IB GLOBAL CONFERENCE 2017

20–23 July • Orlando FL, USA
Integrating Inquiry-Based Math Into PYP Units of Inquiry

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Riverstone International School
My Road Trip!

By Avery
I will go from Boise to Las Vegas to San Diego to San Francisco to Portland and then back to Boise. I would be on the trip for 1 week and 4 nights.
The car that I will choose will be the Honda Accent. It gets 27-36 MPG. It can also seat 5 people.
I AM GOING TO DRIVE IN A KOENIGSEGG CCXR TREVITA.

IT COSTS $4.8 MILLION AND IT’S MILEAGE IS 21 MPG.
My Vehicle

My vehicle is a tank. It costs $8.58 million USD. On the freeway it averages 0.6 mpg. My total cost of gas is $132,176.00.
Breakfast—$5.78
Lunch—$9.65
Dinner—$15.99
One day’s food cost—$31.42
Total food cost—$434.88
Tourist Attraction

Las Vegas:

Cirque du Soliel- Ka
Cost of ticket- $292.00
Experience: sublime
Final Cost

Gas-$369.55
Hotels-$1,122.00
Attractions-$275.00
Food-$314.00
TOTAL-$3,995.00
WHERE WILL THE ROAD TAKE YOU?
Riverstone International School
Boise, Idaho

Inspiring the journey through five pillars: Academic Excellence, Outdoor Education, International Understanding, Leadership by Example and Community and Service.
Inquiry Rocks!

The Blank Planner Project
Grade 5 Exhibition
Project Lab Template
“The Road Trip”
“Build an Eco-Friendly House”
Example Playlist
Personal Progress Reflection
Objectives for today’s session:

● Model strategies for guiding students in creating and sharing inquiry-based math projects with direct ties to unit of inquiry concepts while engaging students in identifying connections between math content and real-world scenarios.

● Identify available resources to enhance traditional curriculum with differentiated, blended math instruction and construct a student-driven, individualized math program with emphasis on project-based learning.

● Model strategies for communicating with school community and parents to develop a collaborative support system for individualized learning.

● Attempt to avoid overly wordy slides.
Get to know your neighbor!

- Connect with the person next to you. Be sure to meet someone new!
- Describe your school’s math program to your partner. What do you perceive to be it’s strengths and weaknesses?
- Work with your partner to find a creative 100 point “Turkey Math” word!
How do we bring math into the transdisciplinary fold?
Inquiry
Project Lab:

Inquiry-based, student designed projects that connect UOI and math content, concepts and strands.
Step One: Identify math concepts

What math concepts will you highlight in your project? Look at the PYP Math Strands and Common Core standards to help you brainstorm ideas!
Step Two: Connect math to UOI content

What content from our Units of Inquiry will you incorporate into your project? It could be a subject we’ve studied, like media, city planning or PLTW, or could be based on a key concept like perspective, change or function. You could even build your project around an attitude or Learner Profile word!
Step Three: Identify real-world connections

What “real-life” connections can you make within your project to make the math more meaningful to other students who will complete your project?
Step Four: Look completely overwhelmed and helpless
Create, Evaluate and Publish

• Students create the basic framework for projects, then test them by completing the project themselves.

• Students evaluate projects, identifying what worked, what was too hard, too easy, etc., and then make adjustments to their draft plan.

• Finally, students publish their projects using Google Classroom, making their projects available for other students to complete.
Project Lab Goals:

**Short Term:**

- Students are actively making connections between math and UOI concepts, creating and then completing each other’s student-initiated work

**Long Term:**

- Seamless integration of student-created math projects into our UOI planners for each of our Grade 5 units, creating a truly transdisciplinary POI, including math
Your Turn!

Brainstorm connections between math and UOI concepts within your Programme of Inquiry (on page 3 of your packet).

Think outside the box!
Individualized, Blended Math Instruction

The ultimate in differentiation is individualization!
Playlists

For each unit of our “in-house” math program, Everyday Mathematics, students complete a playlist:

• Pre-Test
• EM lessons
• EM games and activities
• KA exercises
• Post-Test
Khan Academy

WHOEVER YOU ARE
WHEREVER YOU ARE

You only have to know one thing:
#YouCanLearnAnything
Off and Running!

Mastery-Based

Individual Pacing

The Sky’s the Limit!
Teacher as Facilitator, not "Deliverer"
Results Speak for Themselves!

Anecdotally:
- Complete change of culture in the classroom: everyone is a “math person”
- High flyers get to soar
- Others build skills and build confidence
- Support for high achieving younger students

Objective:
- MAP Growth: 170% of projected growth met; 84th percentile median conditional growth; mean RIT score growth +19
- MAP Scores: mean RIT score 243; 91st percentile nationally
- ISA Scores: mean score 544; ~90th percentile internationally
Khan Academy LearnStorm builds growth mindsets and personalizes learning through a fun six-week challenge.

Sign up opens on August 15!
SUCCESS

What people think it looks like

What it really looks like

TheLeaderInMe.org

#TLIM
... YET!
I'm not really a control freak

BUT...

can I show you the right way
to do that?
Personal Progress Reflection
Now, it’s your turn to take action!
Questions?
Thank You!

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