SIPSAW – School Improvement Plan for Student Achievement and Wellness – Numeracy

Goal:

All students, as measured by our focus students, will move forward along the continua of number development as evidenced by several varied open-response tasks over the course of the school year.

Plan:

Monitoring:

-create a monitoring plan that will document the current state and plans to move students along the Student Continuum of Numeracy Development

Possible Student Monitoring Plans: (Still in Beta)

Monitoring Plan: (Educator)

Date/Task	Teacher Name	What Are My Teacher Moves?	What are the Next Steps Based on How the Task/ Lesson Unfolded?	General Comments (how to achieve next step, use of manipulatives/tools, other interesting observations)

Monitoring Plan: (Student)

Date/Task	Student Name	What Can This Student Do? (Location on continuum)	What are the Next Steps?	General Comments (how to achieve next step, use of manipulatives/tools, other interesting observations)

Using a math running record, teachers will determine where students are (from this data set) along the numeracy continuum. This will be repeated several times throughout the year.

Teachers will continue to provide opportunities for students to improve their fundamental math skills and strategies through intentional lessons, games, and tasks. The desired result is that students will increase their automaticity and efficiency when solving problems.

Data Sources/Resources:

Alex Lawson, "What To Look For" resource and number continua.
Nicki Newton, "Math Running Records in Action: A Framework for Assessing Basic Fact Fluency in Grades K-5".

Action Items:

Action 1:
Record where students currently are on the numeracy continua and plan intentional tasks to help students improve their number fluency.

Teacher Specific Ideas:
-give more open-response questions
-provide a context of how the math is relevant
-do Bansho/Gallery walks for students to see/hear about different ways to solve a problem
-labelling strategies to develop a common math vocabulary
-when doing number talks, make it directly connected to learning in context

Action 2:
Begin to consciously think about ways to integrate the math curriculum with other areas of study, and how to make it more relevant, important and challenging for students.

Reflection/ Year in Review: Posted June 14, 2019

As we conclude our numeracy learning team we are proud of our students' accomplishments and our commitment to helping students move forward along the continua of number development. We know our intentional approaches are making a difference, as evidenced through our data. This snapshot of the primary and junior continua data shows the growth that our students have made over the course of the year. We can see that our students have increased their fluency (phases), are using increasingly sophisticated strategies, and are gaining automaticity.

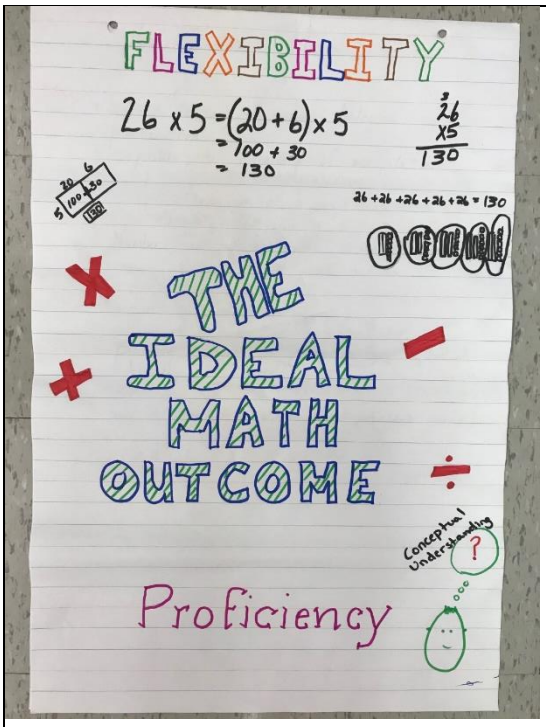
Our reflections over the course of the year about "Engaging Learning Experiences" and "Assessment and Feedback Practices" have given us a way to focus our dialogue on what we are seeing and hearing and what our next steps may be to improve our students' mathematical experiences. Through our most recent discussions, the teachers communicated that they noticed that the time of day impacted the students' ability to show their understanding and sometimes the context. For example, one student was able to demonstrate his learning orally when it wasn't a testing environment. Others consistently performed better in the morning or the early afternoon. When collecting data, we made these types of accommodations (time, space, method of communication) to ensure that students could show us the extent of their understanding.

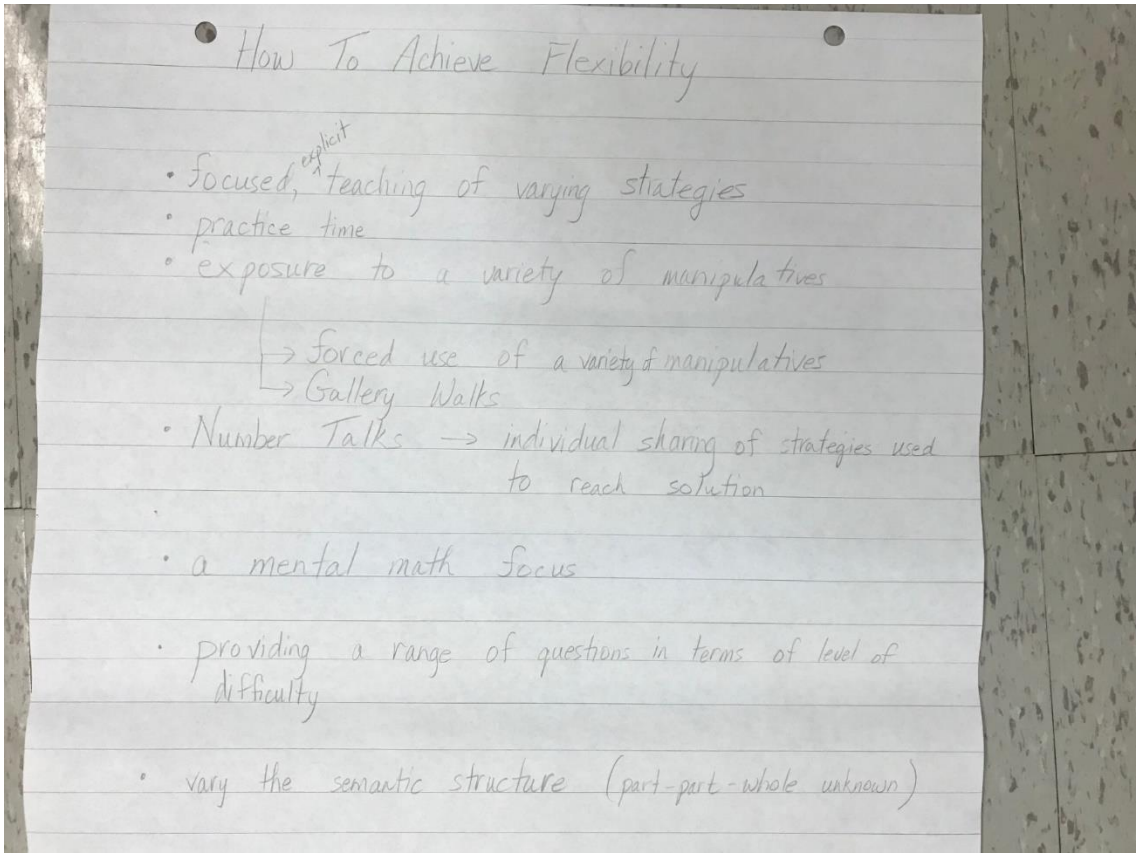
We also discussed the use of manipulatives and how we may improve our practices. Teachers generated a list of ways that they may use manipulatives next year:
-using the ELMO to model (what if we added…how would we show this in numbers?...How could we explain this representation in words?...How can we write an equation for this?)
-putting out a variety of manipulatives at different groups and having the students use the given tools to make a representation. Then doing a "gallery walk" to learn from others' displays.

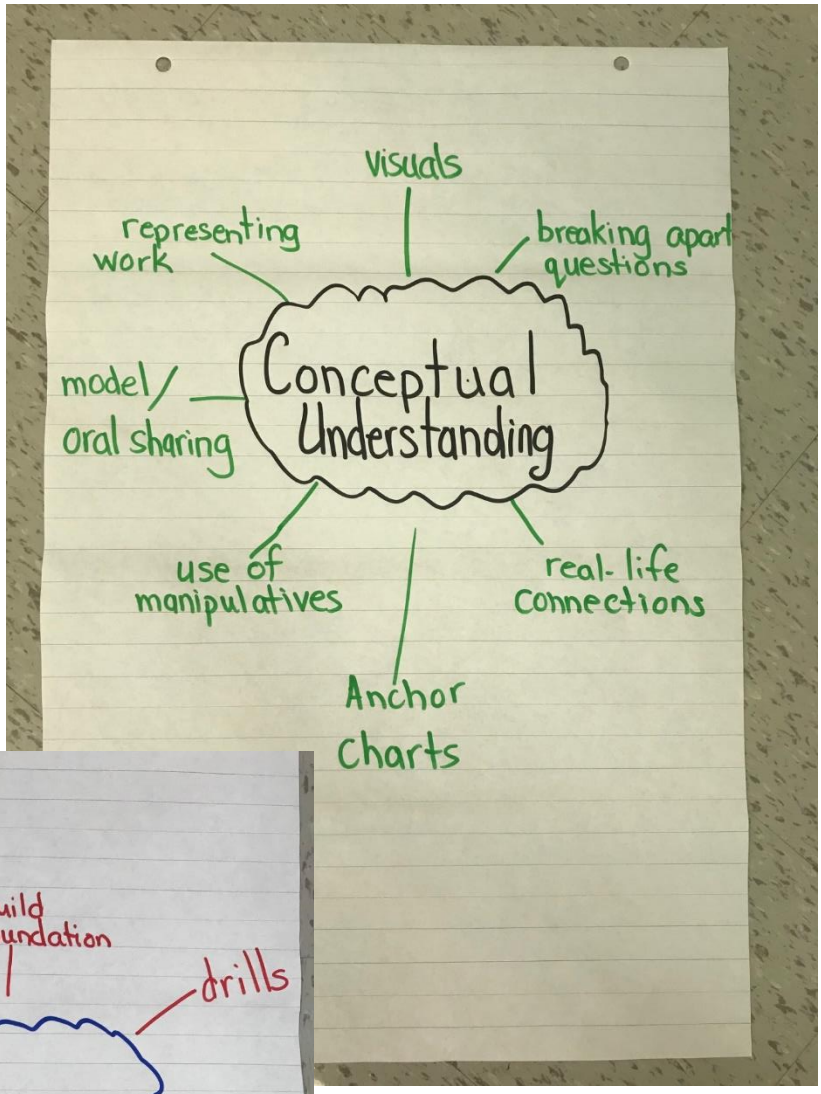
Our conversations continually reminded us that we need to give students a variety of ways to show their knowledge and understanding (product, conversation, and through our observations) for us to gain a true picture.

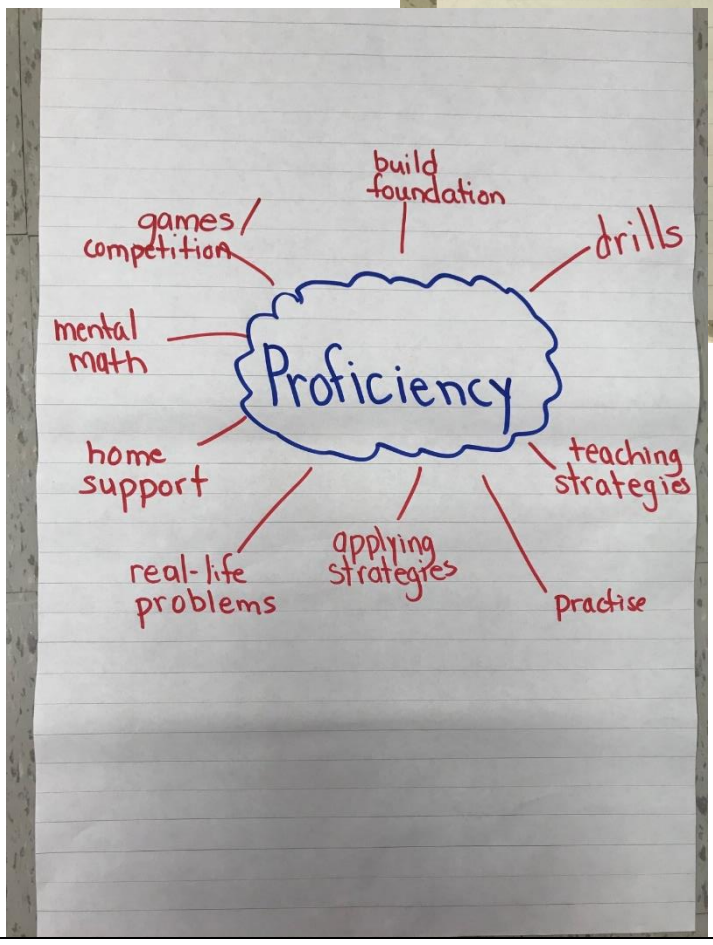
In our final learning team meeting we created storyboards. The purpose of the activity was to give the teachers an opportunity to showcase their learning by depicting what they believe to be the "Ideal Math Outcomes" and the steps to get there. The ideal math outcomes, according to the numeracy team, are flexibility, proficiency, and conceptual understanding. This storyboard will be shared at our upcoming staff meeting so that we can showcase our experiences, the outcomes, and generate a discussion with all staff.

The visuals that the team generated:


FLEXIBILITY
26 x 5 = (20 + 6) x 5
= 100 + 30
= 130
26 x5 130
20 6
5 100 30
150
26 + 26 + 26 + 26 + 26 = 130
THE IDEAL MATH OUTCOME
Conceptual Understanding
?
Proficiency


How To Achieve Flexibility
• focused, explicit teaching of varying strategies
• practice time
• exposure to a variety of manipulatives
→ forced use of a variety of manipulatives
→ Gallery Walks
• Number Talks → individual sharing of strategies used to reach solution
• a mental math focus
• providing a range of questions in terms of level of difficulty
• vary the semantic structure (part-part-whole unknown)


Visuals
representing work
breaking apart questions
Conceptual Understanding
model / oral sharing
use of manipulatives
real-life connections
Anchor Charts


build foundation
games / competition
drills
mental math
Proficiency
home support
teaching strategies
real-life problems
applying strategies
practise