PLANET PROTECTOR ACADEMY

Training superheroes of environmental protection!

COUNTY & CITY OF PETERBOROUGH

KEEP COOL, FINAL REPORT 2016-17

ABOUT THE PROGRAM

The ***Planet Protector Academy: Keep Cool*** is an innovative behaviour change program that inspires kids to become environmental superheroes, helping them understand core issues through fun classroom activities before sending them home on superhero missions to change their families' energy, water and transportation habits.

The County and City of Peterborough worked with the program's creators, charity DreamRider Productions, to bring the program to Peterborough schools, **engaging almost 300 elementary students to inspire change in their families!**

THE RESULTS

Engaged 299 families in over 1,500 participant hours of inspiring environmental education!

28,356kg CO2e saved!

Mission: Turning Off Lights More
Participating Families: 151
% Reported Behaviour Change: 59%

Mission: Taking Shorter Showers
Participating Families: 152
% Reported Behaviour Change: 45%

Mission: Idling Less
Participating Families: 143
% Reported Behaviour Change: 77%

Mission: Speeding Less
Participating Families: 143
% Reported Behaviour Change: 62%

Mission: Driving Less
Participating Families: 122
% Reported Behaviour Change: 43%

TEACHER QUOTES

"A fun and exciting way to get students involved in protecting their planet."
– Rebecca B., Grade 5 Teacher

"Because it is such an interactive program, the students are involved on a higher level. We still talk about it!"
– Amanda O., Grade 4/5 Teacher

"I'm also making sure that my own kids (aged 5 and 7) know that they need to shut off the light when they leave their room."
– Kailee G., Grade 4/5 Teacher

TEACHER FEEDBACK

- **100%** said it was easy to use!
- **100%** said it's effective at inspiring behaviour change
- **100%** said they would use it next year

77% of kids feel like real-life Planet Protectors!

MISSION ACCOMPLISHED!

With great feedback from teachers and students, the program has demonstrated its unique and innovative contribution to Peterborough's Climate Change Action Plan. We look forward to working with the County and City to bring the program to even more schools next year and inspiring another generation of planet protecting superheroes across the region!

APPENDIX 1: FULL BEHAVIOUR CHANGE RESULTS

Energy-related behaviours

- Kids turning off lights more now: 76%
- Families turning off lights more now: 59%
- Kids pledging to turn off lights: 99%
- Kids taking shorter showers now: 76%
- Families taking shorter showers now: 45%
- Kids pledging to take shorter showers: 77%

Transportation-related behaviours

- Families idling less now: 77%
- Families speeding less now: 62%
- Families pledging to maintain their cars better: 77%
- Kids pledging to be a Green Driver when they grow up: 89%
- Families driving less now: 43%
- Families walking more now: 42%
- Families cycling more now: 16%
- Families taking transit more now: 16%
- Families ridesharing more now: 35%

Other stats

- Kids feeling like real-life Planet Protectors now: 77%
- Kids pledging to be Planet Protectors from now on: 96%

Estimated savings (see Appendix 3 for full calculation)

- 33,126 kWh
- 28,356kg CO2e
- $6,618.50

APPENDIX 2: TEACHER SATISFACTION RESULTS

5 teachers in Peterborough responded to our teacher satisfaction survey:

Experience in the classroom

- 100% had a lot of fun doing the program in their class!
- 100% agreed that the website was easy to use

Impact on students

- 100% agreed that the Academy is effective at inspiring children to change their environmental behaviours
- 60% said the PPA had a higher impact than other environmental education programs offered to their school
- 80% said the resource developed students' understanding of how human actions modify the physical environment
- 80% said the resource developed students' motivation and personal responsibility for protecting the planet

Supporting teachers to bring sustainability and new tools/approaches into classroom

- 80% agreed that the resource increased their confidence to teach sustainability topics
- 80% agreed that the resource increased their excitement to teach sustainability topics
- 60% agreed that the resource helped increase their own personal literacy around sustainability topics
- 100% strongly agreed that the resource helped them bring technology into the classroom
- 100% agreed that the resource helped them reach diverse learners

Overall rating

- 80% would definitely recommend the PPA to other teachers, with 20% saying they would likely recommend
- 100% said they'd use the resource again next year

Excerpts from surveys

"A fun and exciting way to get students involved in protecting their planet."
– Rebecca B., Grade 5 Teacher

"My favourite thing was the variety of activities. I liked how interactive it was and the student's benefited from the group activities. Because it is such an interactive program, the students are involved on a higher level. They will definitely remember the program. We still talk about it!"
– Amanda O., Grade 4/5 Teacher

"A fun way for students to start talking about the environment and personal choice."
– David B., Grade 3 Teacher

"My favourite part was the Game Show questions and the integration of the arts into the activities. The program created a lot of time to have discussions with my students. It also made me think about my family and share with my students. As an example today we were talking about driving less and I was thinking of how my husband and I often take two cars places where we could take one. Also, I am more aware of turning off the lights in my house and making sure that my own kids (aged 5 and 7) know that they need to shut off the light when they leave their room."
– Kailee G., Grade 4/5 Teacher

Note: please ask permission from teachers before quoting them

APPENDIX 3: C02 AND $ SAVINGS CALCULATION

Assumptions

1. Typical residential consumption: 750kWh (Ontario Energy Board, April 2016)
2. 151 families who undertook both switching off lights and taking short showers missions
3. Assume conservative average of 52% of families reporting change across energy behaviours.
4. Assume 5% reduction in energy usage as a result of energy saving actions.
5. CO2 conversion factor 0.856kg CO2e / kWh (National Resources Canada, 2013)
6. Annual monthly electricity cost of $149.85 (Ontario Energy Board, April 2016)

Short-term savings (3 month period)

1. Assume 5% reduction in energy usage in first 3 months for the 52% of families that successfully completed energy saving missions
2. Baseline energy usage during 3 months period equates to 750kWh x 151 families x 3 months = 339,750kWh
3. kWh reduction equates to 750kWh x 151 families x 3 months x 52% families taking action x 5% reduction = 8,834kWh savings
4. CO2e savings equate to 8,834kWh x 0.856kg = 7,562kg CO2e savings
5. Cost savings for residents equate to $149.85 x 151 families x 3 months x 52% taking action x 5% reduction = $1,764.93

Long-term savings (remaining period up to 3 years)

1. Assume that 25% of active households continue energy saving behaviours for subsequent 33 months
2. Baseline energy usage during 33 months period equates to 750kWh x 151 families x 33 months = 3,737,250kWh
3. kWh reduction equates to 750kWh x 151 families x 33 months x 52% families originally took action x 25% families continuing to save energy x 5% reduction = 24,292kWh savings
4. CO2e savings equate to 24,292kWh x 0.856kg = 20,794kg CO2e
5. Cost savings for residents equate to $149.85 x 151 families x 33 months x 52% families originally took action x 25% families continuing to save energy x 5% reduction = $4,853.57.

Total savings over 3 years

33,126 kWh
28,356kg CO2e
$6,618.50

APPENDIX 4: SAMPLE PRESS RELEASE

Young Green Superheroes Lead the Way in Peterborough

Peterborough, July 19, 2017

Almost 300 elementary school children in Peterborough are celebrating their green achievements as new graduates of the Planet Protector Academy. Not only have they taken steps themselves to protect the planet, they've encouraged their siblings and parents to get involved too!

The Academy, developed by youth engagement charity DreamRider Productions, was delivered through a unique partnership with the City and County of Peterborough. The aim was to raise awareness about climate change and engage students and families in taking practical action to reduce their impact on the planet.

Supported by an interactive website that's projected at the front of the classroom, teachers lead fun arts-based activities to explore climate change, energy & transportation issues. As 'apprentice' Planet Protectors, they then use the knowledge and skills they learn in class to go home on superhero missions to lead change in their families' habits. By putting kids at the center of the storyline, the Academy becomes a game, but also real life, as they compete in teams to make the biggest impact!

> *"My favourite thing was the variety of activities. I liked how interactive it was and the student's benefited from the group activities. Because it is such an interactive program, the students are involved on a higher level. They will definitely remember the program. We still talk about it!"*
> – Amanda O., Grade 4/5 Teacher, Peterborough *(need to ask permission first)*

The students certainly made an impact, with 43% of parents ditching the car for a more sustainable alternative and 52% saving energy in the home.

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Background

The Planet Protector Academy is a 6-week digital-led educational program that aims to inspire and empower kids to lead change in their families' energy & transportation habits. It was developed by youth engagement charity DreamRider Productions, who partner with municipalities and school districts across North America to inspire a generation of environmental superheroes.

Contacts

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APPENDIX 5: LIST OF PARTICIPATING TEACHERS

	Name	School	Status
1	Carrie Andreson	King George	Used
2	Kailee Gooley	Ridpath Junior	Used
3	Julie Rutherford	North Shore	Used
4	Todd Richard	St Catherine	Used
5	Rebecca Beavis	St Catherine	Used
6	Laura Smith	Edmison Heights	Used
7	Amanda O'Reilly	St Anne	Used
8	David Buckley	St Patrick	Used
9	Linda Cott	St Cather	Used
10	Karen Kempt	North Shore	Used
11	Kim Laton	Norwood	Used
12	Kayla Williams	Curve Lake First Nation	Used
13	Shauna Moodie	Monsignor O'Donoghue	Used
14	Debbie Thomas-Amaral	Queen Mary	Registered
15	Shirley Hamilton	Queen Elizabeth	Registered
16	Lucia Collaci	St John	Registered
17	Mona Adam	Monseigneur Jamot	Registered
18	Trish McAdam (3)	Armour Heights	Registered
19	Jennifer Connelly	The Children's Montessori	Registered
20	Heather Hedges	Highland Heights	Registered
21	Stephanie Benn	Edmison Heights	Registered
22	Sarah Chambers	Kawartha Heights	Registered
23	Josee LeVasseur	RF Downey	Registered
24	Matthew Smith	Roger Nelson	Registered
25	Sandra MacDonald	St Anne	Registered
26	Sarah Sullivan-Berardi	St Alphonsus	Registered
27	Margaret Javi	RF Downey	Registered
28	Julia Tearne	Monsignor O'Donoghue	Registered
29	Ross Cowie	Monsignor O'Donoghue	Registered