

## Theory of Action

Our goal is to provide structured differentiated instruction to enhance student number sense increasing their foundational understanding of numbers. Increasing student number sense through planned classroom activities will increase their ability to think and reason mathematically and support student success when working with mathematical operations leading to numerate members of society. This document identifies several key elements of number sense indicated across all elementary levels in the British Columbia Curriculum as well as the Langley Essential Standards Documents. Working from the claim that number sense is foundational to all mathematics instruction students require regular high quality and differentiated instruction in number sense including hands on activities and discussion-based activities. As a staff we will engage in professional development and collaboration using our existing PLC structure to focus on numeracy.

Overall objective	Strategies If we do the following...	Evidence of improvement	Goals
Increase student number sense	<ul style="list-style-type: none"> <li>- Implement daily number talks</li> <li>- Professional development opportunities around number sense</li> <li>- Vertically align number sense goals</li> <li>- Introduce number corner <a href="https://www.mathlearningcenter.org/curriculum/number-corner-third-edition">https://www.mathlearningcenter.org/curriculum/number-corner-third-edition</a></li> <li>- Students identified as having gaps in their understanding will participate in small group focused number sense instruction. Including members of the resource team for push in instruction</li> <li>- Utilize existing PLC time to focus on number sense goals</li> <li>- Integrate rich math tasks               <ul style="list-style-type: none"> <li>o Three Act Tasks</li> <li>o You Cubed <a href="https://www.youcubed.org/">https://www.youcubed.org/</a></li> <li>o Mindset Mathematics <a href="https://www.youcubed.org/resource/k-8-curriculum/">https://www.youcubed.org/resource/k-8-curriculum/</a></li> <li>o Math for Love <a href="https://mathforlove.com/">https://mathforlove.com/</a></li> <li>o NRICH <a href="https://www.youcubed.org/">https://www.youcubed.org/</a></li> </ul> </li> <li>- Utilize Building Thinking Classrooms Strategies <a href="https://buildingthinkingclassrooms.com/">https://buildingthinkingclassrooms.com/</a></li> <li>- Introduce games that support number sense</li> </ul>	<ul style="list-style-type: none"> <li>- Assess all students on number sense skills in September and follow up each term to track growth.               <ul style="list-style-type: none"> <li>o SNAP assessments with all students <a href="https://snap.sd33.bc.ca/node/22">https://snap.sd33.bc.ca/node/22</a></li> <li>o Math Running Records <a href="https://mathrunningrecords.wordpress.com/">https://mathrunningrecords.wordpress.com/</a></li> </ul> </li> <li>- Growth on District Numeracy Assessment</li> <li>- Growth on Foundation Skills Assessments</li> </ul>	<p>There by demonstrating increased number sense and fluency with numbers. Evidence of success will be measured by using a school based number sense screening tool and growth on the Foundation Skills Assessments and District Numeracy Assessment.</p>

Overall objective	Smaller Objectives	Strategies Instructional tools and routines to support each area.	Evidence of improvement	Goals
Increase student number sense	Estimate reasonably	<ul style="list-style-type: none"> <li>- Esti mysteries <a href="https://stevewyborney.com/category/esti-mysteries/">https://stevewyborney.com/category/esti-mysteries/</a></li> <li>- Estimation clip board <a href="https://stevewyborney.com/category/estimation-clipboard/">https://stevewyborney.com/category/estimation-clipboard/</a></li> <li>- Estimation 360</li> </ul>	<ul style="list-style-type: none"> <li>- Fewer guesses to complete the mystery</li> <li>- More accurate estimations</li> </ul>	There by demonstrating increased number sense and fluency with numbers.
	Count accurately	<ul style="list-style-type: none"> <li>- Counting collections</li> <li>- SPLAT <a href="https://stevewyborney.com/category/splat/">https://stevewyborney.com/category/splat/</a></li> <li>- Choral counting</li> <li>- Tens frames</li> <li>- Number of the day</li> <li>- Target Number <a href="https://mathforlove.com/lesson/target-number/">https://mathforlove.com/lesson/target-number/</a></li> </ul>	<ul style="list-style-type: none"> <li>- Students use grade appropriate strategies to count</li> <li>- Students use appropriate grouping strategies to count</li> </ul>	
	Use the base ten number system	<ul style="list-style-type: none"> <li>- Number talks</li> <li>- Base ten blocks</li> <li>- Ten frames</li> <li>- Funny numbers game</li> </ul>	<ul style="list-style-type: none"> <li>- Students use grade appropriate base ten understanding including decimals where appropriate</li> </ul>	

Overall objective	Smaller Objectives	Strategies Instructional tools and routines to support each area.	Evidence of improvement	Goals
	Compose and decompose numbers	<ul style="list-style-type: none"> <li>- Number talks</li> <li>- Rectangle of the day</li> <li>- Number talk images <a href="http://ntimages.weebly.com/">http://ntimages.weebly.com/</a></li> <li>- Alternate ways to build numbers using base ten blocks or manipulatives</li> <li>- Funny numbers game</li> <li>- Unit Chats <a href="https://mathforlove.com/lesson/unit-chats/">https://mathforlove.com/lesson/unit-chats/</a></li> <li>- Part , part, whole diagrams</li> <li>- Function machine</li> </ul>	<ul style="list-style-type: none"> <li>- Increased accuracy when placing numbers on number lines</li> </ul>	
	Compare and order numbers	<ul style="list-style-type: none"> <li>- Number lines</li> <li>- Greater than less than game</li> <li>- Fill the Stairs <a href="https://mathforlove.com/lesson/fill-the-stairs/">https://mathforlove.com/lesson/fill-the-stairs/</a></li> </ul>	<ul style="list-style-type: none"> <li>- Increased accuracy when ordering numbers</li> <li>- Utilization of benchmarks dutiable to the grade level</li> </ul>	
	Fractional concepts	<ul style="list-style-type: none"> <li>- Fraction talks <a href="https://mathforlove.com/lesson/fraction-talks/">https://mathforlove.com/lesson/fraction-talks/</a></li> <li>- Unit Chats <a href="https://mathforlove.com/lesson/unit-chats/">https://mathforlove.com/lesson/unit-chats/</a></li> <li>- Measuring cup activities</li> </ul>	<ul style="list-style-type: none"> <li>- Discuss fractions actually</li> <li>- Use fractions for groups and sets</li> <li>- Use fractions to represent parts of wholes</li> </ul>	