Annual Summary

Peter Rehak - Science Council Executive – Elementary Director

I presented a Water Bottle Rocket session at the Mighty Peace Teachers' Convention<<https://mptca.teachers.ab.ca/>>, in Grande Prairie on March 9, 2018.  Their teachers convention committee paid for 100% of incurred expenses.  Successfully shared designs and strategies for teachers to build water bottle rockets in their own classes.  Also launched several teacher-constructed rockets outside despite the cold temperatures and lots, and lots of snow.

I continue to develop Ikigai (生き甲斐, pronounced (ee-kee-gah-ee) a Japanese concept that means “a reason for being.”) projects with students to assist in identifying, developing, and sharing their passions.  Design thinking cycles are embed into this project.  Continually reinforce that the process is as important as the final product.  The iteration process progresses from prototype to prototype after feedback opportunities.  This methodology can be incorporated into all subject areas.

Mount Royal University - ATA Science Carousel, March 2017

Background – In Winter of 2017 contacted MRU contacted ATA science council requesting a representative share elementary themed science lessons with education students.

27 Mount Royal University Education students participated in five hands-on science experiments.  Students were from first, second, third and forth year education programs.  Focus of the evening event was to encourage students to explore and create inquiry questions connected to hands on science explorations.  Classroom with access to LCD project was provided along with refreshments to students who signed up to participate in the evening class.  Total cost of materials (each student received a “kit”) was approximately $70.00 and was 100% paid for by MRU.

Feedback from MRU student representative was very positive.

“Thank you very much and most importantly for working with our teacher candidates. It is very much appreciated.”  
Kevin O'Connor, Ph.D. , Assistant Professor, MRU

Potential for future lessons?

Link to shared lessons, student samples, and connected web links with additional information at:  
[pdwithrehak.edublogs.org](http://pdwithrehak.edublogs.org/)<[http://pdwithrehak.edublogs.org](http://pdwithrehak.edublogs.org/)>  
  
I continued researching design thinking space and projects (Fall 2017).

Key aspects of design thinking are:

·      Brainstorming  
·      Asking ‘Why?’ often  
·      Listening to partners feedback  
·      Reflecting and repeating the process  
  
Attended “Staff Development” session on academic vs. intellectual engagement. (Fall 2017)  
Academic engagement: on task behavior that signals engagement in class work  
Intellectual engagement:  deep personal commitment by learners.  Thanked and clarified with administration regarding this staff development opportunity and shared the “professional development” I am doing with ATA science council during our “fireside” chat.

My school 2017-18 school theme/ inquiry is connected to the growing popularity of,  “Maker Movement”.  We attended a PD session at TELUS Spark on “Design Thinking” as it is closely connected to Maker Movement.  Design Thinking is a process in which you begin with an idea (ie. “ideate”) and then create a prototype (from 2D to 3D construction).  Prototypes will be tested and results recorded.  New ideas/ solutions may or may not emerge from these results.  Secondary prototypes will be created and this cycle of actions will continue.  A major part of this process is creative problem solving.  Imaginary skills are an important part of the process as you can always go “backwards” and redo a step in the process.

Additional information on Norms of Shift Lab at TELUS Spark:

<https://mancenido.wordpress.com/portfolio/shift-lab-brainstorming-poster/>