

Passion for Teaching and Learning Reflection Guide

Mistakes are not only opportunities for learning, as students consider the mistakes, but also times when their brains grow. Understanding the power of mistakes is critical, as children everywhere often feel terrible when they make a mistake in math.

How have these teachers created a safe environment for accepting mistakes?

The teachers talk about the importance of eliminating math anxiety in their students. To learn more about this go to: thelearningexchange.ca/math-anxiety/ to read the blog entitled Math Anxiety: An Important Component of Mathematical Success by Erin Maloney, Jonathan Fugelsang & Daniel Ansari.

Strings improve students' flexibility in thinking and expose them to multiple methods/strategies for one problem. This flexibility allows students to build their fluency and confidence. The format of the strings allows quieter or slower students time to process and share their ideas or build on the ideas of their classmates. Since strings are related problems, they are designed to help students see, identify, and use patterns.

Self-assessment is essential for students to become independent learners. How might you support students in becoming more aware of how strings is helping improve their own learning?

Vivid stories that tie in key concepts within the lesson help students to make connections to real life. New concepts are typically abstract to students of any age. They rarely see how it is applicable to real life. A great story can make these real life connections and often helps students remember concepts because they remember the story. Each of these teachers used a story or a real life scenario to bring the mathematics to life.

Can you think of a story problem that would help your students explore fractions or another topic in an authentic way?

Think about how the teachers' thorough planning facilitated student learning in these lessons.

How did the teachers plan for differentiation in these lessons?

The teacher in the Grade 4/5 lesson shared a time when she had to persevere in order to provide important learning experiences for her students. How do you think this supported her students in persevering? Think of a time in your teaching when you had to persevere with something that was difficult.

In the grade 4/5 lesson how does the Mathematizing our World activity provide an assessment opportunity for the teacher? In what ways is it a learning activity for the students?

Enthusiasm and enjoyment pervade the classrooms. What do you suppose the teachers did to create this learning environment?

What are the advantages of the exit ticket that the teacher in the grade 4/5 lesson used?

Planning a great lesson takes time and effort. Careful planning gives each lesson a better chance to captivate each student, and to provide students with meaningful learning opportunities. What is the evidence of thoughtful planning in these lessons?

In the grade 6 lesson, think about how the teacher ties previously learned concepts into this lesson showing students that the concepts are meaningful and connected. How does the minds-on flow into the lesson so that rigor and difficulty increase without losing students along the way? How does this lesson build critical thinking skills?

How do these teachers establish real life connections for their students?

How are the teachers assessing progress during these lessons?

The teachers have created a learning environment where dialogue is common, and opinions are exchanged and valued. What steps would have been taken at the beginning of the school year to create this culture?

In the grade 6 lesson what is the teacher doing with regard to mathematics concepts by giving this extension task to the students?

We know that students learn best when they are actively engaged in hands-on learning activities. Having materials ready to go before the lesson maximizes the learning time. How did the concrete materials support student understanding in the grade 6 lesson?