MATHEMATICAL COMPREHENSION

REASONING & ANALYZING

GRADES K-5

- Use reasoning to explore and make connections
- Estimate reasonably
- Develop mental math strategies and abilities to make sense of quantities
- Use tools and technology to explore mathematics
- Model mathematics in contextualized experiences

GRADES 6-9

- Use logic and patterns to solve puzzles and play games
- Use reasoning and logic to explore, analyze, and apply mathematical ideas
- Estimate reasonably
- Demonstrate and apply mental math strategies
- Use tools or technology to explore and create patterns and relationships, and test conjectures
- Model mathematics in contextualized experiences

UNDERSTANDING & SOLVING

GRADES K-5

- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- Visualize to explore mathematical concepts
- Develop and use multiple strategies to engage in problem solving
- Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

GRADES 6-9

- Apply multiple strategies to solve problems in both abstract and contextualized situations
- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- Visualize to explore mathematical concepts
- Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

Connect & Reflecting

GRADES K-5

- Reflect on mathematical thinking
- Connect mathematical concepts to each other and to other areas and personal interests
- Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts

GRADES 6-9

- Reflecton mathematical thinking
- Connect mathematical concepts to each other and to other areas and personal interests
- Use mathematical arguments to support personal choices
- Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts

CLASSROOM EXPERIENCES TO SUPPORT MATHEMATICAL COMPREHENSION

- Number line routines (eg Clothesline Math)
- Number Talks
- Interactive Read Alouds
- Small group instruction
- Math Stations
- Vertical Surfaces
- Critical thinking problem-solving
- Land-based learning opportunities

ESSENTIAL RESOURCES TO SUPPORT MATHEMATICAL COMPREHENSION

- Number Line (class and individual)
- Anchor Charts
- Base Ten Blocks
- Cuisenaire Rods
- Snap Cubes
- Counting Collections
- *Number Talks* by Nancy Hughes
- *Good Questions* by Carole Fullerton
- *Making Math Meaningful* by Marian Small
- *Building Thinking Classrooms* by Peter Liljedahl

NUMERACY FRAMEWORK

NUMERACY ASSESSMENTS & SUPPORT

- SNAP
- SNAP Zoom-Ins
- Nelson Math Pre-Assessment
- Leaps and Bounds
- Observation
- Conferences
- Observational Data Collection Sheet