2015-2016 AESN Case Study

School: Hatzic Elementary **District:** Mission #75

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Our focus for this year: Our focus was to use of both mindfulness and nature/outdoors to support math achievement.

Scanning: Our focus was math and the results of scanning showed a distinct lack of "joy" in regards to mathematics, and a reluctance to problem solve. The students seemed to be comfortable with operations but their anxiety levels rose when asked to do more.

During the scanning process we really paid attention to what student omitted when they spoke about their strengths. We also paid attention to where they were "placed" during joyful times of the day that incorporated learning.

Focus: As a school we have been reading "Learning to Love Math; Teaching Strategies That Change Student Attitudes and Get Results." We believed that if we could use both mindfulness and children's natural connection and curiosity of nature we could increase their learning in regards to mathematics.

Hunch: During our conversations regarding the results of our scanning we recognized that we take children outside on many occasions but math is typically learned at a desk in a way that does not contribute to joyfulness or curiosity. Further, the anxiety it provokes does not instill a mindful thinking process.

New professional learning: We continued to read "Learning to Love Math." We also met as a group often to share strategies and our learnings. Additionally, we increased our use of the School District's Aboriginal Library and the Mind Up curriculum in our work.

Taking action: We committed to having an outside math experience once per week regardless of the weather. Students used natural materials to show their understanding of symmetry, shape, multiplication, fractions etc. (please see photos attached). We also asked the teacher who was covering our weekly preparation time to focus on math activities that promoted joy. Students made and played games, used manipulatives, cooked and participated in a year-long discovery of mathematics that did not involve worksheets of any kind. Students were very enthusiastic and learning was more exciting and relevant to them.
Many students began their day with mindfulness exercises where they learned self-calming and focusing techniques that were repeated during the day.

Checking: We feel that we have just scratched the surface of this inquiry. In order to make a measurable difference we would have to redesign our whole math program around mindfulness and Aboriginal Principles of Learning. We have now had a taste of it and it was encouraging to see the students' responses to the initiative. Kid response: "there is so much to count outside, we should never go back in."

Reflections/Advice: We learned that math should be joyful and not just seat work. Learning math using children's natural curiosity about the environment inspires students and reduces anxiety about math. We noticed that when the children were outside they often sustained their focus for longer periods. All students were curious about relating with their environment. We believe that that our inquiry "fits" with the new curriculum.

Symmetry


Patterning


Multiplication


Time


Addition