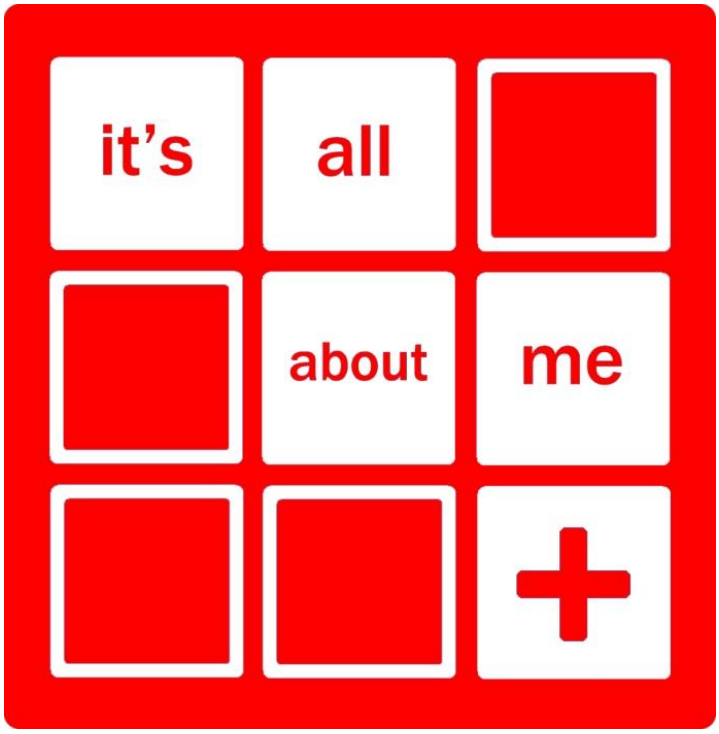


2010-2011
School Year Report

Stephen Jones
June 2011

Hôpital St-Boniface Hospital
RECHERCHE • RESEARCH

2010-2011 School Year Report

Prepared for: St. Boniface Hospital Research
Prepared by: Stephen Jones, Teaching Liaison
June 2011

Summary

This report details major outreach initiatives at St. Boniface Hospital Research Centre in the 2010-2011 school year. St. Boniface Hospital Research operates *It's All About Me*, a formal partnership between St. Boniface Hospital Research and the Louis Riel School Division. The 2010-2011 school year has seen a significant expansion of this programming that includes the development of an on-site laboratory for youth.

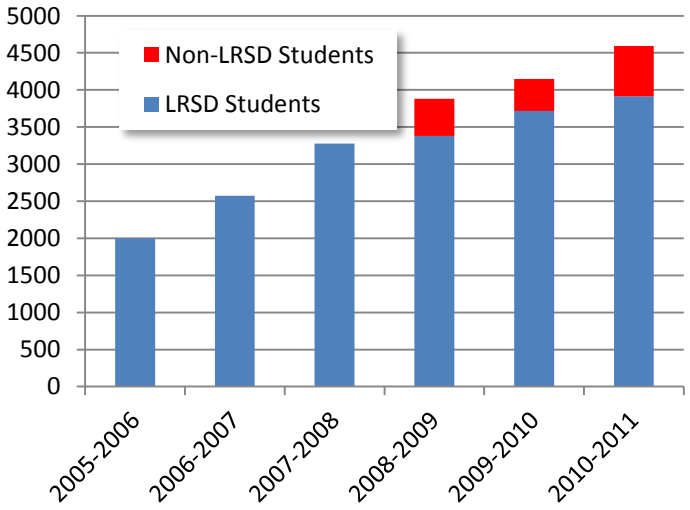
It's All About Me is a health science education partnership between the St. Boniface Hospital Research Centre (SBRC) and the Louis Riel School Division (LRSD). The 2010-2011 school year is the sixth year of this partnership, designed to connect current biomedical science at SBRC and medicine at St. Boniface Hospital with regular classroom instruction across LRSD. *It's All About Me* is continually developed in collaboration with teachers, administrators and staff from both sides of the partnership. Stephen Jones of SBRC coordinates *It's All About Me* and implements classroom sessions with Divisional support from LRSD Instructional Support Coordinators Harry Bell and Eva Dupont. Meghan Kynoch worked her second school year with *It's All About Me* on a part-time basis to develop and implement parallel programming for French Immersion schools. Funding for this initiative consists of equal contributions from SBRC and LRSD with a $20,000 PromoScience grant from the Natural Sciences and Engineering Research Council of Canada (NSERC). Our yearly launch and initial planning meeting with LRSD partner schools took place at SBRC in October 2010, and classroom sessions took place throughout the school year in one-day to one-week blocks in each school.

Our work with youth focuses on health and science curriculum connections to SBRC in grades 5 to 8 in English and French, extending to other grades as requested by teachers. In the 2010-2011 school year, all elementary schools in LRSD were targeted as part of *It's All About Me*, reaching 29 schools in collaboration with more than 125 classroom teachers. This work extended to 9 other schools in 6 other school divisions. In total, we connected with 4591 students in 167 classroom sessions and 22 Research Centre tours. Teacher feedback on experiences was highly positive.

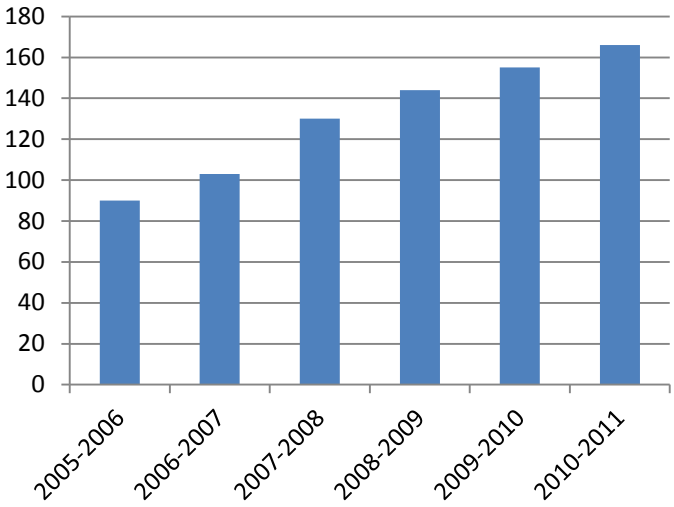
Based on the strength of the *It's All About Me* partnership, in February 2011 Manitoba Education provided SBRC with $450,000 towards the development of a teaching lab for youth. This lab, to be completed in early 2012, will be available to students in LRSD as part of *It's All About Me*. This funding will require an expansion of SBRC's outreach efforts beyond LRSD in future school years. As this new direction in our work with youth develops, SBRC has made a commitment to maintain the level of service we have developed with LRSD through the *It's All About Me* partnership.

Year	Classroom Sessions	LRSD Students	Non-LRSD Students	Total Students
2010-2011	**167**	3916	**675**	**4591**
2009-2010	155	3717	430	4145
2008-2009	144	3380	500	3880
2007-2008	130	3275		3275
2006-2007	103	2575		2575
2005-2006 (pilot)	90	2000		2000

Students Reached



Classroom Sessions



LRSD Partner Schools 2010-2011		
Archwood School	Highbury School	Samuel Burland School
Collège Béliveau	Island Lakes Community School	Shamrock School
Darwin School	École Julie-Riel	St. George School
Frontenac School	Lavallee School	École St. Germain
George McDowell School	École Marie-Anne-Gaboury	École Varennes
Glenlawn Collegiate	Marion School	Victor H. L. Wyatt School
Glenwood School	Minnetonka School	Victor Mager School
École Guyot	Nelson McIntyre Collegiate	Windsor School
H. S. Paul School	Niakwa Place School	Windsor Park Collegiate
Hastings School	École Provencher	

Other Schools 2010-2011 (outside LRSD)	
Acadia Junior High (Pembina Trails SD)	Lowe Farm School (Lowe Farm, Red River SD)
École Dieppe (Pembina Trails SD)	École Viscount Alexander (Pembina Trails SD)
H.C. Avery School (Seven Oaks SD)	Westgrove School (Pembina Trails SD)
John Henderson Junior High (River East Transcona SD)	Scott Bateman Middle School (The Pas, Kelsey SD)
Home School Community	

St. Boniface Hospital Research Centre Outreach Goals

Our unique and collaborative approach to outreach is based on these goals:

- Making life science education and expertise accessible for students, teachers and the general public
- Working with the community to connect the public to medical research
- Broadening public awareness of the roles of St. Boniface Hospital and St. Boniface Hospital Research
- Creating an understanding of the science behind health
- Demonstrating the contribution of our research programs to society
- Sharing our research and passion for science

It's All About Me Partnership Overview

The *It's All About Me* partnership between the St. Boniface Hospital and Louis Riel School Division is designed to support health and science literacy for students and teachers in the middle and senior years by connecting science learning in the classroom to the current research and daily work done at the St. Boniface Hospital and Research Centre.

- *It's All About Me:* learning that health, science, research and medicine have meaning to each of us as individuals and as a community
- Partnering since 2005, the St. Boniface Hospital Research Centre and the Louis Riel School Division work together to bring current science and medicine at SBH into all schools of the LRSD, connecting with over 20,000 kindergarten to grade 12 students
- An increased focus on students in the middle years (grades 5-8) to support students at a formative age where their decisions and attitudes towards health and science are developed
- Learning experiences are developed on an ongoing basis in collaboration with participating teachers and brought into classrooms, fitting with regular classroom instruction and meeting provincial curriculum learning outcomes
- Classroom "scientist-in-residence" sessions with staff from the St. Boniface Hospital Research Centre include lab-based activities, dissections focussing on current research and disease, research presentations, scientific technology and much more, tailored to the needs of schools, teachers and students
- We work together to expose students, parents and teachers to the nature of science, the science behind health and to current health science in their community
- Our goal is science for all: showing *all* students how the material they learn in class across curriculum relates to both them as individuals and to applications at SBH
- We hope to create a basis for further science learning and to address the literacy skills required to understand the rapidly changing worlds of medicine and science

It's All About Me Partnership Goals

Our common goals are:

- To identify and understand how work in the classroom connects to health care and basic medical research at St. Boniface Hospital and Research Centre
- To continually develop a model for exposing *all* students to the work done at SBRC and SBH in a meaningful way
- To develop a framework to include all students in extending their personal understanding of health, the nature of science, scientific inquiry and design
- To provide an opportunity for teachers to engage in a professional learning community with "resident-in-schools" scientists to support and sustain the inquiry and design nature of science learning
- To maintain a relationship and a suitable vehicle to facilitate the communication and sharing of resources and expertise and between LRSD students in both French and English programs, teachers and families and the St. Boniface Hospital and Research Centre

New Initiatives, Activities and Achievements in 2010-2011

Building upon on the success of the first five years of *It's All About Me*, several new classroom sessions and initiatives have been developed in collaboration with LRSD teachers and other partners this year. Some examples are briefly detailed below:

- *Year-Long availability of French Immersion programming:* Meghan Kynoch, a 3rd year Biochemistry student from the University of Winnipeg, was hired on a part-time basis from October-May to provide French sessions, marking a shift from past years in which French programming was only available in May and June. This allowed for more direct curriculum integration in French Immersion schools
- *Teacher advisory committee/working group:* We have been working with a small committee of grade 8 teachers throughout the school year to improve our divisional web content and compile activities that link classroom learning to *It's All About Me* activities
- *Increased Divisional Support for Whole-School Initiatives:* Based on the success of last year's whole-school activities, we worked with all kindergarten to grade 8 students at five schools. Harry Bell of LRSD provided support to teachers in extending and integrating *It's All About Me* activities at these schools
- *Live cell imaging:* With last year's purchase of an Olympus inverted phase contrast microscope, we held several classroom sessions using live cells in culture
- *EKG/EEG:* Purchase of a Biopac Student Lab provided the ability to run basic electrocardiograms and electroencephalograms on students in their heart and brain health learning
- *Blood Pressure:* Purchase of six blood pressure monitors provided students with the opportunity to understand blood pressure as a measure of heart health and cardiovascular disease risk
- *Health and Physics video project*: With Manitoba Education and the Canadian Cancer Society, we produced 12 videos as part of the Grade 12 Physics Curriculum, explaining the experience and technology of different medical imaging modalities. Students from Nelson McIntyre Collegiate played the roles of patients and narrated the videos which will be made available to all physics teachers in October 2011.
- *Stem cells and cardiomyoplasty (Grade 8 Cells and Systems, Grade 11 Biology)*: Investigating stem cells in current research at SBRC, use of different stem cells in research and therapy, activities for students to predict their own medical future
- *Survivor Science: Get Fit Challenge (multiple grades)*: With George McDowell School, a week-long cross-grade program based on fitness and health. In multi-age teams, students participated in mini-challenges and created healthy meals in an Iron Chef challenge
- *Tours:* With six groups of grade 8 students, we held tours at the Research Centre prior to classroom sessions. This approach appeared successful for classroom engagement.
- *Flaxseed and nutraceuticals (Grade 6 Health) :* Highlighting current flaxseed and nutraceutical research at SBRC and its connection to atherosclerosis and heart health
- *Increased focus on diabetes (Grade 6 Health, Grade 8 Cells and Systems):* Again, this year saw an increase in interest towards investigating type 1 and type 2 Diabetes in through the cardiovascular and nervous systems, detailing the molecular and cellular processes behind the disease and connecting to patient cases, neuropathy, retinopathy and

cardiovascular disease. Teachers have supported an increased focus on physical activity, sugar content, fat content and in foods such as energy drinks, fast food etc.
- *Increased multiple visits:* this year has again presented us with the opportunity to make some repeated visits to schools throughout the year to demonstrate multiple curriculum connections to SBRC and explore various topics with students on a recurring basis
- *Ron Duhamel Innovation Fund Award:* Stephen Jones received the Ron Duhamel Award for innovation in health care at St. Boniface Hospital

New Teaching Lab Development

In December 2010, SBRC submitted a proposal to Manitoba Education seeking financial support for the construction of a student teaching laboratory at SBRC. On February 14, 2011, Premier Greg Selinger announced $450,000 funding in support of this development. The lab space will be a fully functional biomedical science laboratory with space for 30 students to work in a safe and controlled environment, putting youth in touch with health science in a way that is not possible in the classroom. Construction is slated to begin in fall 2011 with projected completion in late spring 2012.

The success of this proposal is based on the strength of the *It's All About Me* partnership. The lab space will be available to interested teachers in LRSD, but due to the nature of the provincial funding, the space will also be available to other school divisions. We are continuing discussions to ensure that we maintain the level of commitment we have to LRSD schools through the *It's All About Me* partnership as the lab space becomes available. This will include the maintenance of an in-class component and hiring of new staff to continue to meet the needs of LRSD teachers. As we expand into other school divisions, the model of collaboration we have developed with LRSD will serve as a template for our interactions with new partners.

Classroom Activities

Time in schools is generally scheduled as two-day to one week blocks in schools as experiential "scientist-in-residence" sessions, often followed by tours of the Research Centre for students. All classroom sessions include an introduction to SBH and SBRC, an introduction to the research programs and researchers at SBRC, and a hands-on classroom session that connects SBRC research programs and the science and health behind them to classroom learning.

Planning for this year's partnership activities began with an introductory meeting for grade 5 to 8 classroom teachers at the Research Centre in October 2010, followed by individual meetings with Stephen at schools. In collaboration with classroom teachers, classroom sessions and Research Centre tours were designed and scheduled to connect with student learning and school needs. In addition to our efforts to introduce students to the people and work at SBRC, our continual work to address cluster 0 objectives, and some of the new initiatives outlined above, some representative examples of our grade- and curriculum-specific activities are as follows:

Grade 4 Cluster 2: Light; Grade 4 Cluster 3: Sound
- How scientists and doctors use light and sound to understand the body through microscopes, stethoscopes, ultrasound, X-Rays

Grade 5 Cluster 1: Maintaining a Healthy Body

- Heart and lung dissections, heart disease, diabetes, asthma
- Heart health and exercise
- MRI puzzles and medical imaging, how we 'see' inside bodies
- Brain disease, neuroscience and brain health

Grade 6 Health: Fitness Management/Healthy Lifestyle Practices

- Heart health, heart rate and cardiovascular fitness, heart rate activities
- Diabetes, exercise and nutrition

Grade 7 Cluster 1: Interactions Within Ecosystems

- Ecosystems within your body, disease in the ecosystem, epidemics and spread of disease throughout a system activities
- Beneficial and harmful microorganisms in the environment: investigating with bacterial swabbing and antibiotics
- Health and sustainable development

Grade 8 Cluster 1: Cells and Systems

- Heart attacks and heart failure from the whole organism to the cells of the heart, types of cells in the heart, cell specialization and current research
- Stem cells and the future of heart therapy
- Neuroscience and neurological disorders from cells to system with a focus on disease and current research at St. Boniface Research Centre
- Diabetes and diabetic neuropathy

Grade 8 Cluster 2: Optics

- Medical imaging and microscopy
- Eyes and diseases of the eye, diabetic retinopathy, eye dissections

Grade 9 Cluster 1: Reproduction

- Bacterial transformation: genes, mitosis, genetic engineering

Grade 11 Biology

- Cardiovascular research presentations and heart dissections
- Stem cell research at SBRC

Grade 12 Biology

- Molecular and cellular basis of medical research, basic molecular biology experiments (bacterial transformation, restriction enzyme digests of DNA and DNA gel electrophoresis)

Program Evaluation

The following are compiled from comments by *It's All About Me* staff, Research Centre staff and respondents to a program evaluation sent to collaborating teachers and administrators in partner schools. Detailed teacher responses to the specific questions from the evaluation are appended below the summary.

Rating of the Partnership
Averages from 43 teacher responses to an online evaluation, based on a rating scale from 1 (strongly disagree) to 5 (strongly agree)

This partnership encourages students to consider careers in science	**4.8**
This partnership motivates students to further pursue studies in science	**4.7**
This partnership increases student interest in science	**4.9**
There was an appropriate balance between instruction and hands-on activities	**4.9**
Information presented was appropriate to student prior knowledge	**4.9**
The information presented and activities performed were well-aligned with curriculum	**4.8**

Areas of Success

- Direct curriculum integration of classroom visits and activities
- Ongoing teacher involvement in planning: increased relevance and connections, gave the sense of true partnership. Teacher involvement in the process is increasing with increased experience with the partnership
- Hands-on classroom experiences create a high level of student engagement
- Grade 5 to 8 students continue to be the ideal age group for programming of this nature
- Connecting with students at a point where curiousity and interest in science is high can affect science and lifestyle choices. Students are very excited to learn about their bodies and the science behind how they work
- In our sixth year, we are again seeing students in successive grades and demonstrating connections across grade levels
- Teachers appreciate the connection between healthy choices and the science of health. Diabetes and nutrition lessons reach students at a critical age
- Combination of scientific literacy/health literacy/nature of science/community
- Disease-based teaching using sample patient cases created a health context for learning of science outcomes, students react to 'real' stories of people's experience with disease
- Humanizing science, medicine and scientists for students: students felt that we were approachable and challenged their conceptions of science/scientists
- Organs/dissection and relation to disease/health very effective for student engagement and learning
- Students learning about and connecting to their community
- Student feedback suggests that they look forward to future visits

Areas for Improvement

- Greater availability of French instruction
- Splitting sessions across days instead of half-day sessions to allow for teacher reinforcement of ideas
- Make vocabulary lists and detailed program summaries available to teachers before sessions in schools
- More focus on nutrition
- More time with each class and multiple visits to enhance curriculum
- Further development of assessment tools (pre- and post-) in collaboration with teachers
- Expanded lists of teacher resources and related activities

Potential Focus Areas for 2010-2011

- Develop a model for continuing the *It's All About Me* partnership into the 2011-2012 school year, maintaining our commitment to LRSD through the development of the new teaching laboratory.
- Enrichment activities for selected students
- Engage more teachers in the development and sharing of pre-visit activities and post-assessments.
- Continue developing an increased focus on student health choices, nutrition and healthy living
- Expand teacher planning committee to grade 5 teachers as we have for Grade 8: create a working group of teachers who have experienced the partnership for transmission of information, development of pre- and post-visit activities and assessments
- Ongoing development of wider program assessment and divisional web portal
- Foster increased public and parent knowledge of partnership: circulate pamphlets and create a public website

Acknowledgments

Many thanks to the students, teachers, administrators and staff of the Louis Riel School Division for welcoming this partnership into your schools. The curiousity, interest and enthusiasm of your students are encouraging to everyone who is interested in the future of science and medicine. Thanks to Terry Borys, Superintendent of LRSD, Dr. Grant Pierce, Executive Director of Research at SBRC and Christian Michalik, Assistant Superintendent at LRSD for their constant support of this unique partnership. Many thanks also to Harry Bell and Eva Dupont at LRSD and Dr. Ian Dixon at SBRC for their advice, resources and expertise.

Appendix 1: Teacher Responses to Evaluation

Teacher input into program development has always been important to this partnership. How can we better integrate these experiences into classroom instruction? Do you have suggestions or ideas for activities/assessments that could be done in the classroom before or after the session?

- Your openness to programming suggestions allowed for highly effective integration into a number of areas of classroom instruction and assessment. I have no specific ideas for pre or post session activities, but previous experience suggests that, given the topic, there is never a shortage of ideas that can be tailored to meet the needs of a class, a grade, or an area of study. Regarding assessment, depending on the purpose and the outcomes focused on, there are a wide variety of tools available.
- One idea would be instead of doing a heart quiz/unit test have the students use the actual heart to answer the heart`s structures and functions/importance. This could be done perhaps in mini groups or table stations.
- This was an easy fit with the curriculum in grade 8. We carried the session further in the classroom by learning more about the nervous system and doing inquiry projects about diseases/disorders of the nervous system.
- I've got a good idea of what needs to be done ahead of time, so I just do it. It works well.
- All the activities were fantastic. My students loved this experience. A written follow up activity for the teacher to do with the students after the sessions are over would be helpful to review what they learned or understood.
- Keep up the excellent effort
- The launch presentation at the St. Boniface Research Centre really got me interested in IAAM. The information binder was helpful. The binder should have lessons/activities/assessments that go along with the various clusters. This could be shared with all the science teachers from the division.
- Meeting with Stephen and Meghan beforehand helped us be better prepared.
- Everything is great.
- Given the time that was available, the pacing was good and has improved over time. I have the kids fill out an exit inventory after the visit and what I teach them prior to is in preparation to the activities presented.
- I like the idea of us going to the research hospital to work in a classroom setting for a day, or maybe two or three days.
- It is important for the students to have the vocabulary down so they can better understand the process so I think it is important for the students to do 3 point approaches or any other form of vocabulary development prior to the activity. It would be nice if there was some form of assessment that the classroom teacher could give that tied directly to the lesson. When seeing the activity for the first time or only seeing part of the experiment because of other teaching responsibilities, it is difficulty to give a formal assessment. However, I feel it is important for the students to know, at the beginning of the activity, that they will have an assessment on the activity following the activity.
- Perhaps a worksheet/word search reviewing vocabulary and new concepts taught during the hands on workshop, cementing the new information provided to students.
- Perhaps some before and after classroom follow-up activities
- "As an educator, I learned a lot of valuable information. I wouldn`t change anything. As a scientist, Steve was able to communicate and motivate the students to explore the unknown. He presented information in such a manner that the students listened carefully and respected the exploration of the heart because of the way in which he presented it. Thanks for a great day!
- By far the questions that came out generated and inquiry. The students were completely engaged and haven't stopped talking about the day. Thanks so much.
- I think it would have been helpful if I had known what was to be discussed with students. There are two teachers in our room on a part-time basis and I might of missed something. I or my partner might have been able to pre-teach some concepts.
- It would be interesting to have students go in partners or small groups to find out more information about specific germs. They could find out what that germ looks like, where it is found, what it does, etc. This might be a good follow-up activity.
- Perhaps the students could share prior knowledge and do some predictions with their teacher before the lesson, so they are thinking about the topic before they enter.
- After the session, it would be good to discuss how this study and others like it could be applied in the world of science, and what it could lead to. Also, how the scientist could take it further.

- I think the timeline is good. I would like to see an enrichment follow up for selected students.
- Sometimes the timing of the sessions does not coincide with the presentation in class. However, they then serve as a review of the concepts presented earlier so it's not overly problematic.
- I cannot think of anything at this time.
- I taught much of the unit Simple Machines prior to our day then was able to integrate what we learned with Steve with the remainder of the unit. The students were able to explain levers and give examples especially referencing the body. We are starting our Health unit on Nutrition. I will tie in what we learned and how food and water helps keeps our bodies working as a Simple Machine."
- There's lots that can be done on either side of the presentation. Having been through the process once, will help to develop some ideas. A survey such as this one would work well (especially if your presentations tend to be pretty standard/similar).
- In my opinion, the teacher's responsibility is to choose a workshop among the choices provided by Steve, and then make it work within their teaching.
- The students have many questions. Perhaps more time spent answering questions would be beneficial. Also a discussion of other body systems would be great. Maybe the students can do a write-up, an evaluation of the session as well.
- I was very pleased with the program and how it ties both my Health and Science curriculums together.
- Great presentation!

Overall, how do you see this partnership affecting student learning? Do you feel we have made a difference to student health literacy, understanding of the nature of science and general science interest? What approaches do you think worked well? Please give specific examples if possible

- In my experience, the effect on student learning has been overwhelmingly positive. It encourages a sense of curiosity, helps develop a solid understanding of the workings of the human body, provides specific vocabulary, and allows the children to work with adults who display a genuine interest not only in science, but also in making science real to them.
- Yes! The dissection was done this year as an introduction to the heart. This helped when we got into curricular outcomes. The students felt as though they were experts after doing the dissection. We also visited the Centre so the student knew Stephen which I believe made them feel more at ease and comfortable.
- Making real world connections is a very important part of creating engagement in learning. The real world applications that Stephen brought into the class were invaluable in helping students understand why learning about body systems and cells is important.
- Showing the kids pictures of actual scientists is quite motivating.
- The students were really engaged in these sessions. They particularly loved testing for bacteria and seeing the lab results the next day. They also loved the epidemiology portion (the spread of the disease and trying to locate who had it first). The hands-on activities really helped encourage their interest in Science.
- We need your presentations to bring realty to science.
- The students really enjoyed the activities. It was very informative, fun and hands-on. You really linked what they were learning to "REAL LIFE". The presentation could also include a list of possible careers for the students who were really interested in the material.
- Students are engaged and thoroughly enjoy the experience.
- The hands-on activities are definitely engaging because we don't regularly have at our disposal the kinds of manipulatives and instruments that your program brings in to have the kids interact with.
- Students were very excited and felt very motivated to ask questions and be curious about what they were learning.
- I have found the kids look forward to this activity every year. At the beginning of the year they always ask if we are going to do "the science thing in February like we did last year". I think this partnership has made an impact on the kids' view of health and general science interest.
- The students were able to see science in a way that was real and meaningful. Making the connections to real life is so important. Actually making solutions and then removing the DNA clearly showed the students what occurs in a lab situation.
- The hands-on approach always seems to be most effective with students. It generates curiosity and inquisition.

- Students are able to see science in the real world
- I really think that opportunities such as this open the eyes of our students. I am confident that someone will think about the endless possibilities that the Faculty of Science, will have for them. Overall, I believe the students will take their health a little more seriously. The Slurpee example with the sugar was great!
- Students learned that their questions can guide instruction. They really were able to see and experience some of the things we talked about. All of the students even the wary ones were enthralled.
- I think this is a great partnership that will have a lasting impact on students. I certainly added to what I know and I will be able to better share with students in the future.
- Students enjoyed looking through the microscope and being able to observe their own germ collection
- It was so valuable for the students to meet an actual scientist, as well as use genuine scientific equipment. Anytime students are actively involved is good. The visuals of germ photographs and bug slides were a help, too.
- Overall very education and informative for all students in my class.
- This program really brings the medical/research communities into the classroom. Bravo!
- This greatly influences the students in terms of their overall interest in sciences. Mr. Jones' presentations show to the students how real science works and looks. It makes them feel like studies in sciences are much more accessible.
- This partnership had definitely made a difference in student learning. The students loved seeing the video clip of how cells, muscles, etc. work. They also enjoyed the hands-on experience with the pig hearts.
- This partnership makes kids more excited about Science, which is important at the Middle Years level. Talking to grade 6/7 students about the reasons to stay healthy and direct links between bad choices and poor health is so important. The kids seem to take the message more seriously in these sessions.
- They enjoyed the power point of the lab. Steve makes their learning interesting and relevant to them plus at their level. It is very student-friendly and gives the students great experiences such as the dissections of the heart and Steve was able to explain the parts and how the aorta, etc. works.
- A majority of my students got right into the lesson and gained much knowledge and understanding. It connected well to our nutrition unit we were completing in Health. Hands on, visual presentations always work well!
- The approach is three pronged, which increases the likelihood of reaching all of our students. The PowerPoint provides the background information and visual supports to reach those that crave the facts, figures and content based stuff, while Steve's vast knowledge and accessible way of relaying and building on the PowerPoint is easy to listen to for those auditory leaners in the crowd, and lastly, the dissection is such a tactile experience for the people who love to get right in there and figure things out while holding the "thing" in their hands.
- THIS PRESENTATION ENHANCED STUDENT LEARNING
- The students are more knowledgeable of the work of a scientist. The power point, the question time, the hands -on work was beneficial.
- The hands-on experience brought the students' understanding to the next level. The ability to actually touch and manipulate the heart and lungs, and see the different parts really enhanced their overall learning.
- They loved the hands on activities. They loved seeing the bacteria growth the next day.
- The presentation helps the kids understand that research and science has an impact on their life.
- The eye dissection allowed the kids to see the parts of the eye they had studied. Direct connections were made to our unit of study. The opportunity to try things really interests the students and deepens the learning experience. Thanks!
- This partnership has been an excellent way for students to do hands on activities involving science. Our students are motivated and excited to work with Steve and the All About Me program.

What would you change or improve upon for next year? If possible, please comment on program/teaching specifics, scheduling, resources etc.

- I wouldn't change a thing: I appreciated having a whole-school consultation/planning session; the half-day cycle format made delivery of the program manageable and effective; the focus on hands-on activities was perfectly suited to the needs of the children; and the support provided for activities was always thoughtful and accommodating on so many levels.
- Nothing, I think it is great!

- It would be terrific if Stephen could have done 3 - one hour sessions rather than one long session. The beginning of the afternoon was too much talking and sitting so the students were not as focused as they could have been towards the end when we were doing dissections. Shorter sessions with a couple days in between would have also allowed for me to do more immediate follow-up to help solidify learnings.
- Very little.
- It was very well organized. I would not improve on anything except maybe leaving us with some form of written activity to complete after the sessions are over (so that the students have something to look back on).
- We would probably do a follow-up activity in regards to assessment of the material that was presented.
- I think I would like another half-day to talk about nutrition and healthy life style choices. The link between diet and disease could be made more concrete or tangible through visuals and a variety of media. This might also touch on the falsehoods of advertising in regards to "low-fat" products and other dubious claims. Activities that had a game format and required some of the critical thinking that is done when you are shopping and reading nutrition labels, for example.
- It would be nice to know in more detail what the students will be learning prior to the week visit from the scientist. That way a unit could be planned around the visit.
- Make the contact time longer with the kids.
- We had some trouble with scheduling at our school. Knowing more in advance, which was our issue, would allow us to better prepare the students for the activity. Also, having a post-assessment may help to focus students during the activity to try and develop a better scientific understanding.
- We need to be sensitive with discussing the heredity of diseases such as heart disease, cancer, etc. Students may become fearful of getting heart disease or cancer when they learn that if it runs in a family it is more likely to happen to them. I don't think they need to know this information at a young and vulnerable age.
- It was great, no complaints, continue on as scheduled.
- I was happy with how things proceeded.
- I suggest that there be another activity to keep the students engaged while the microscope is in use. The drawing of germs was good, but perhaps making germ models out of plasticene or modeling clay would be another possibility.
- I wish we had more time to explore and ask questions in all areas of the presentation
- Same comment as previous, timing could possibly coincide better with units presented in class.
- It would be great to have half a day and then a follow up lesson later in the week.
- Everything was great!
- It was fantastic this year!
- I did have at least 3 students that couldn't "stomach" the hands on part. I wonder if there is a "virtual dissection" that would work as a supplemental lesson for those who have difficulties with smells, etc.
- In an attempt to limit Steve's "residency" at Guyot to 1.5 days, I felt rushed in our afternoon as accommodations had to be made for recess and phys ed - it's the kids, honest! Perhaps in the fall we could address this issue, or if it is of a concern to you, I'd be happy to explain in detail what I mean.
- Perhaps more time spent with each group would be good.
- Some of the hands-on activities were a little rushed for the time we had.
- It would be great to learn about how other schools are working with the All About Me program. I would love to share our resources and activities.

Can you suggest any specific topics or areas of the curriculum that you would like to see addressed in the future? Please be specific.

- Outcomes taken from the PE/Health curriculum could be addressed quite effectively (e.g. Safety ~ harmful substances; Healthy Lifestyle Practices ~ importance of physical activity etc.).
- More brain study if possible.
- You always satisfy.
- Find other experts who could present on other clusters that are not part of this program.
- No, not for my grade level.
- I have had the opportunity to see ecosystems and particle theory of matter concepts being addressed. I think those are the most appropriate of the 4 grade 7 clusters and I have no other areas that I would like to see addressed.
- There was a huge variety of topics covered across the grades at our school over the past two years. They included germs, bones, heart and lung dissections, brain dissections, eyeball dissections, microscope

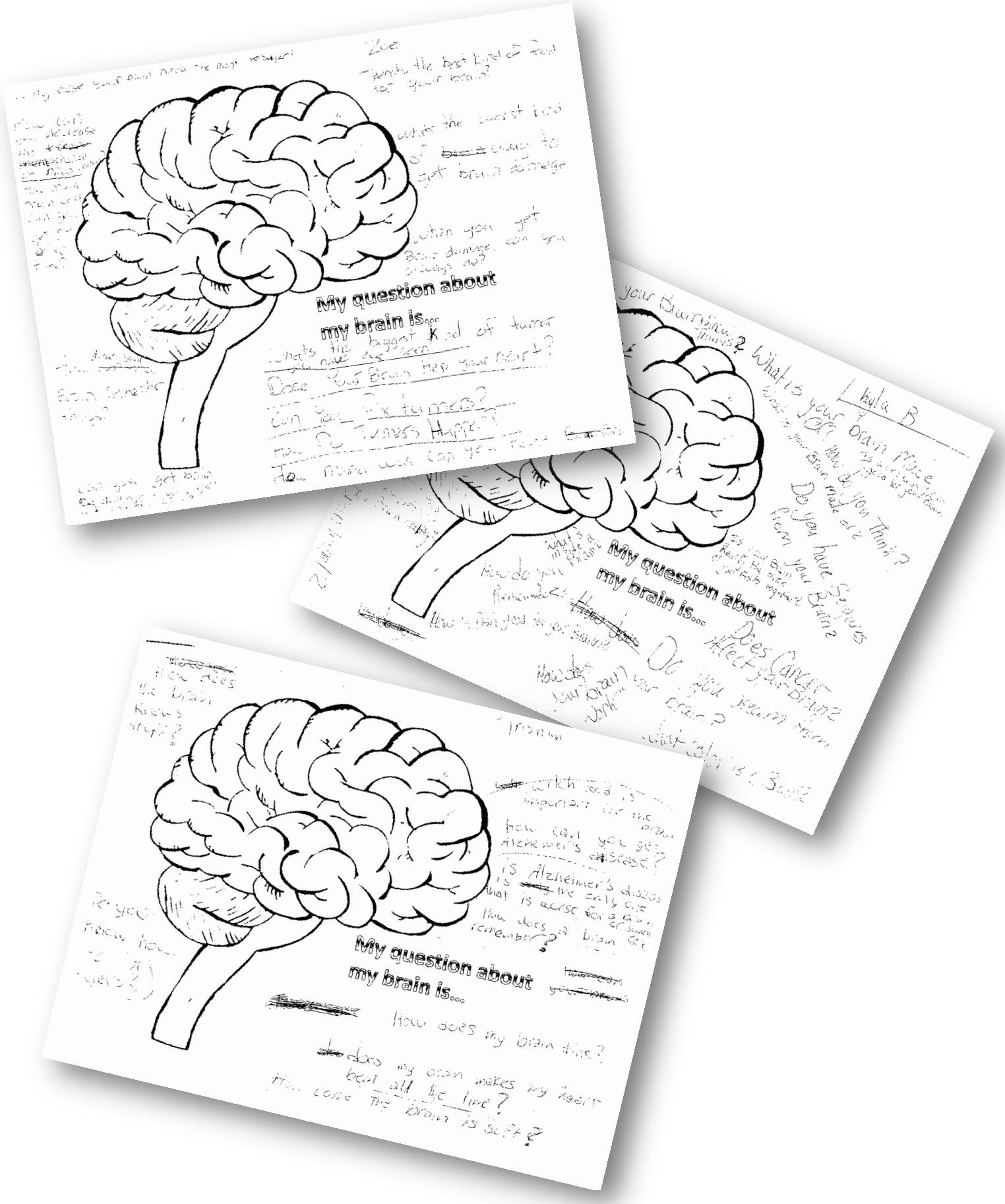
work. It has been great for our students.

- I would be interested in the effects of sleep or the lack of sleep on learning. This is very relevant for kids today and not well understood.
- I don't think we need to confine the topics to what is presented in the curriculum. Our students did a human body study this year, even though they are primary students, and would have loved to examine a heart and lungs.
- no comment
- Not sure. I would like to see all aspects of what is presented in order to make a better informed suggestion.
- In keeping with heart theme, since many of our students participate in sporting / activity after school, perhaps an angle to explore would be how their activities help keep their heart in shape, which activities exercise the heart the most efficiently, the relationship between heart, lungs and general good health, in other words, an extension of what is already included in the presentation.
- Inclusion of a discussion of the other body systems, nutrition, dental health, exercise and fitness

Any additional comments?

- I'm really looking forward to doing it again!
- Thank-you for such a great experience for both myself and the students ;)
- This is a valuable partnership - keep it up!
- The videos are very effective as well.
- It was amazing just the way it is.
- Keep up the great presentations.
- Great program! Thank you!
- I will continue to book Stephen into my classroom.
- I think this program is very worthwhile and it gives students the opportunity to be involved in activities that I don't have the expertise to do with them. Well done.
- All in all my students were highly motivated and excited to learn about body systems. Thank you!
- I appreciate and value the partnership with the St. Boniface Research Centre.
- I spent a good deal of time sharing what I had learned with family and friends after the presentation. Way to go!
- Thank you for doing this. It was a valuable learning experience for the children.
- Our students look forward to these visits every year. They talk about the presentations afterwards and continue to ask questions and reflect on what they experienced. This is a great testament to the impact of the program.
- Thank you for a wonderful experience! The students were engaged and enjoyed their time with Dr. Steve.
- I think the program is great and I wouldn't change much. Steve was easy to work with and has numerous activities and ideas so planning is easy. He works wonderfully with the students and the kids love the All About Me program.
- Steve is wonderful with the students in that he is patient, candid, funny; the bonus for the students is that he allows them to ask questions as the presentation unfolds, rather than saving them until the end.
- The presentation was wonderful, instructive, and it definitely enhanced the program we are teaching.
- Thank you Steven for another awesome presentation and learning opportunity.
- I would like to do this survey again in the fall when I can reflect upon the up-coming year. At this moment I cannot think that far in advance.
- Steven was very comfortable and relatable to the kids. He showed the kids many interesting aspects of science and health that will stay with them for a long time.
- I love the program and can't wait to continue with more activities next year.

Appendix 2: Student Letters and Work


My question about
my brain is...
My question about
my brain is...
My question about
my brain is...

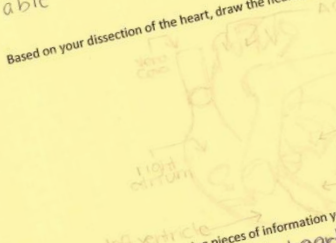
1. Use one word to describe your experience with Steven Jones: Interesting/cool

2. List three things you learned about **cells** during the workshop:
- There are 3 different types of muscle cells.
- A scar is made from collegen.
- There are more than 200 different kinds of cells in your body.

3. Approximately how many cells do humans have in their body?
100 trillion
A human has approx. 100 trillion cells in their body.

4. Describe your favourite part of the workshop?
My favourite part of the workshop was when we got to see a pig heart and be able to dissect it.

5. Based on your dissection of the heart, draw the heart and try to label the parts.



6. Name two other interesting pieces of information you learned during this workshop?
- They use four rat hearts a week.
- The amount of cells in a pinch of your skin.
- The way the type of liquid, keep hearts beating with a
- A stem cell can turn itself into a muscle cell, blood cells, or another type of cell.

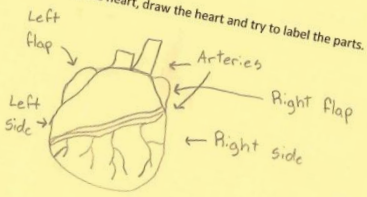
word to describe your experience with Steven Jones: exciting

List three things you learned about **cells** during the workshop:
- Stem cells can learn to be any type of cell.
- Muscle cells work together like bricks in a wall.
- Another type of cell releases collegin to hold the muscle cells together.

3. Approximately how many cells do humans have in their body?
Humans have approximately 50-100 trillion cells.

4. Describe your favourite part of the workshop?
My favourite part was when we got to cut the heart open and see what was inside.

5. Based on your dissection of the heart, draw the heart and try to label the parts.



6. Name two other interesting pieces of information you learned during this workshop?
1. Once you have a heart attack, it takes a while for your heart to shut down.
2. Collegin is like sticky glue that holds all [redacted] your cells together.