



Ana: Trillium Lakelands District School Board acknowledges that these lands and waters are the traditional homeland of the Ojibway (Oh-jib-way) Nation and the Huron (Hur-on) / Wendat (When-dat) Nation, and now includes communities from the Mohawk Nation, the Pottawatomi (Pot-a-watt-a-me) Nation, the Inuit Nation and the Métis (May-tee) Nation of Ontario.

Under the One Dish With One Spoon Treaty, the Haudenosaunee (Hoden-oh-shownee) Confederacy and the Anishinaabe (An-ish-i-na-bay) Peoples agreed to share and care for this territory for the benefit of future generations. We acknowledge their stewardship throughout the ages. Please take a moment now to acknowledge the traditional territory that you are situated on.



Components of Effective Math Instruction	
 High-Impact Practices Fact Sheets Learning Goals, Success Criteria, and Descriptive Feedbacks Direct Instruction Problem-Solving Tasks and Experiences Teaching about Problem Solving Tools and Representations Math Conversations Small-Group Instruction Deliberate Practices Flexible Groupings 	7 9 11 13 15 17 19 21 23
References and Resources for Further Reading	

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References and Resources for Further Reading	25		PRINCIPAL ADDOURDS PROJECTS

Problem solving tasks and experiences

- Provide opportunities for students to reason, communicate, represent, and connect as well as to justify their thinking;
- Can provide multiple entry points and allow for a variety of solution strategies
 - Accessible students at various stages of readiness,
 - Give more students an opportunity to construct mathematical ideas.
- Can be used to introduce concepts, build on prior knowledge, incorporate students' ideas and consolidate learning';



(High-Impact Instructional Practices in Mathematics, 2020)

LEADERSHIP

PRINCIPAL ASSOCIATION

The Bus Problem



Solve the problem in a way you might expect a primary school student to solve it:

There are 36 children on the school bus. Some are from Ms. Adam's class and some are from Mr. Baji's class.

There are 8 more children in Mr. Baji's class than from Ms. Adam's class.

How many children are there from Mr. Baji's class? How many from Ms. Adam's class?

CATHOLIC INCOMES LEADERSHIP EN ACTION PROTACTS



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Review Slide.

Why is this important?

Because mathematics is the study of abstract concepts.

The teacher plays a key role in allowing students to develop a rich understanding that is more than isolated facts and procedures.

Let's explore these ideas further

The Bus Problem



When engaged in rich problem solving tasks, we have an opportunity to use a variety of tools such as manipulatives to build concrete models and visually represent ideas that are abstract. (includes use of diagrams).

This allows students to make sense of mathematical ideas and think through problems with better depth and understanding.

A classroom that supports this will have a variety of tools. They are easily available in the classroom, allowing students to select and make decisions about what the best tool to use as well as tools that won't work.

These tools and visuals are important for all students (not just for struggling students), across grades. Learning a new math concepts begin from a concrete perspective.



A math talk community is key to allowing students to communicate their thinking, "since the mathematical ideas are not in the representations themselves but rather in student's thinking about mathematics." (High-Impact Instructional Practices in Mathematics, 2020)

Tools and Representations support students to clarify their ideas and express them more precisely. When sharing their thinking, and hearing multiple perspectives students build a deeper understanding and math becomes more then a set of rules to be followed.



Suggestion for administrators to further explore Tools and Representations in the context of the items we have highlighted.

What Works? Research into Practice Monograph can support thee conversations.

http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/WW_SpaceThinkMath. pdf

Breakout Room Questions

- i) What examples of high impact strategies have you seen in your school?
- ii) What does this look like now with the impact of covid on our schools?
- iii) How can we further develop and support these practices?

LEADERSHIP EN ACTION PROJECTS

Dates for Upcoming Professional Learning Networks

Professional Learning Network # 3: High Impact Practices...Continued Dates: 25 mars – 15 h (français) March 30 – 4:00 pm (English)

> LEADERSHIP INACTION BACTION

Resources

Mathematics Resources organized by themes

https://docs.google.com/document/d/1KAJ8ztV5W-X5N5WRAGSf4bD6j-LQmCLYNYG_znCqILo/edit?usp=sharing

CATHOLIC B LEADERSHIP PRINCIPAL ASSOCIATION PROJECTS

