie Muswagon,

Grade 3 teacher at Helen Betty Osborne, Norway House, MB



OUR CAMPS

Camp programming is fun, interactive, hands-on, indoors and outdoors and incorporates everything from large muscle group physical activities, to design build and creative activities.

wisekidneticenergy.ca/camps



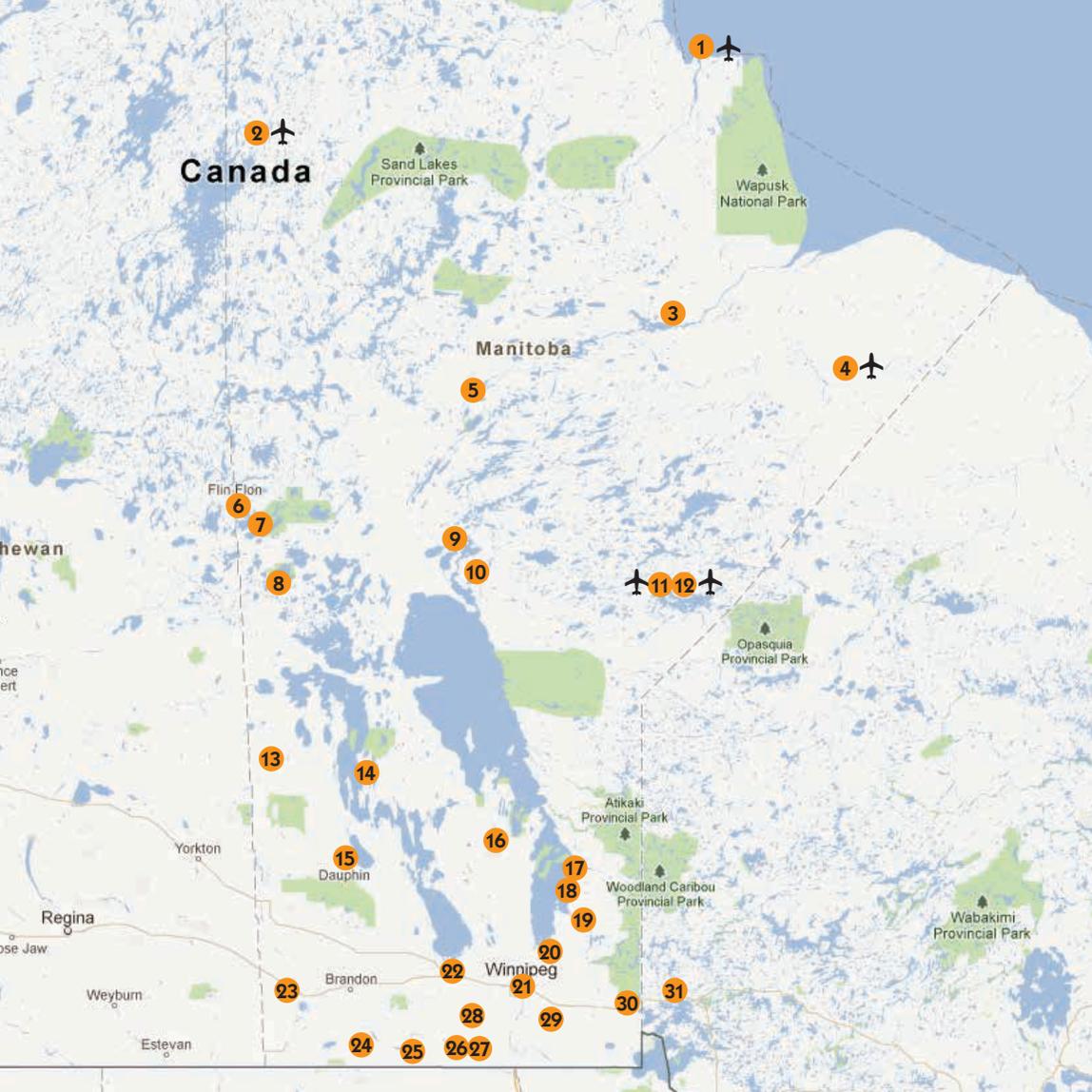
OUR CAMPS

We run week-long science and engineering camps in northern Manitoba (Churchill, Dauphin, Flin Flon, etc.), southern Manitoba (Steinbach, Brandon, Morden, etc.), and First Nations communities (Hollow Waters First Nations, Skownan, Norway House, etc.) and within Winnipeg through the Boys and Girls Club of Winnipeg, Helping Hands Immigrant Resource Center, Rossbrook House and Flora House. Each day, boys and girls within grades

4, 5 and 6 experience a new career path. In summer 2012 participants were exposed to different themes in chemistry, zoology, construction, nautical science and agriculture. Campers participated in activities such as mixing concrete, making bio-degradable plastic, cleaning pennies with chemistry, designing a sail boat, and dissecting owl pellets. Our lesson plans maximize hands on learning.

I learned that science is really not that boring. There were a lot of epic things to do at this camp.

Frontier School Division Career X camper, 14 year old boy

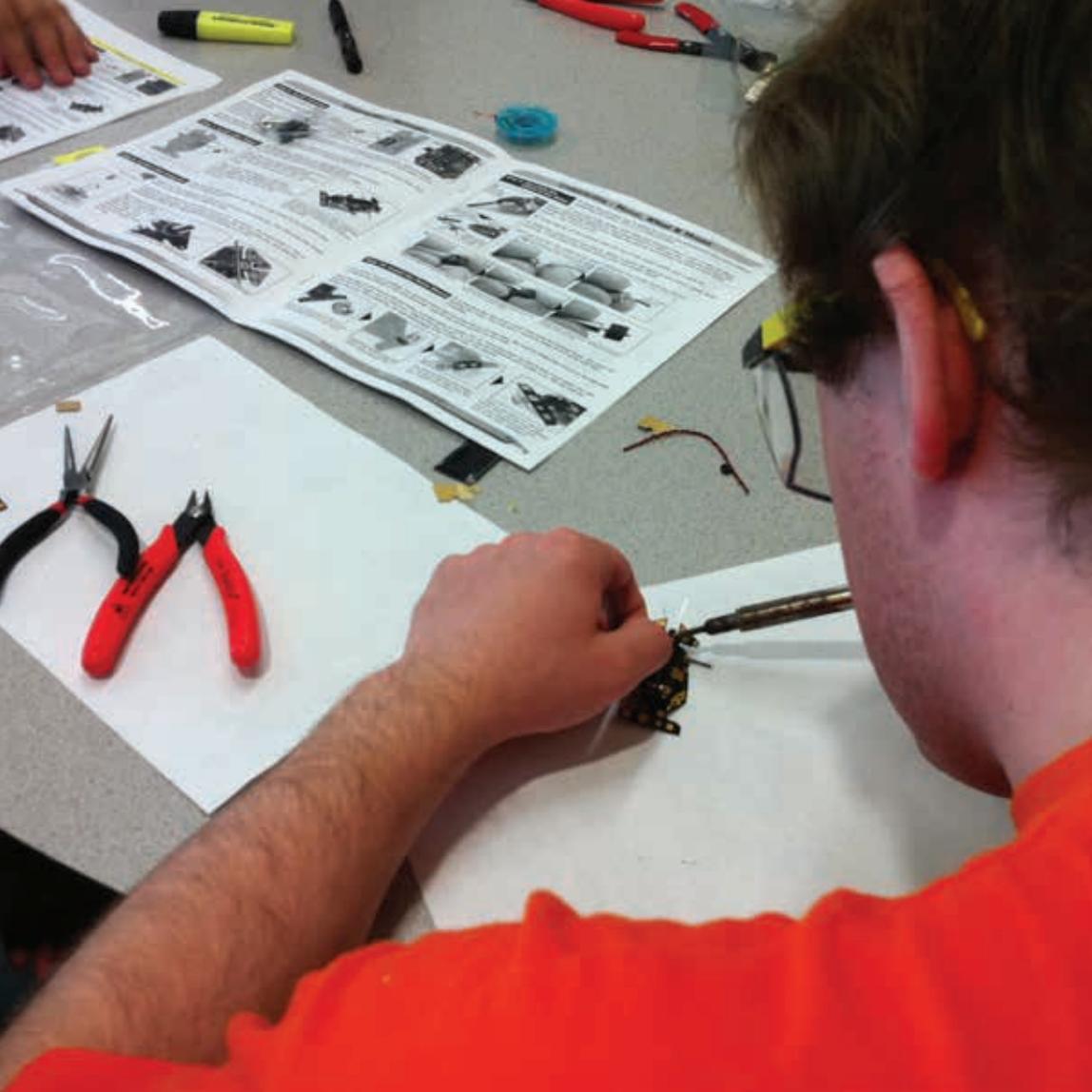


CAMP LOCATIONS SINCE 2001

- 1. CHURCHILL
- 2. BROCHET
- 3. GILLAM
- 4. SHAMATTAWA
- 5. THOMPSON
- 6. FLIN FLON
- 7. FRONTIER SCHOOL DIVISION'S CAREER X
- 8. THE PAS
- 9. CROSS LAKE
- 10. NORWAY HOUSE
- 11. WASAGAMACK
- 12. GARDEN HILL
- 13. SWAN RIVER
- 14. SKOWNAN
- 15. DAUPHIN
- 16. PEGUIS
- 17. HOLLOW WATER FIRST NATION
- 18. LITTLE BLACK RIVER FIRST NATION
- 19. PINAWA
- 20. TYNDALL
- 21. WINNIPEG
- 22. PORTAGE LA PRAIRIE
- 23. VIRDEN
- 24. KILLARNEY
- 25. CLEARWATER
- 26. MORDEN
- 27. WINKLER
- 28. CARMAN
- 29. STEINBACH
- 30. FALCON LAKE
- 31. KENORA

Highlighted locations received week-long camps in Summer 2012





SPACE ADVENTURE CAMP

WISE Kid-Netic Energy continues to provide the promotional and administrative support for the Manitoba Space Adventure Camp, a Manitoba Aerospace initiative. The enrichment camp designed for students in grades 9-11 explores various aerospace, flight, physics and space topics. Students participate in hands-on activities such as rocket builds, extensive lab tours in the Faculty of Engineering and drive a race car—a simulator of course!





OUR CLUBS

Each week exciting hands on activities, tours, field trips and mentor events are hosted. Club members have the opportunity to interact with professionals, see the “heart” of the University of Manitoba and explore science and engineering on a more in-depth level.

wisekidneticenergy.ca/clubs



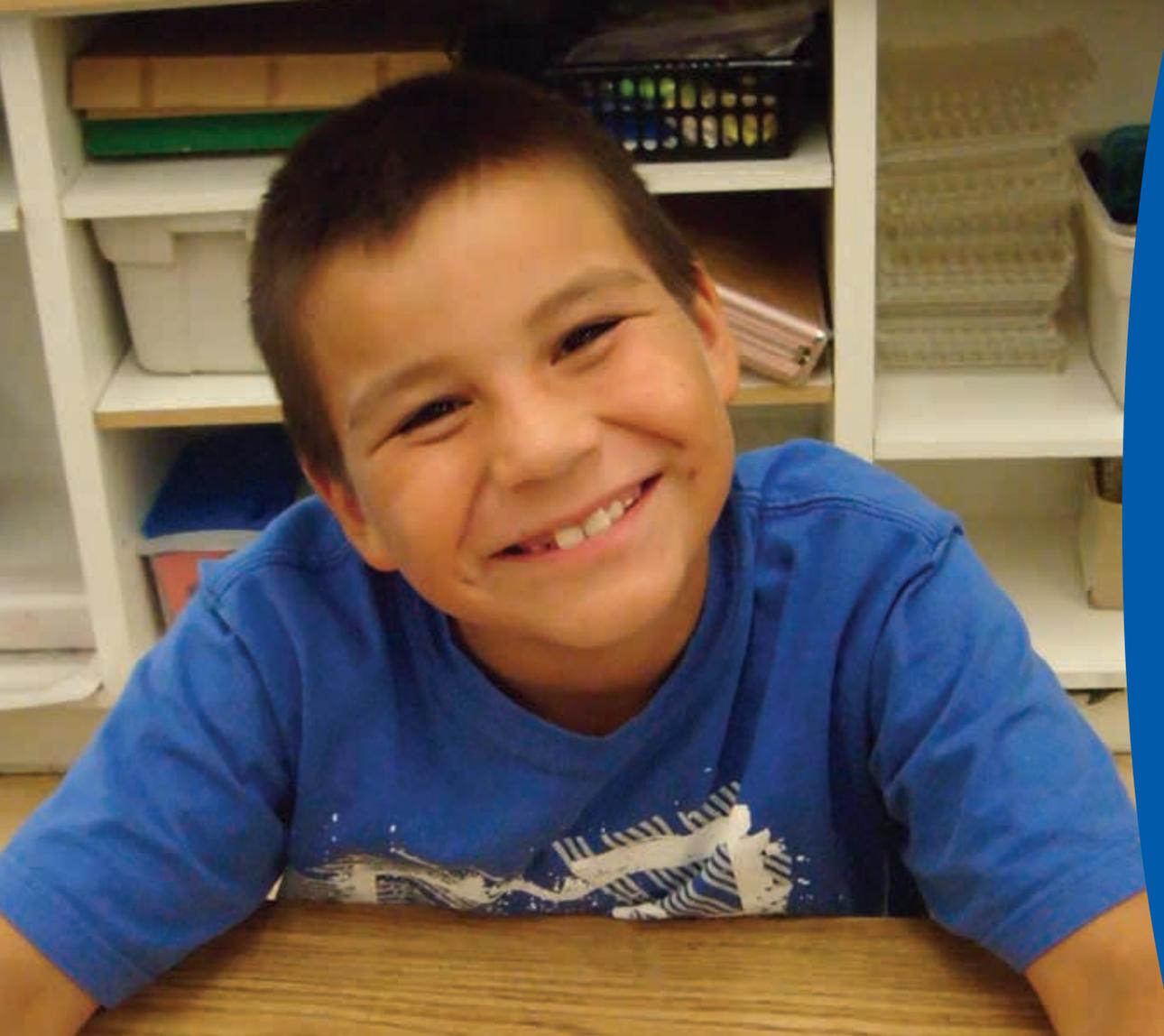
OUR CLUBS

Offering quality extra-curricular science and engineering programs is crucial to the development of Manitoba's future scientists and engineers and we offer two girls clubs that run throughout the school year to support local interest. Every week the girls meet with their instructors and develop their skills and interests through participation in competitions, field trips and mentorships.



Girls Club was more than I ever imagined. The quality was wonderful and the diversity of the topics was great.

Sharon Sankar (parent)



OUR OUTREACH

WISE Kid-Netic Energy is dedicated to inspiring all youth to Science and Engineering. We have special initiatives to provide outreach to underrepresented groups.

wisekidneticenergy.ca/outreach

ADOPT-A-CLASS

By far the most meaningful new project we started in September 2012 was our Adopt-a-Class program. We recognized that we could do more to make our workshops accessible in areas of Winnipeg with socio-economic challenges. We asked the Boys and Girls of Winnipeg and ENGAP (Engineering Access Program provides students with Indigenous ancestry prepare for, and succeed in Engineering) to nominate schools which would receive our workshops at no cost. The schools are Dufferin, Norquay, David Livingstone, Niji Mahkwa, William Whyte, Children of the Earth, Gordon Bell, Sisler High School and

Elmwood High School. Between September 2012 and March 2013 we had already seen 2448 students. We are passionately developing this project further. We are so grateful to Actua and NSERC Chair of Women in Science and Engineering (Prairie Region) Dr. Annemieke Farenhorst for supporting this new initiative. Mr. Robert Kennedy, a philanthropist and University of Manitoba Engineering alumni has committed funds to this project for the next four years. Find out more online. We hope you are as excited as we are.





INDIGENOUS OUTREACH

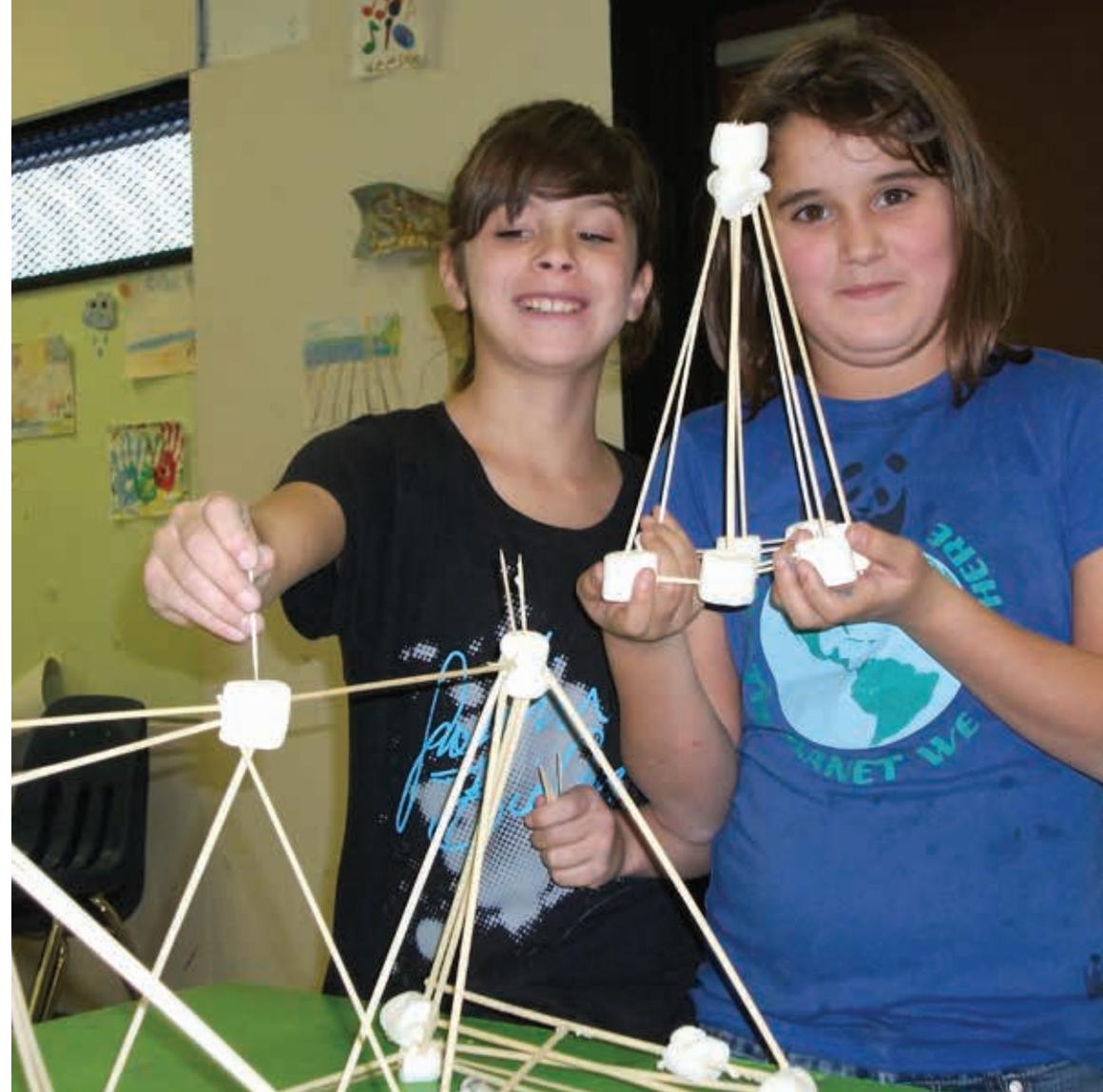
In the fiscal year of 2012-2013 we were very engaged on First Nations reserves. We delivered week-long science and engineering camps for local youth in four fly in communities: Shamattawa First Nation, Garden Hill First Nation, Brochet and Wasagamack First Nation. We also delivered our science and engineering camps in Skownan First Nation, Norway House Cree Nation, Hollow Water First Nation, Cross Lake First Nation and Little Black River First Nation. Prior to the camps, in spring, we delivered our hands-on science and engineering workshops to many of the communities as well. In total we saw over 2100 Indigenous youth in their home reservations.



INNER-CITY GIRLS CLUB

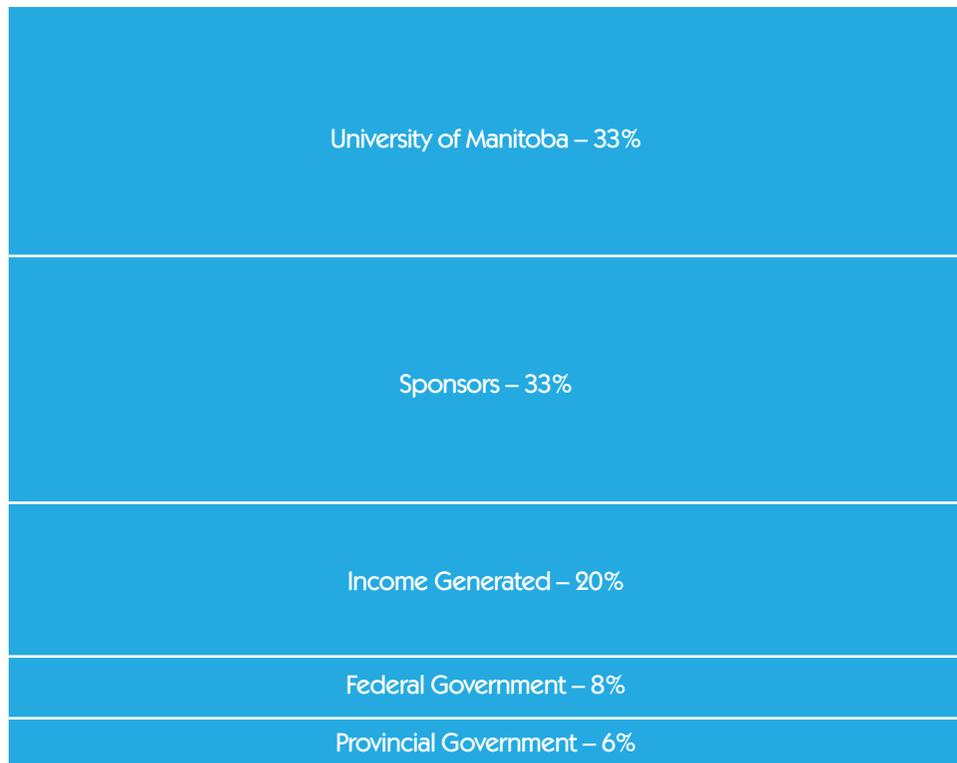
In the fall of 2012 we started our second girls club in partnership with the Boys and Girls Club of Winnipeg at the Freight House location. During the school year, on Saturday afternoons, 34 girls met to prepare and share healthy meals with female students pursuing science and

engineering and mentors already practising as professionals in those fields. The girls also played sports and participated in science and engineering activities each and every week. It was a safe and fun environment for all participants.

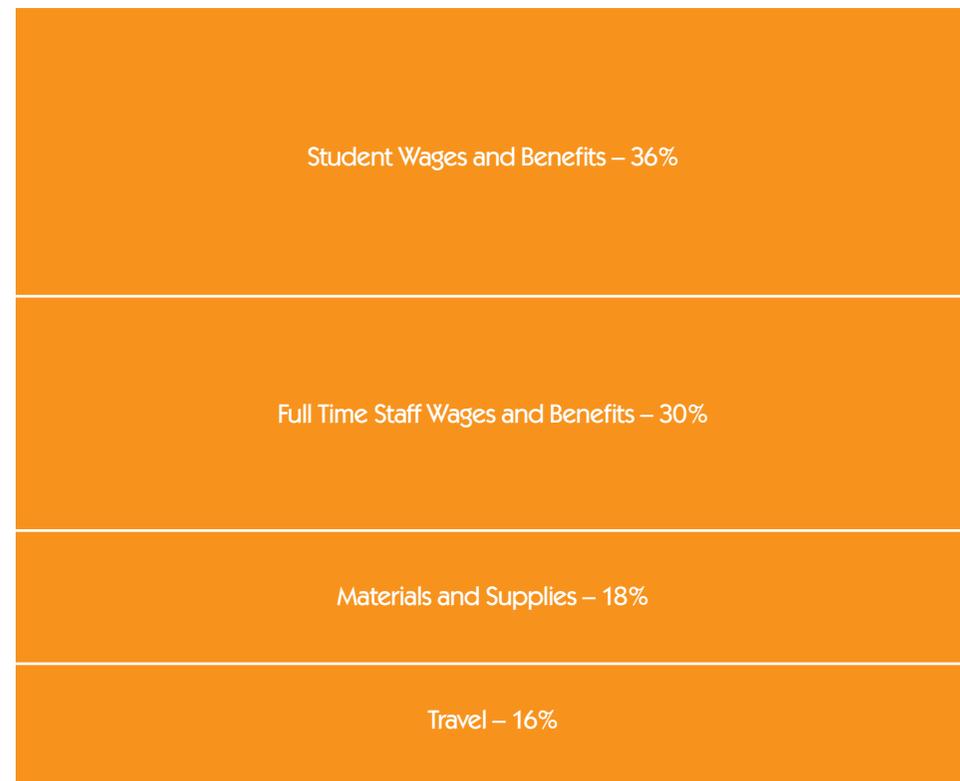


OUR FINANCES

REVENUE: \$400,000



EXPENSES: \$410,000



I learned a lot at this camp, thank
you for teaching us everything
and I hope to see you guys soon!

camper, 9 year old girl





OUR SUPPORTERS

2012-2013 FISCAL YEAR FUNDERS

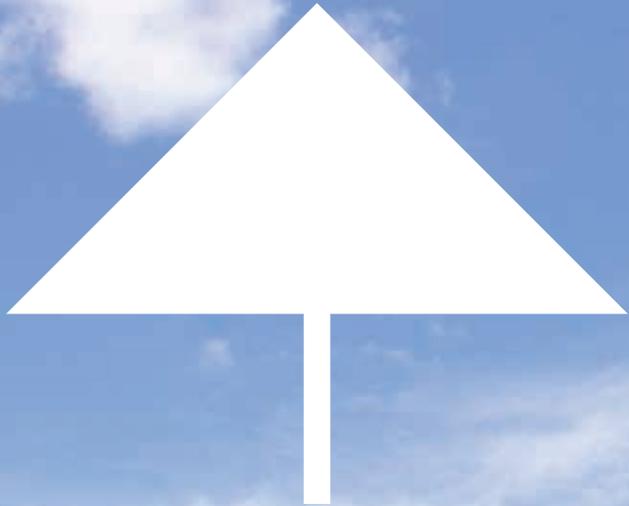
We have many generous supporters that make our work possible.



2012 ACTUA NATIONAL FUNDERS

Actua provides training, resources and support to a national network of local organizations offering science and technology education programs. Actua members reach over 200,000 youth per year. Please visit Actua on the web at www.actua.ca





OUR FUTURE

WISE Kid-Netic Energy looks forward to maintaining close ties with the Faculty of Engineering and the Faculty of Science at the University of Manitoba and aligning ourselves closely with their strategic outreach objectives. We look forward to strengthening our ties with teachers and schools within the province so we can continue to support efforts to attract more youth into careers in Science, Technology, Engineering and Math. Our province has a bright future ahead and we know our talented youth are the conduits to our joint success.





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