

# Participatory Learning through Phenomenon Based Learning: Moving from the Learning Commons into the Classroom Ardagh Bluffs Public School 2017-2020

“The only limit is your mind!”  
*Kiyomi, Grade 8 student, Ardagh Bluffs*

**By Greg Harris**

## Contents

- Introduction: Ardagh’s vision of Phenomenon Based Learning: why we implemented it
- Successful Implementation
- The role of administration
- Enhancing existing inquiry programs (e.g., Genius Hour, small inquiries):
- Beginning the implementation process
- Mindset for working in the Phenomenon Based Learning Environment
  - Philosophy requirements
  - Colleagues
  - Community
  - Students
  - Administration
- Potential Roadblocks
- Other considerations
  - Picking a topic
  - Conferencing and feedback, learning goals, success criteria, tracking
  - Student failure
  - Summative assessment
  - Peer and self-assessment
- Presentation Formats
- The ever popular fun fact section
  - Year one to year three
  - Students were able to work with students from other classes and grades
  - We re-iterated continually that the learning process was the key
    - Trust was essential
  - Our staff had unique strengths
  - Keep on pushing/inviting/accepting contributions
- Conclusion: Do and Don’t for Teacher Librarian Implementation (and Interested Others)

## **Introduction: Ardagh's vision of Phenomenon Based Learning and Why We implemented it**

In 2016-17, Finland started to make Phenomenon Based Learning mandatory in all of its schools. The practice had been used for decades, but wasn't required in all schools (Al Kilani, 2016). Phenomenon Based Learning is defined as real-world phenomena providing the starting point for learning. The phenomena are studied as they exist in the world. The information/opinions do not neatly fit into traditional subject categories so students are not constrained by artificial boundaries of subject content and curriculum.

Phenomenon Based Learning is students working on a problem or provocation of their choosing with some teacher set boundaries. This is an authentic learning process. Student decisions on topic and inquiry lead to deep learning, understanding and engagement. Their inquiry, experiments, and reporting bring in various subject areas as they fit the inquiry. Arts, science, mathematics, history and geography are drawn upon by the students to tell their story about their selected phenomenon.

Stand-alone specific subjects are minimalized. For example, from the phenomenon topic of human rights, a student could study bullying of LGBTQ people, water issues in Grassy Narrows, women's rights in Pakistan or refugees. History could involve comparing and contrasting using timelines as a reference. Geography could deconstruct government decisions in a community. Mathematics could use graphs to compare government spending and the effects of that spending. Arts and media creations could be developed based on how they will best suit the story that students want to tell their audience.

At Ardagh, our collective vision was to give students independent learning challenges where they would view their work as valuable and interesting. Students would be included in designing the learning, presenting and self-evaluating (i.e., meta-cognition) from start to finish. Teachers would conference with students non-stop throughout the Phenomenon Based Learning process. Intermediate teacher Jamie Taylor started the discussion, the entire intermediate division was onside, Taylor applied and received a "Teacher Learning and Leadership Program (TLLP)" grant from the Ontario Teachers' Federation, and we started planning our implementation. (TLLP is presently not funded by the Ontario Ministry of Education.)

We believed this would make a safe environment that would be conducive to risk taking. More than making this a safe place, we wanted to help students make this leap – from intuitive understandings and natural curiosity to knowledge creation – to a space where ideas can be transformed into formalized understanding and further questioning (Ontario Ministry of Education, 2013). "The learning process is the most important part" is what we emphasized to students. If they didn't finish their research, they would present their current understandings; this wasn't a problem, it was a success.

Phenomenon Based Learning was and continues to be a fulfilling, engaging success for students and teachers at Ardagh. The following outlines how we did this and how you can make this happen at your schools.

### **Successful Implementation**

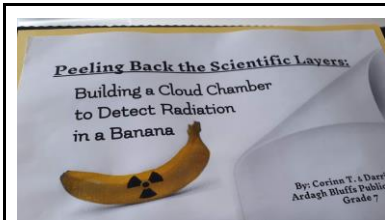
We achieved much of our vision. We exceeded our expectations - students of all levels produced works that reflected passions and great understandings that we had not seen before. Many students loved the freedom to learn the way they wanted to and they loved how they could represent their learning in ways that suited them and their topic best.

## Examples of success:



Rice hut ... started with an experiment to see if negative/positive talk aimed at rice would affect development of mold ... expanded to volume of an ellipsoid, water use, climate impact, microscopes ...

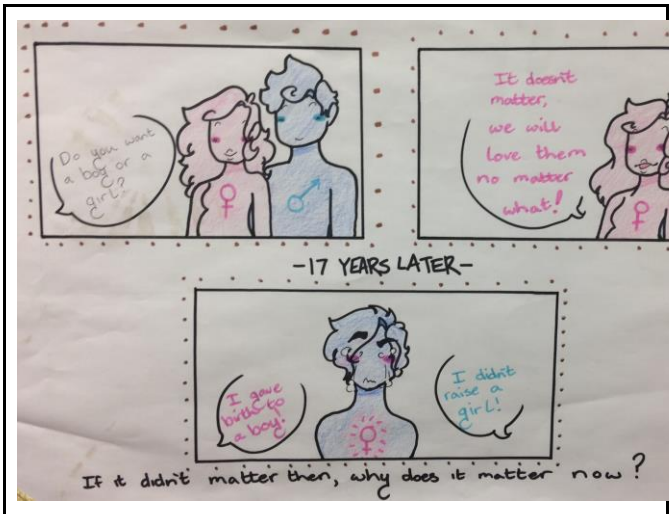
[Click here for more details](#)



Students built a cloud chamber to detect radiation levels in bananas ... analyzing banana consumption with cancer rates by country enabled them to make a connection that large consumption of bananas could possibly lead to contracting cancer. This was supervised by a professional, scientific experimentation wasn't done at school, safety was discussed throughout proposal to presentation.

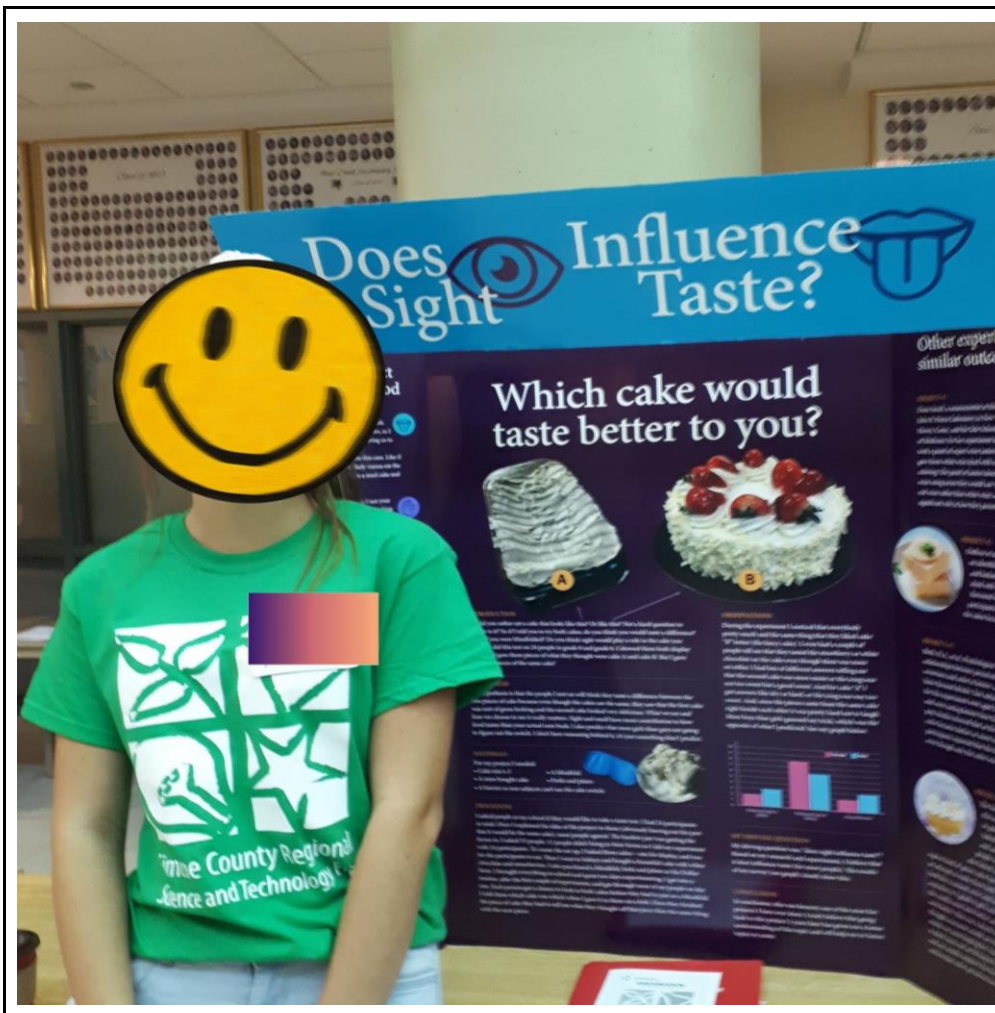


Students not 'known' for academic excellence progressed from an idea to create a kind of a Magic + Pokemon card game from paper draft, to colour draft, to final laminated cards. This cycle required a tremendous amount of reading, writing, drawing, and adjusting 'strength' values of the various card characters to develop a fun and challenging game.



Transgender Rights - students voluntarily sat riveted during the presentation and then asked questions to better understand.

Visual presentation included Leading Questions that seemed to lead you to one answer, but then when you flipped open the 'door' the answer fit the themes 'love is love' and 'acceptance is more important than tolerance'.



This student extended her original inquiry a year later. Developed an attitude to 'finish' her work. Previous research looked cut and paste and was not very deep. One year later, the work was in depth in research and surveying. The student learned from her mom how to move a presentation from idea, to design, to final professional looking product. Her mom taught her how to use the tools; the student applied what she learned. Finished indeed!

A student learned to play a ukulele and sing along. In the next "open choice" cycle, the student wrote a song with lyrics and performed beautifully a number of times.

Antioxidants Effects on Plant Growth - student experiment with antioxidants did make plants grow better in a controlled experiment; potential to eliminate fertilizers was the student's conclusion.

Phenomenon Based Learning was not easy to implement. It was much more difficult than we imagined. Student trust and buy-in did not happen immediately; we discovered introducing change with respect to acceptance was not a given. We thought involving students in the decision-making and planning would have them join right in. We were wrong. In spite of some of their challenges to changing the status quo, we found most students appreciated our debriefing after the Phenomenon Based Learning cycles and that we accepted many of their ideas. This furthered their trust in their teachers. We continued to include students in developing this program and their learning. The majority of students accept, respect and look forward to the Phenomenon Based Learning cycles.



"If we are doing all the work, what are you getting paid for?"

This excellent question came near the end of our very first introduction to Phenomenon Based Learning.

"Drink lots of coffee and socialize," didn't seem like an appropriate answer. We said, "We will be conferencing with you non-stop. We will help you find resources. We will talk with you and ask questions because we will be interested in you and your topics. We will be earning our pay."

We had no idea how much we would be earning our pay.

Assessment of student work fought with our traditional mindsets of having to cover curriculum and assign grades. Our initial attempts at turning learning goals and success criteria and process work into report card grades and marks was not pleasant. We didn't understand. However, through ongoing debriefing and reflecting, we agreed that learning skills and subject related communication skills were able to be reported on. Further, we cemented our belief that relevant feedback given when needed (assessment FOR learning) is much more important to student development and metacognition (assessment AS learning) than summative evaluation (assessment OF learning).

We are confident educators can implement Phenomenon Based Learning in their classroom, division and school. With a teacher-librarian to collaborate with, our confidence increases greatly.

## **The Role of Administration**

Principals have the means to provide funds and time to participants, they want their staff to provide excellent learning environments for their students, and they understand the community.

Administrators can approve Professional Learning Community (PLC) funding which can give your team time to plan. They can approve the purchase of technology such as Chromebooks to increase research time/access for students. They can increase the budget and fund-raising allocations to your team for supplies for students.

They can promote Phenomenon Based Learning in their board-level meetings which can make them look good AND this makes you and your team look good because it promotes and delivers outstanding critical thinking experiences for students. This can lead to a further allocation of funds from Superintendent discretionary budgets.

Principals like to be involved. When they see their teacher-librarian involved with students in areas of critical thinking and collaborative planning, they can see the importance of the teacher-librarian in developing intrinsically motivated students and furthering the abilities of engaged teaching staff. When administrators know the program, they can deliver elevator speeches to visitors, they can promote the excellence of their teaching staff, and they can discuss pros and cons with parents/guardians and lean heavily on the pro-staff pro-Phenomenon Based Learning way of learning for students.

## **Enhancing Existing Inquiry Programs (e.g. Genius Hour and Small Inquiries)**

Where teachers are using “Genius Hour and small inquiries” as a part of their classroom learning programs, Phenomenon Based Learning provides a further extension into student led inquiry. Many students enjoy the freedom for learning provided by Genius Hour. Phenomenon Based Learning furthers this engagement by providing more time to pursue passions in areas of student interest in the world around them. Introducing Phenomenon Based Learning to students as an extension of Genius Hour should help to ‘sell’ the program because students already will come in with a positive attitude to this freedom in learning.

When the teacher-librarians and collaborating teachers share the student learning process and finished products in a public manner (e.g. library as presentation centre, classroom visits with student led workshops) they send key messages to administrators, staff and community that Phenomenon Based Learning is important to student learning and that the teachers doing this support and value student independence and deep learning.

## **Beginning the implementation process**

Initial planning should be used to assess student skills in research and use of technology. This diagnostic type of assessment provides information on how much guidance and modelling will be required. Availability of devices such as Chromebooks and laptops is essential as students need to be able to find information. Searching for grants can be financially rewarding. Personal device use will need to be permitted. If not a part of your school, you will need to educate administration, parents/guardians and students regarding academic purpose and acceptable use and consequences for non-compliance by students. Alignment of teacher-librarian availability with Phenomenon Based Learning classwork has to be arranged. You need to plan an over-arching phenomenon with learning goal and success criteria intentions and book tech times (e.g. Chromebooks, laptops). Decide how you will track conference discussions of learning goals, success criteria, and next steps. Decide how

you want students to present (e.g. gallery walk, scheduled presentations, peer/self evaluations). Set due dates by working backwards from the end presentation date(s).

Start by sharing the phenomenon topic a few days before starting the next cycle. Set due dates, introduce the theme, due date for proposal, set scheduled conferences for each group, set presentation date/place, set a date for debriefing with students. Conference with students about their proposals. Conference regularly. Be sure to see student work - students telling what they have done is not evidence. After presentations, hold a debrief with students (join with other classes when possible) and then implement changes for next cycle.

### **Mindset for Working in the Phenomenon Based Learning Environment**

Philosophy requirements - Be flexible, collegial and collaborative, accepting of mistakes and supportive of corrective next steps for students, teachers and the learning process; know that the learning process is more important than the final product and have a mindset for continual improvement.

Colleagues - Accept any who are willing to join; it may be more cohesive if all the same grade/division teachers begin together but it will not always happen. Make collaboration in this initiative one of your key priorities; teachers and students will need you. Over time and by presenting student learning in various formats you will attract new teachers. For example, showcase student learning by inviting other classes in, display student work in the library/hallway, invite the community in, present at staff meetings with selected students - these actions of sharing will go a long way to convince hesitant staff to join.

Community - Inform families of your plans. You aren't asking for permission. You are sharing the vision.

Students - Introducing change and saying they have freedom to learn may lead to suspicion and anxiety. Reassure throughout their working periods and in their conferences. Consider using status of the class to set unplanned conferences and highlighting those groups who are embracing. During the debrief session, highlight those groups who took risks and presented in interesting and dynamic ways. This will further encourage students to take the risks they need to make.

Administration - Keep administration informed, invite them to debrief sessions, ask for input and advice. This enables them to be current and inform others about the work students and staff are doing.

### **Potential Roadblocks**

Technology - Plan well in advance to book full sets for groups to have. Give up your technology in other subject areas to help convince other staff to change their tech-use times. Define Bring Your Own Device as being essential. Convincing administration then becomes essential.

Student skill sets - Determine in advance what students need such as research and questioning, ethics, and technology skills like Google tools. You determine the needs ahead

of implementation as best as you can and implement appropriately. Develop additional skills as required as you progress.

Student opposition - Most parents/guardians and all administrators were supportive. The most vocal opponents were a few high achieving students. They wanted to be prepared for high school, they wanted direct instruction, and they wanted rubrics so they could clearly see what was required for them to get A+ (90%+) grades. Some of these students did not change their views throughout their involvement in Phenomenon Based Learning even though they achieved at very high levels in their chosen areas of study. Author belief: these students were 12 - 14 years old, their parents were not educators with experience in inquiry, we are professional educators with much experience in inquiry based learning, we trust our judgement and stand by it. Through our observations and conferences we know Phenomenon Based Learning develops independent, critical thinking, caring and engaged students. We listened to these critical students and we did not stop our programming. These students were required to take part in Phenomenon Based Learning; it did not harm them. It enriched their learning even though they did not agree. One student did a Phenomenon Based Learning study on Phenomenon Based Learning. Their conclusions were: curriculum content was surpassed in quantity and quality, this approach clearly goes beyond preparing students for high school because it prepares students for making life decisions while meeting the curriculum content learning expectations. Their study turned them from a dissenter to an active supporter.



Students presenting to teachers and administrators at Simcoe County Push Your Learning Conference.

Students willingly shared their expertise and experiences with Phenomenon Based Learning.

One of the students studied Phenomenon Based Learning and concluded it provides an excellent way to learn.

## Other Considerations

Choosing a topic - Teachers decide the phenomenon themes. We look for themes where students will likely have some prior knowledge and personal interest in. Examples are social justice, human rights, environment earth, history and geography, science, and arts. The final theme for the year 'Student Own Choice' has been successful and engaging. We think this happened because students had sufficient experience working with the learning process and meeting the high expectations. Many students went much deeper than we had seen in our prior inquiry and project work. Giving students time and freedom and support matter.

Conferencing and feedback, learning goals, success criteria, tracking - Conferencing is essential. Teachers questioned students about their written proposal topic choice, prior

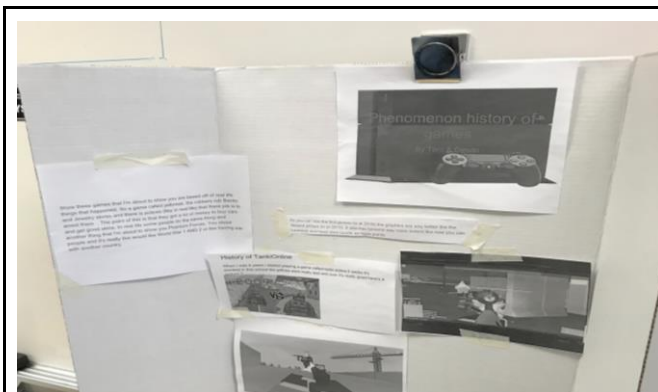


knowledge (schema), learning goals, potential presentation format(s) and success criteria. This enabled students to begin with a focus/purpose. On-going conferencing (some scheduled by teacher, some asked for by students) provided feedback to advance students in their inquiry and presentation planning. Student involvement in setting learning goals and success criteria enabled them to use assessment as learning (metacognitive development) to further their own learning/understanding.

Based on our prior teaching practices, we recognized that Phenomenon Based Learning provided a gateway to greatly improve on how we had students work on self-evaluation. Working together at assessment in our conferences, we made it clear to students that this mattered a lot. Over time, we incorporated student and teacher assessments into next steps that were used to begin the next Phenomenon Based Learning cycle. Quite effectively, this new practice ended the days of writing next steps for students on their work which they promptly forgot or didn't care enough about to use in their next projects. Google Forms and Doc Appender made it possible to record, track and access this information easily for each student and their teacher(s).

Sometimes, initial inquiries were satisfied in a few working sessions. Conferencing and reflective thinking about the questions they want to answer enabled students to dig deeper and/or go in new directions. Typically, the learning process continued with enthusiasm and led to greater student understanding. Aside: teachers got out of the students' way so they could learn what they needed/wanted to learn. This was a challenge to most of the teachers - we are almost hardwired to 'tell' the students what to learn and how to do it.

Student failure - Some students failed, mostly for not working during work periods and not moving forward after conferencing. The consequence was students still had to share their work in a public manner. This wasn't meant to be punitive. It was a logical consequence that was applied to all students; you share the results of your inquiry. For most, one failure was enough. For a few, new strategies and involvement of parents/guardians/special education was required. This likely would have been required if a textbook approach to learning was done. We refused to lower our expectations.

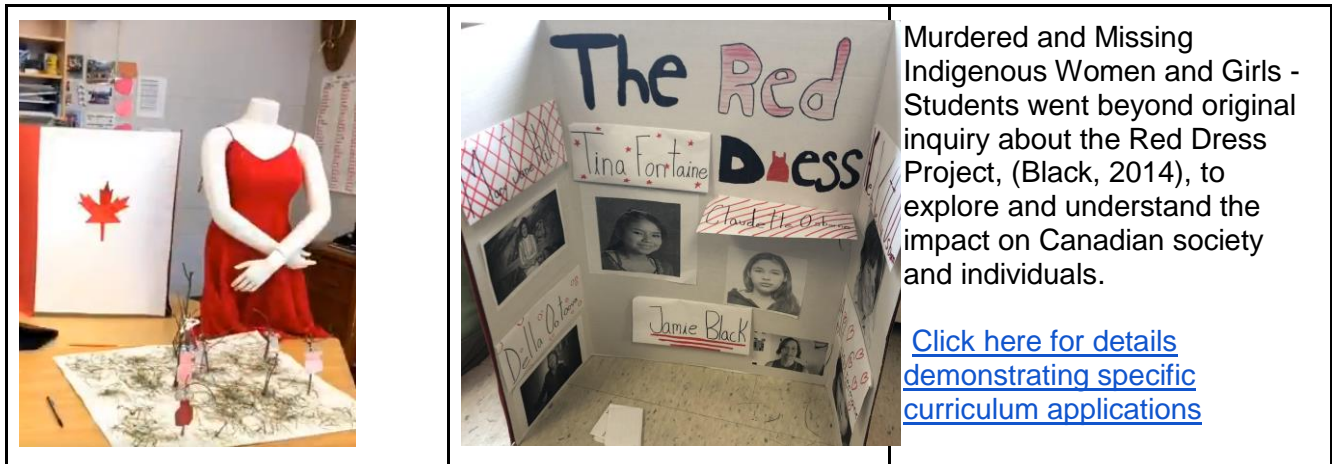


The History of Video Games was a near complete failure. Conferencing and redirection did not motivate. Research was minimal. This project cried out for a digital presentation. No colour was used.

Students learned about selecting group members, using work time to work, and receiving the consequences of not working and still having to present.

Summative assessment - Mentioned earlier, summative assessment was difficult. For the first year of implementation, we hadn't given this enough attention in our planning. After our third cycle, we started to understand. We decided to tackle this at the year end; we did not have the energy to do this in the school year. At the end of the first year, we set our umbrella topics and then printed and cut out subject expectations, and we placed them into the topics where

the expectations fit - not all did. Now we knew which specific content had to be taught before or during the topic related Phenomenon Based Learning cycle. Students were expected to address this content in their learning skills, success criteria and in their inquiries. Here is an example of how this change worked in year two:



While curriculum content could now be reported on, we felt this approach often didn't provide a fair evaluation as the application was only completed once. Learning skills and communication aspects of specific subjects still provided the most relevant report card information. We still struggle with this. Teachers who are very concerned with covering curriculum content must plan their instruction carefully to reduce report card stress. Author opinion: some specific curriculum expectations are best covered during the non-Phenomenon Based Learning cycles. For evaluation, authentic problem solving and short inquiries can still take place in the context of learning curriculum content.

Peer and self-assessment - Peer assessment was required. A paper organizer was used by the assessing student who then presented it to the presenters. Peer assessment still requires work by staff and students for it to be taken seriously by more students. Self-assessment was tracked quite well in conferences. Teachers added student comments in their individual files via Google Forms and Doc Appender. Students had to review these at the start of each cycle.

## Presentation Formats

Teachers thought students would love the freedom to present however they wished, that they would love the liberation from tri-fold and poster board presentations. We were mostly wrong. Students lacking in visual arts skills and persuasive/report writing skills were drawn into the bright lights of the tried and true boards and the results were the same as ever - uninspired and terribly disappointing.

We gave students a list of possible presentation formats such as using green screen to create videos. We celebrated the students who tried the new and untried. Many students took this to heart and those same 'less talented' students excelled.

Presentation formats included gallery walks and scheduled presentations with set audiences. Recently, Google classrooms were built and made accessible to all students - input included videos, surveys, and photos of product/process. After two cycles, students say they like this. Author opinion: Not having an 'official' presentation format is fine. Students and teachers can adapt to the selected format. At a minimum, the variety and new learning

associated with the different formats doesn't hurt and it does provide students with new vehicles to reach their audience.

### **The Ever Popular Fun Fact Section**

Year one to year three - Initially, Phenomenon Based Learning ran for twenty straight days for 100 minute blocks each day. A few weeks were then taken off. This proved to be too much for students and teachers. We adjusted based on input from our all-students-involved debriefing meetings to running cycles for three to four weeks, four days/week and we split the 100 minute blocks with recess. We then took the next month off of Phenomenon Based Learning. This enabled teachers to cover curriculum content with greater impact and this reduced some of our colleagues' stress levels around report card evaluations. The break enabled students to recharge. This also freed up teacher-librarian time to work with other teachers and students.

Students were able to work with students from other classes and grades - This enabled students with similar interests to work together. Extended French students could work with English students which helped to erase some of the 'class elitist' attitudes. This also 'forced' teachers to work together and learn who the students were in other classes. An unexpected benefit was teachers could address inappropriate student behaviour with the student names; issues didn't seem to escalate as they may have in previous years. This may have occurred because we were more familiar with our students.

We re-iterated continually that the learning process was the key - A polished final product was much less important. Interestingly, this statement was ignored or not fully understood by most students. While many went deeper into their topic area as they discovered/created answers for themselves, they demonstrated they wanted to present a finished product.

Trust was essential - Students trusted they could adjust and change their inquiry focus as they learned more. They trusted they could present in the format of their choice. They trusted that their teachers were going to support them. They trusted through our debriefing sessions that we would listen to them and implement changes to improve their learning and working environment because we did.

Our staff had unique strengths - One was very organized and wrote our plans and readied the many forms and organizers for student and staff use. Another was an artist and could teach and provide guidance to students as they needed support. The teacher-librarian was skilled at helping students to develop questions to further their inquiries and to find information. Others were able to define what students needed and then get it, for example [various project presentation formats](#) (Taylor, 2019). All shared their observations and suggestions during debriefs to better the learning experience for all students.

Keep on pushing/inviting/accepting contributions --Carolyn Hilmer, teacher at Ardagh Bluffs Public School, recently completed project-based learning with her Grade 6 class where they designed a food truck business. It involved mathematics, research, problem solving, arts, and language. The students and the teacher loved it. Hilmer was so impressed with student engagement and quality of work that she is continuing with project-based learning. Hilmer and Taylor agree this is a fantastic way to prepare Grade 6s for the greater independence required in Grade 7 with Phenomenon Based Learning.

## **Conclusion: Do's and Don't for Teacher Librarian Implementation (and Interested Others)**

- Do start with a positive vision and a commitment to enriching the school learning lives of students, teachers and administrators. Do create a map for implementing. While the map provides direction know that much will be learned from the detours and side destinations you discover.
- Do start gathering your points to convince your administration and teaching staff. Prepare detailed and summary presentations that address your audience. Convincing your administration should be considered an essential first step. Be persistent if you receive hesitation and resistance.
- Do partner with all who want to; just one staff member is worth it. One leads to two ... it can start a movement. Work with "Long Term Occasional" teachers because they work with students.
- Do search for grants. Be creative, for example, contact companies on your school board's order tender lists, contact teacher unions, and contact companies who provide technology to your school.
- Do be aware of student topics. While teacher-librarians instruct students in research strategies and techniques, we have a greater ability for finding information that we can share. This should diminish as students progress through their education. Teacher-librarians have greater access to technology and can discuss what we find with students and then flip information to student Google Drive accounts. Finally, once we are aware of the needs of others, often the information seemingly jumps out at us because we are aware – the phenomenon of frequency illusion.
- Do take part in conferencing. You offer views that are unique and you will better learn what your students need to learn about researching, writing and creating for specific audiences.
- Do thank the people you work with because they make it happen: Ardagh Bluffs collaborators were Alexa Barrie, Darryl Bax. Melissa Borysiak, Alica Dart Shaw, Karl Denny, Joanne Downham, Lisa Henderson, Carolyn Hilmer, Desiree Miskimmon, Jamie Taylor, Stephanie Tosh and of course the Intermediate Students 2017-2020.
- Don't be a procrastinator. Do start now.

## References

- Al Kilani, B. (2016, August 21). *What is Phenomenon-Based Learning?* [Blog post]. Retrieved from <http://teachmiddleeastmag.com/phenomenon-based-learning/>
- Black, J. (2014). *The Red Dress Project*. Retrieved from <http://www.thereddressproject.org>
- Cooper, R., & Murphy, E. (2016). *Hacking Project Based Learning: 10 Easy Steps To PBL and Inquiry in the Classroom*. Cleveland, OH: Times 10.
- Drake, S. M., & Reid, J. (2010). *Integrated Curriculum* [PDF]. Retrieved from [http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW\\_Integrated\\_Curriculum.pdf](http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_Integrated_Curriculum.pdf)
- Faridi, S. (2014, June 24). *Happy Teaching, Happy Learning: 13 Secrets to Finland's Success* [Blog post]. Retrieved from [https://www.edweek.org/tm/articles/2014/06/24/ctq\\_faridi\\_finland.html](https://www.edweek.org/tm/articles/2014/06/24/ctq_faridi_finland.html)
- Loertscher, D. V., Koechlin, C., & Zwaan, S. (2004). *Beyond bird units!: 15 models for teaching and learning in information-rich and technology-rich environments*. Salt Lake City, UT: Hi Willow Research & Publishing.
- Ontario Ministry of Education. (2013). *Inquiry-based Learning* [PDF]. Retrieved from [http://www.edugains.ca/newsite/literacy/ALG/docs/CBS\\_InquiryBased.pdf](http://www.edugains.ca/newsite/literacy/ALG/docs/CBS_InquiryBased.pdf)
- Silander, P. (2019). *Phenomenal Education*. Retrieved from <http://www.phenomenaleducation.info/home.html>
- Shindler, J. (2009). *Transformative Classroom Management: Positive Strategies to Engage All Students and Promote Psychology of Success*. San Francisco, CA: Jossey-Bass.
- Taylor, J., Borysiak, M., Dart Shaw, A., Downham, J., Harris, G., Hilmer, C., Miskimmon, D., & Tosh, S. (2019). *Phenomenon Based Learning* [Slideshare]. Retrieved from [https://docs.google.com/presentation/d/1j8zXAcHvURts0XZR9ts\\_ujHMZDnIVRp1o\\_ph9OvxrMw/edit?usp=sharing/](https://docs.google.com/presentation/d/1j8zXAcHvURts0XZR9ts_ujHMZDnIVRp1o_ph9OvxrMw/edit?usp=sharing/)
- Taylor, J. (2019). *Phenomenon Based Learning at Ardagh Bluffs P.S.* Retrieved from <https://phenomenonatardagh.weebly.com/>
- Walker, T. D. (2017). *Teach like Finland: 33 Simple Strategies for Joyful Classrooms*. New York, NY: W.W. Norton & Company, Inc.