



# The Urban Classroom



Taking Advantage of Everything a  
City Has to Offer



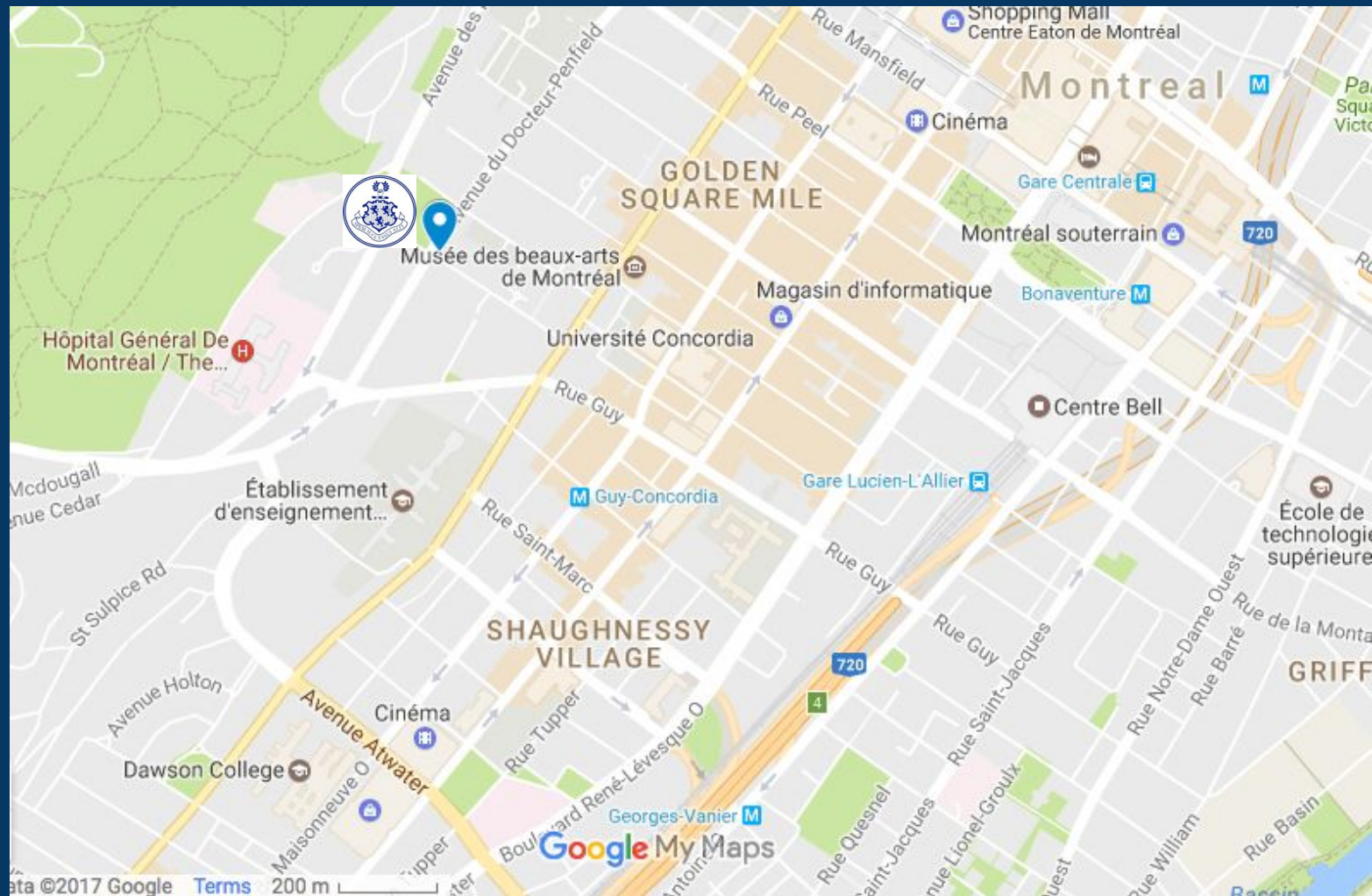
Christianne Loupelle, Science Department Head and Teacher  
Adriana Ruffini, Math Teacher  
Trafalgar School for Girls, Montreal, Canada

# Trafalgar School for Girls



- The Trafalgar Institute (right), was founded in 1871.
- Trafalgar School for Girls was founded in 1887.
- The oldest all-girls English school in Québec.
- Strong affiliation to McGill University.





# Our mission:

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In the heart of downtown Montreal, our diverse school community challenges and inspires girls to embrace learning, be confident and shape a better world.



# Constraints:

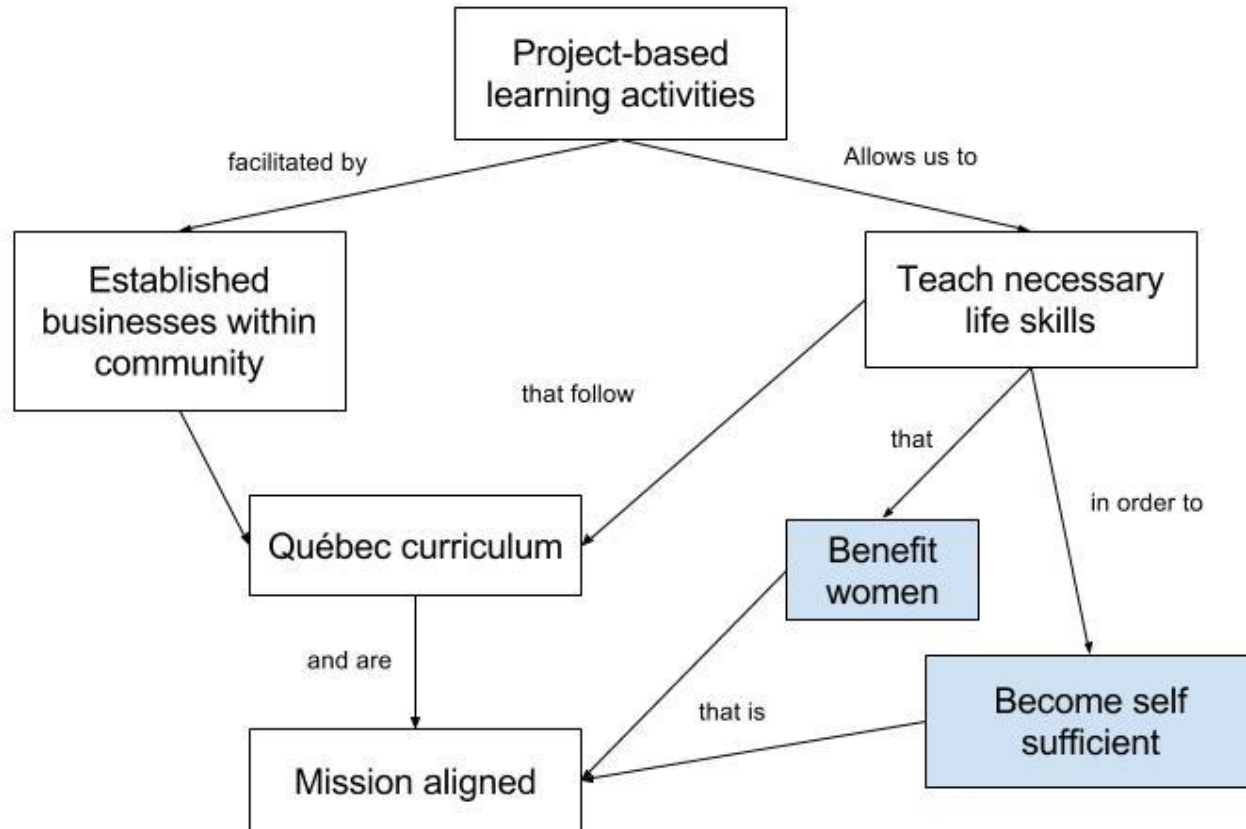
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1. Limited school space
  - Urban location limits expansion
  - Small school size limits room/space availability
2. Cost
  - Machinery is expensive
  - Fundraising is difficult
3. Knowhow
  - Keen understanding of how machinery works
  - Ability to repair broken machinery
  - Safety guidelines



# Trafalgar today





# Acquiring valuable skill sets

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1. Building, repair and design
2. Proper food preparation and budgeting
3. Sewing, fashion design, and wearables
4. Physical activity and wellness

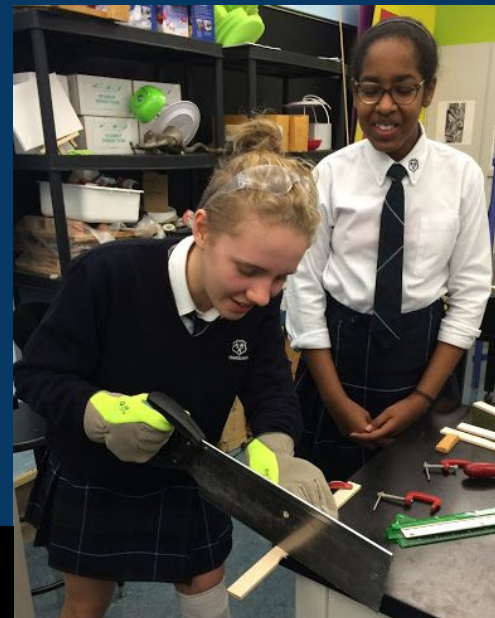




# Building, repair and design

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- Design and engineering projects in class
  - Proper use of common household tools
    - Hand held drills and dremmels
    - Exacto knives
    - Soldering irons
    - Levels
  - Instill confidence

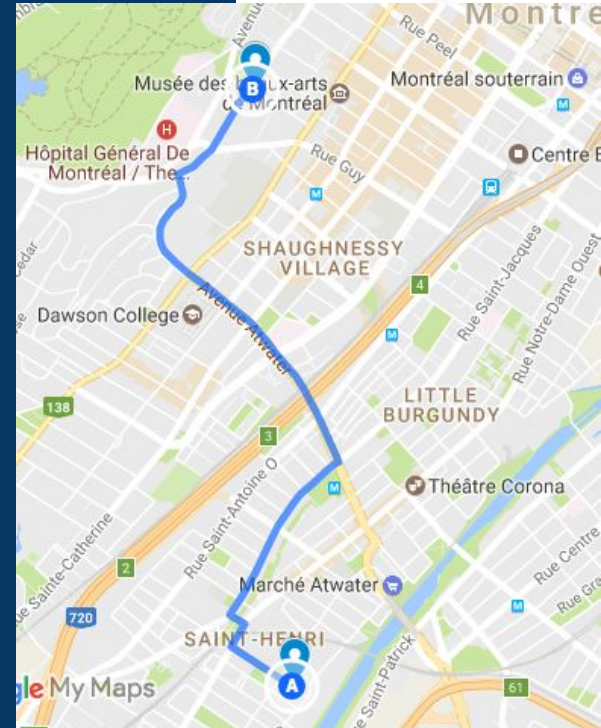




# Community makerspace

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- Access to larger scale tools
  - 3D printing
  - CNC cutter
  - Laser cutter
  - Woodworking tools
- Modest user fee
- Knowledgeable animators
- Safe environment









# Proper food preparation and budgeting

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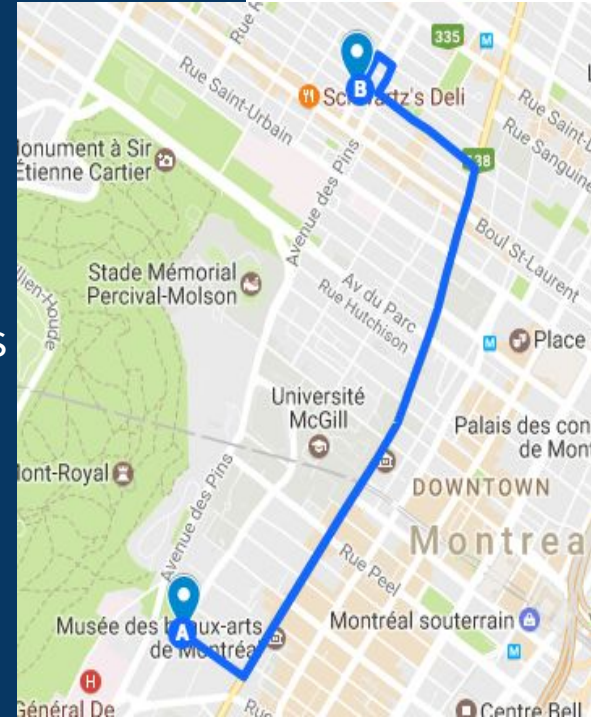
- Students learning to bake cookies (science) and pie (math)
- Gardening in our own backyard with our butterfly and bee friendly garden.
  - School apiary (future entrepreneurship project)
  - Vegetable patch
  - Composting
- Budgeting in our math classes
  - Discussions about finance
  - Nutritious yet frugal meals
  - Where can you save money



# Community cooking and gardening



- Santropol Roulant: community organization that offers food/nutritional services to people in Montreal.
  - Meals on Wheels
  - Growing, preparing, delivering food
- Volunteer opportunities community service
- Lessons in cooking and meal preparation are offered to members of the community in return for volunteer hours in their kitchen.
- Volunteering at their community garden plot in Senneville, Québec







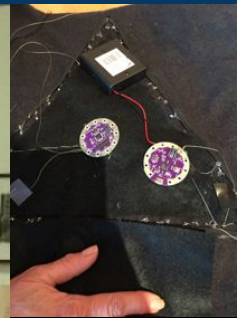
# Sewing, fashion design, and wearables

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- Learning to replace buttons on blazers and kilts in class.
- Learning different types of stitches in class in preparation for a cell model project.
- Learning wearable circuitry.







MADE my LED sweater for science fair

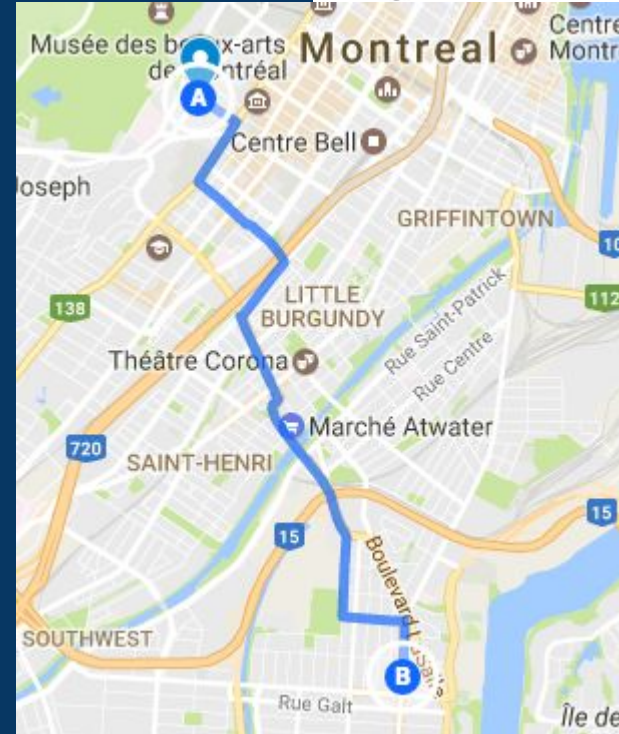
MADE my

science fair

# Sewing co-op

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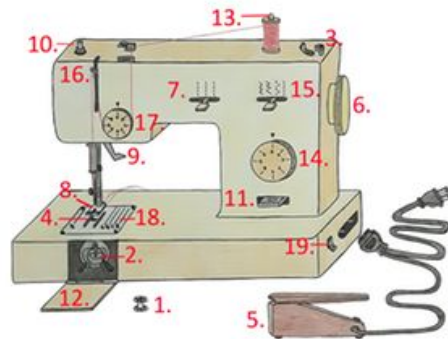
- Students learned to cut size and cut out a dress pattern.
- Basic threading and bobbin set up of a sewing machine.
- How to properly sew clothing, using a machine.
- Over 30 sewing machines in one place.
- Knowledgeable animators







# INITIATION À LA COUTURE





# Physical activity and wellness

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- Physical education classes twice a week for all grades.
- 12 GMAA sports teams are fielded throughout the year.
- 70 % of our students participate on one or more school sports team.
- Limited because of small gym and lack of playing field.
- Make use of our outdoor green space for physical education and team practices.
- Use of the mountain for walks and training.
- Yoga sessions.

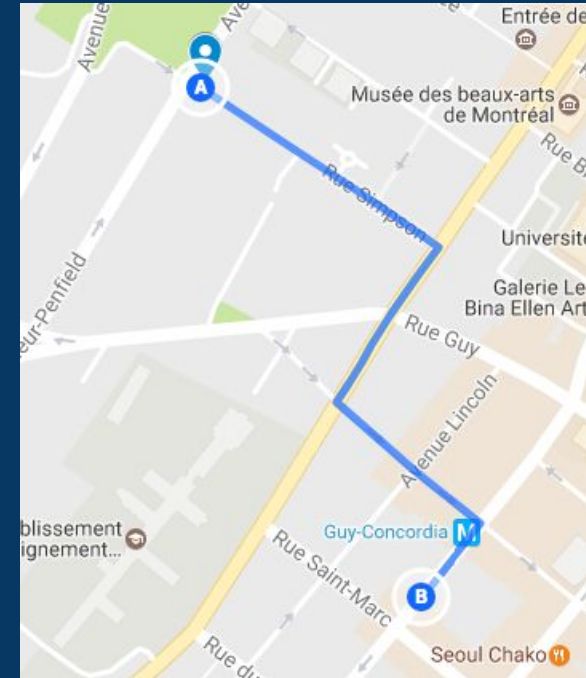




# Introducing new sports



- Royal Montreal Curling Club
  - Sec V students carry out a physics lab while learning the basics of curling.
  - Royal Montreal Curling Club is the oldest sports club in North America.
  - Introduces students to a non-mainstream sport that they can do for a very long time.







# The city's the limit...



# Potential recruitment partnerships

- Explorations summer day camp
  - Over 400 children aged 5-16 attend summer camp at Trafalgar.
- Debate camp Canada
  - Use of school space for two weeks in summer.
  - Traf teachers, students, and alumni act as facilitators.
- Montreal Hoshuko school
  - Supplemental Japanese school
  - Uses facilities during the school year on weekends.

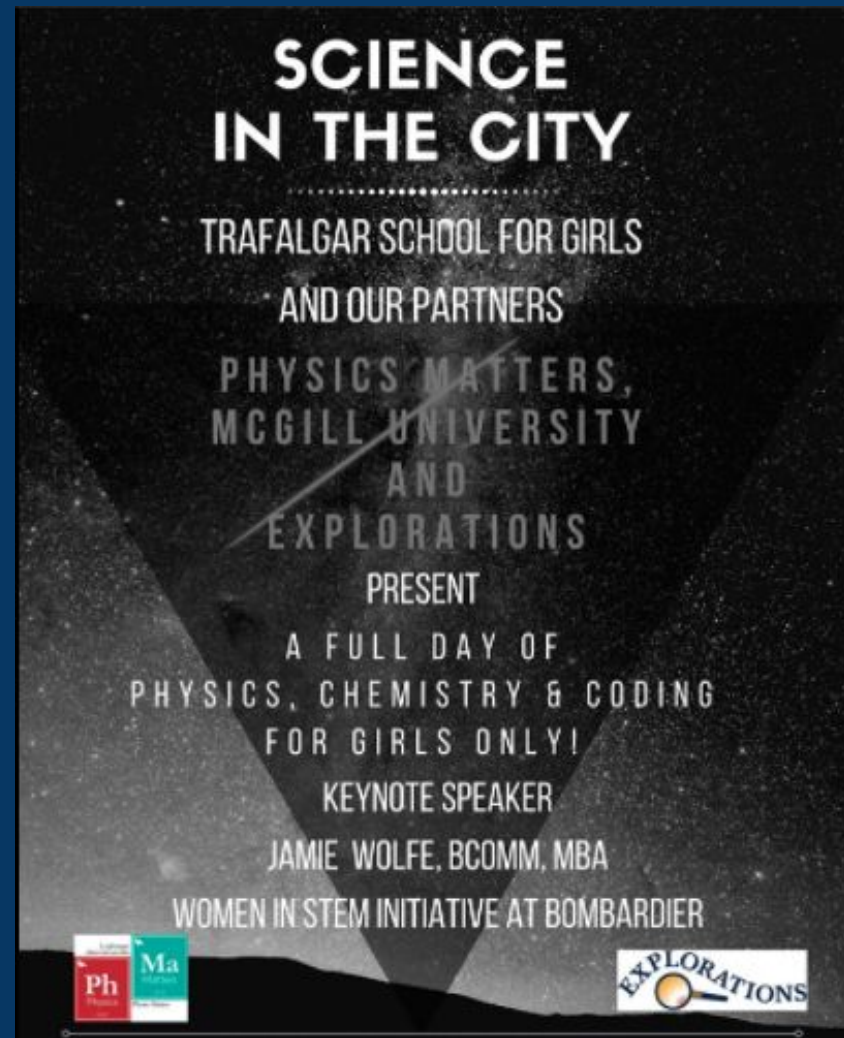




# Science in the City

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- One-day science camp for girls in grades 4-6.
  - 52 girls participated
- In partnership with:
  - Physics Matters, a McGill University Physics dept. outreach group
  - Explorations camp
  - Bombardier
- Various science-related workshops:
  - Physics
  - Chemistry
  - Coding











# Lesson plan: Teaching life skills

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[bit.ly/nCgS17](https://bit.ly/nCgS17)

# Our contact info

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Please feel free to get in touch with either of us if you have any questions or need help getting an idea off the ground!

Christianne Loupelle

[cloupelle@trafalgarc.ca](mailto:cloupelle@trafalgarc.ca)



@c\_loupelle

Adriana Ruffini

[aruffini@trafalgarc.ca](mailto:aruffini@trafalgarc.ca)



@MsRuffini