# PLC Share Out 2016

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*Filled Wednesday, June 01, 2016*

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## PLANNING

**Sharing what we have learned in our 2015-2016 professional learning collaborations with colleagues helps us all…• improve student learning for all students,• identify valuable resources and tools now available to help educators• reflect upon and enhance our collaborative practices• celebrate and share our learning and our students' growth and successes.Please take some time with your team over the next few weeks to complete this PLC Share out template. The deadline is JUNE 8, 2016. Responses will again be posted on Learn71 PLC sorted by "Themes" and "Schools"**

### 1. In which school is this PLC team based?

G. P. Vanier Secondary

### 2. Who is/was in your group? Please provide names of your team members for the purpose of finding peer contacts for future projects. If possible, please include grade or subject each member teaches, separated by commas: (i.e Chris Brown, Gr 8 math, Sue White, LST)

| Variable | Response |
|---|---|
| 2. Who is/was in your group? Please provide names of your team members for the purpose of finding peer contacts for future projects. If possible, please include grade or subject each member teaches, separated by commas: (i.e Chris Brown, Gr 8 math, Sue White, LST) \| 1 | Ursula deGroot, Ross Jamieson, Shannon Tran, Darren Freeman |

## 3. If possible, please provide a key contact person(s) who would be willing to answer questions about your project in the event that another educator or group wants to pursue a similar inquiry.

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|---|---|
| 3. If possible, please provide a key contact person(s) who would be willing to answer questions about your project in the event that another educator or group wants to pursue a similar inquiry. \| Key contact | Shannon Tran |

## 4. Planning: What is/was your Inquiry Question?

Goal 1: Analyzing trends in basic numerical operations (add, sub, mult, div) of all students moving from elementary Grade 7 to Grade 8 at G.P. Vanier Secondary. Goal 2: Tracking (and possibly improving) automaticity in mathematics times table fact recall up to 144.

## 5. To what student need are/were you responding? What student learning issue did your team focus upon or seek to improve?

Feedback from colleagues in math and math-related courses (ex. science, home economics, industrial arts) has indicated weak basic numeracy skills, often hindering new learning.

## ACTING

## 6. What actions/interventions/strategies did you or will you implement or explore?

We created a standard template for basic fact testing shared amongst all Grade 8 teachers. Students completed the drill in 6 min, 30 seconds (allowing only 4 seconds per question to prevent skip counting and encourage automaticity). We analyzed this data over time and researched resources to support numeracy skills. We also created a short assessment of adding, subtracting, multiplying and dividing from upper elementary outcomes. We analyzed student results (percent success per question type) across incoming Grade 8s (sample size about 100). We felt this identified some basic skill areas that need more attention in Grade 6-9.

## 7. What resources, materials, links, tools, experts, or research did you use?

Please provide details so others may easily access those same resources in their similiar inquiries.

Early research included some papers on automaticity in math; teacher comments from BCAMT list-serv; Mathematical Mindsets by Jo Bowler;

## 7a. Did your team or school co-create any new tools, assessments, learning resources or materials as a result of your inquiry?

Our principal has purchased "Mathletics" for future teachers in this grade level to enhance student skill development. We are also recommending Multiplication.com as an easy site for other teachers to do paperless drills with students. We support the use of dry-erase markers on glass / whiteboard surfaces to increase student willingness to participate in math calculations.

## 7b. If yes, for what grade level or subject area are they best suited?

Grade 6 - 9

## 7c. If these tools, assessments, rubrics or materials could/will be made accessible for other educators, where will they be located? (i.e. LRC, online links, at your school?)

At the school (GP Vanier) and a resource list in our short report.

## OBSERVING

## 8. What are/were the results of your inquiry/implementation/project on student learning? What changes, if any, did you see in student learning, behavior or engagement that correlates to your team's interventions?

We saw that students enjoyed doing math drills and we were surprised that always seemed happy to do fact drills. We never made individuals' marks known in our test procedure (the same anonymity is possible on individual computers). Students seemed to enjoy practicing their facts and they wanted to get better.

## 9. What types of information/observations/data did you monitor or collect to confirm whether or not your intervention is/was working? (i.e. qualitative, anecdotal, quantitative sources: surveys, student journaling or student work, changes in attendance or behavioral incidents, before/after videos, test scores, DART, observational checklists, student self-evaluations, interviews, completions rates.)

We saw student average scores (out of 100 facts in 6.5 minutes) go from about 70% to around 82% across 4 classes. We completed between 4 and 6 drills per class of students. We compared result of the first to the last drills. It was not surprising that the scores went up, given the repetition and familiarity with the procedure (though facts were random each time). From identifying the weak

areas of general numeracy, we attempted to do more work by hand when giving Math 8 notes (less use of calculator, taking the time to back-teach 'easy' concepts like multiplying and dividing by 10, decimal movements, rounding, multiplying and dividing by hand).

## 10. What were some of the student learning highlights that your team shared that could be shared with others? What student successes/stories stood out for you?

We felt the scores on basic facts improved. We didn't interview many students about practicing math drills or their basic numeracy, but we may ask a feedback question at the end of the final exam. 3 classes were asked about where they felt they learned their times table facts; we were surprised how many did NOT practice or learn at home, and learned in school. This concerned us since the curriculum over the last few years has not emphasize the teaching of math fact automaticity.

## 11. If you feel your initiative did not improve student learning at this point in time, why do you think that might be? Can you identify any impeding factors? What advice would you give peers who are exploring similar issues to help them avoid these impediments?

(No response)

## REFLECTING

## 12. What are/were some of the highlights experienced in your Professional Learning Community journey so far? What worked well?

We enjoyed collaborating and we saw that at least informally (without much statistical rigour or permissions granted), it was easy (and interesting) to assess our shared classes of students on a specific topic.

## 13. What are/were some of the challenges experienced in your collaborative learning community? (By sharing this information, we are better able to identify needed resources or solutions.)

It was tough to find time to properly do this project.

## 14. What do you believe would be helpful to have/know/do next time in order to improve results or help you or your learners move forward?

I think having some individual whiteboards (plastic or glass students can write on and erase), and having a good software resource like Mathletics will help student learning.

## 15. What are your next steps, moving forward?

Start on a new focus area/inquiry

## Thank you for your time and for sharing your insights, resources and learning with your colleagues and the educational community.

The results of these Share Out templates will be sorted and posted on the Learn71 website by July 2016, so all educators will have access to the information in time for fall 2016 planning. If you have any questions or concerns about the questions in this template, email SD71PLC@gmail.com. If you have technical difficulties, please contact the IT help desk.Thank you