SCIENCE RENDEZVOUS KINGSTON: PROMOTING STEM EDUCATION

Nancy Dalgarno and Lynda Colgan
Queen's Community Outreach Centre
Faculty of Education

What is Science Rendezvous?

Why is it a priority for the Queen's Community Outreach Centre?

Esso Imperial Oil Foundation

Queen's Community Outreach Centre

Campus Bookstore at Queen's University

MSTE
Mathematics, Science and Technology Education Group
Faculty of Education, Queen's University

Queen's University

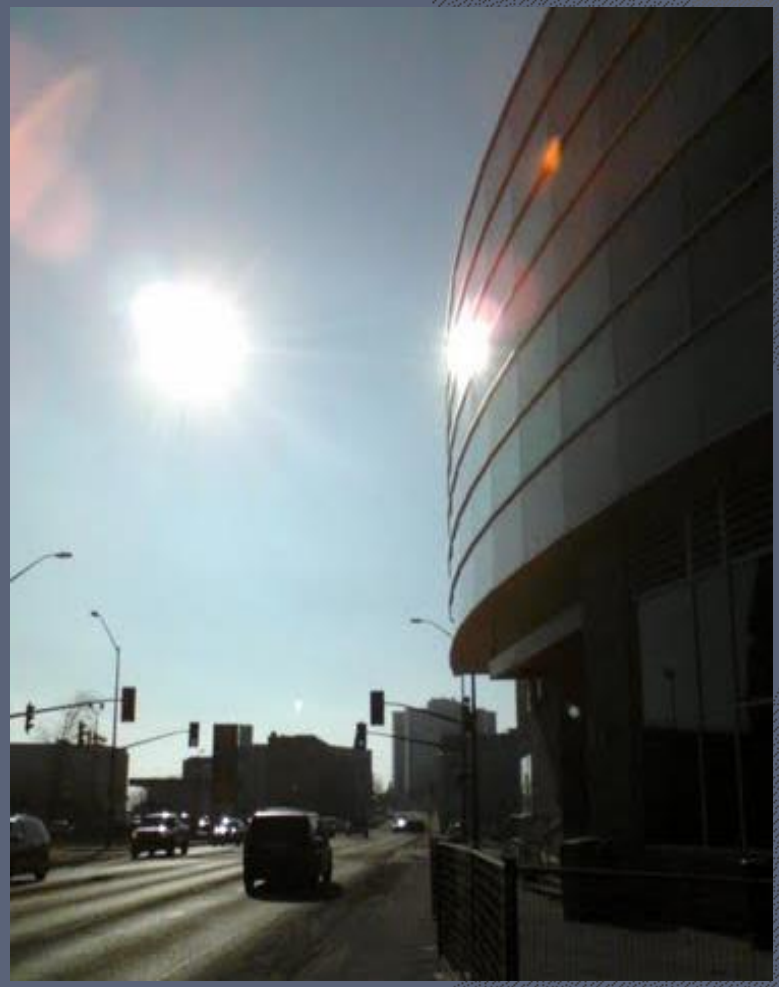
kingston association of museums art galleries + historic sites

IN 3 YEARS…

- 2011 MacArthur Hall
  - 16 stations
  - 5 public lectures
  - ~600 visitors
- 2012 Grant Hall
  - 27 stations
  - Chemistry Magic Show
  - 1 public lecture
  - Town Crier/Proclamation
  - Take-Home Book
  - ~1250 visitors

2013 K-ROCK CENTRE

- 50+ stations
- ~2500 visitors
- Chemistry Magic Show
- Street Closure
- Food Concessions
- T-shirts for sale
- Free tote bag
- Free Take-Home Book
- Door prizes
- *People's Choice* Awards

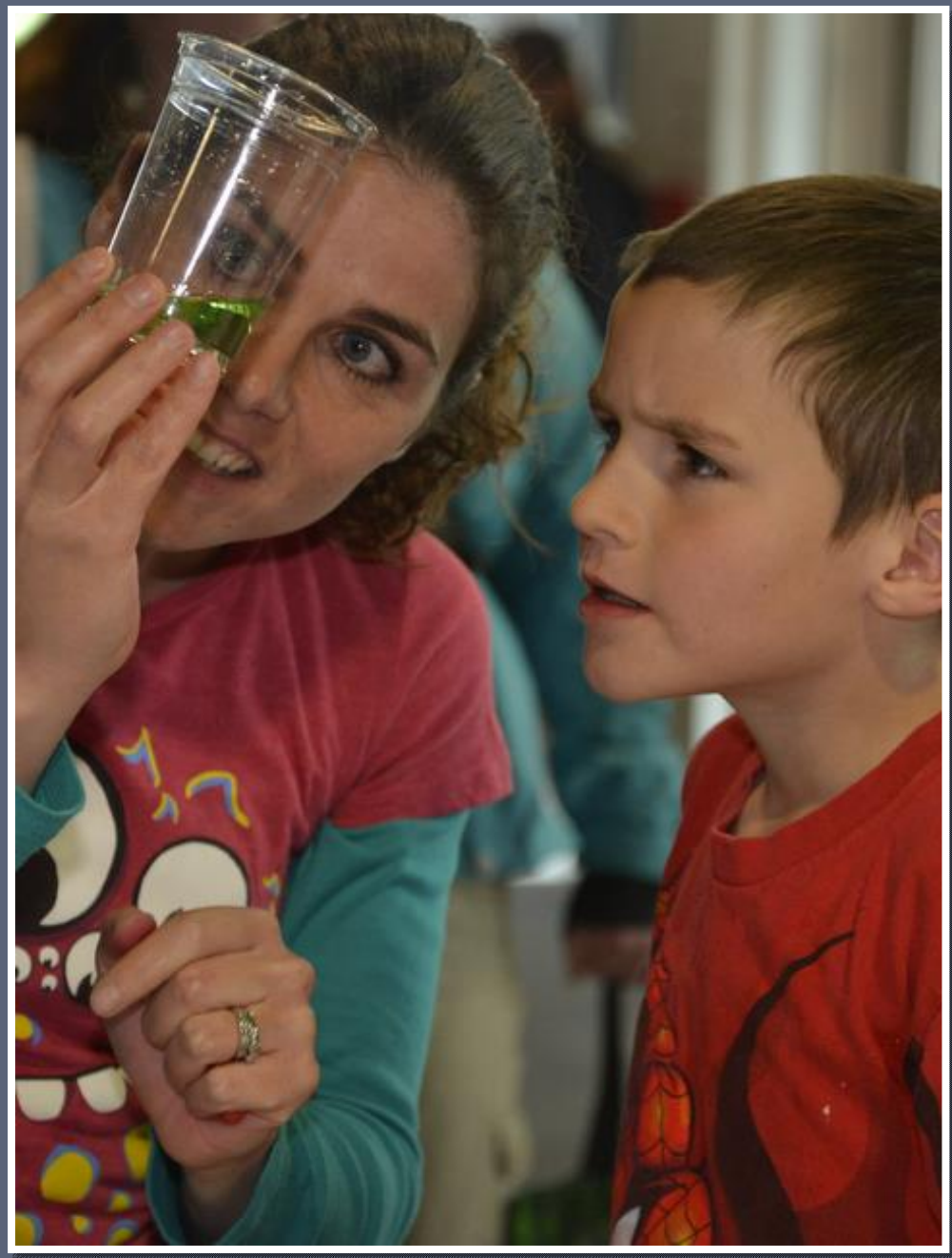


INFORMAL "HANDS-ON, HEADS-IN" LEARNING OPPORTUNITIES IN STEM


FLIR
4.8 °C
40.0
e=1.00
ST. LAWRENCE


SKF
Davis
33


Laerdal Airway Management Trainer



"Most of a person's science education is done outside a formal environment," J.F. Falk & L.D. Dierking.

RESEARCH

Purpose

- To determine the strengths and challenges
- To determine the learning experiences of participants
- To provide a set of actionable recommendations

Research Questions

1. What were the strengths and challenges of SR
2. How was SR perceived by stakeholders as a positive educational experience?
3. What was the key learning by participants
4. What are the recommendations for enhancing community-based education events
5. How as SR perceived as a community-based opportunity to learn

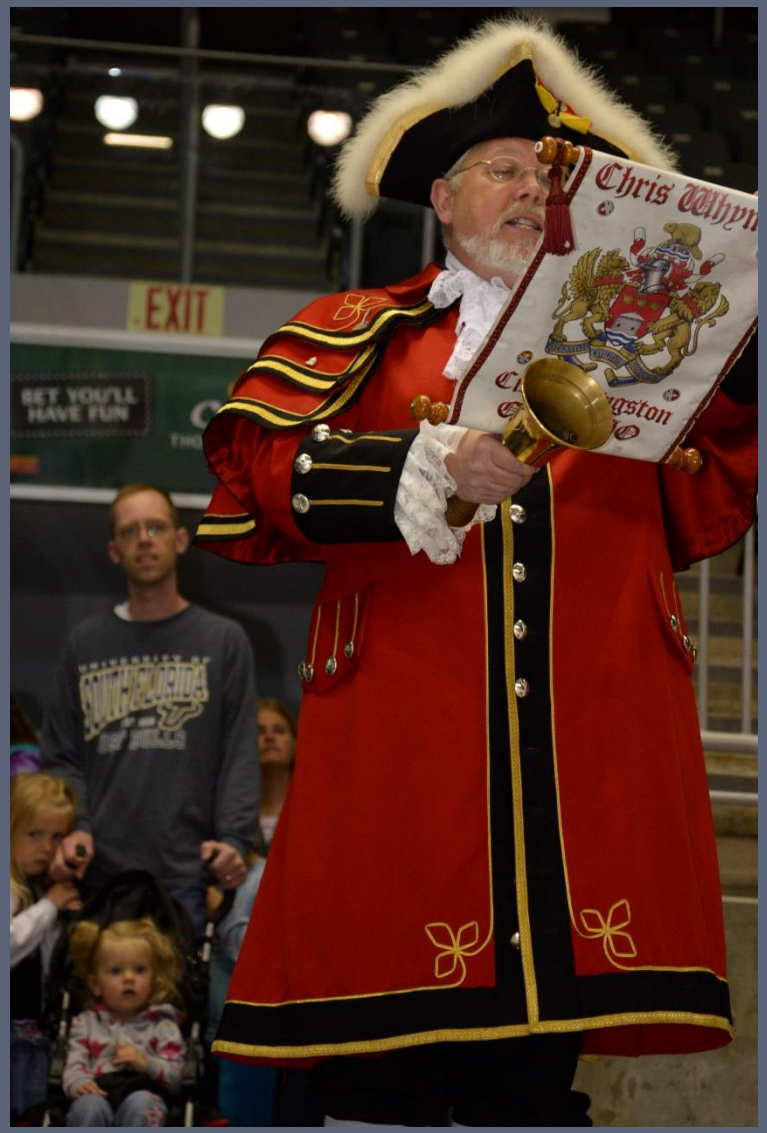
METHOD

Data Collection

- 30 semi-structured interviews
- 7 focus groups
- Online survey

Data Analysis

- Qualitative Data
  - Thematic analysis, CCM, NVivo®
  - Inductive, deductive
- Quantitative Data
  - Descriptive statistics



FINDINGS

Pattern	Category
Strengths	• Hands-on • Learning • Resources • Networking • Community Building • Organization
Challenges	• Home Concerns • Communication • Logistics

STRENGTHS

"Honestly, my daughter and I learned a ton about fundamental aspects of how the work works…I wish there were more opportunities like this when I was growing up" (Online survey).

"I learned that it's very hard to explain something quite technical to children but that it can be done and it can be fun" (Ruby, I).

"It's a great way to network and discover other people and other projects that they're doing within the community that we might be able to partner with…We've already created a partnership out of Science Rendezvous" (I).

"Raising awareness of all of these public education issues only makes for a better community" (FG).

CHALLENGES

"An event is only as successful as it's marketing…I might wager a guess that most people that heard about the Science Rendezvous probably heard about it word of mouth…From my point of view, it, it didn't stand out enough to really highlight what it was" (I).

"The main disappointment for me was that there weren't more people. And I don't know if that was because my booth was in an area that just had low traffic" (I).

"It could have been configured differently so that it was a bit more inclusive of everybody" (FG).

One of the challenges was the number of meetings leading up to it…Museums are used to going to…We understood what we needed to do…We didn't need that many [meetings]" (I).

CONCLUSION

Through collaborative community-university partnerships, it is possible to:

1. recruit, support and sustain commitment of significant numbers of university faculty, staff and students to advance STEM education through well-coordinated, high-quality, reciprocally rewarding activities and events.
2. Improve the STEM education of students by supporting teachers, parents, educators and families in informal settings and through resource development.
3. Legitimize the power of informal learning experiences and non-traditional teaching environments
4. Influence public attitudes and beliefs about science, scientists and scientific research
5. Coordinate activities across institutions, departments, and organizations to advance STEM education.

ACKNOWLEDGEMENTS

Thank You

nancy.dalgarno@queensu.ca

lynda.colgan@queensu.ca

http://educ.queensu.ca/community/outreachcentre.html