

Course: Numeracy 8/9

Teachers: Hayley Goodman, Diana Morris, Shin Young Pyo, and Liz Thornhill

Contact information: hgoodman@sd44.ca, dmorris@sd44.ca, spyo@sd44.ca, and lthornhill@sd44.ca

Course Website: <https://blogs.ubc.ca/numeracy/>

Course Description:

This course will engage learners in a number journey that will build numeracy skills, develop curricular competencies, and help students develop as learners.

Some big ideas that will be explored:

- Number relationships are the foundation of mathematical understanding. They help us identify patterns, make generalizations, and solve problems.
- Fluency and flexibility with numbers can be extended to all operations.
- Numbers represent quantities that can be decomposed into smaller parts.
- Fractions, decimals and percents are types of numbers that can represent quantities.
- The rules of math apply equally to algebraic equations; using our knowledge of mathematics, we can evaluate, analyze and describe what is happening in algebraic situations.

This course will be framed by our essential question: ***How do I know I am growing as a learner?***

Students will be asked to explore personal strategies that support their developing understanding of numerical concepts and strengthen their self-advocacy skills and confidence in math.

Summer Learning Beliefs:

Summer Learning provides an engaging learning environment where all students can challenge themselves academically and fulfill their learning goals. To ensure this, students will:

- abide by the student Code of Conduct
- adhere to the Academic Honesty policy
- adhere to the *Summer Learning* Student Engagement policy
- respect themselves and others
- attend every class and be punctual
- inquire, think, and participate to the best of their ability
- access technology in class when instructed to do so and for learning purposes only
- challenge themselves and have fun learning

All Summer Learning policies can be accessed at:

<https://www.sd44.ca/school/summer/policies/Pages/default.>

Learning Plan:

	Evidence of Learning (Assessment)	Learning Plan
Goals	SACC portfolio	Self-efficacy Executive functioning Curricular growth Self-assessment
What the students will know	<ul style="list-style-type: none"> • Pre and post-assessment • Learning portfolio • Self-assessments • Exit slips • Reflection journals 	<p><i>Students may engage with learning the following:</i></p> <p>Number sense (place value, integers, basic operations, order of operations, representing numbers, exponents) Parts of numbers (fractions, decimals, percents) Algebra (linear relations, algebraic expressions, one and two-step equations)</p>
What the students will do	<ul style="list-style-type: none"> • Build a repertoire of strategies and apply them to their learning • Advocate for their own learning • Ask questions • Build on understanding • Persevere through challenges 	<p><i>Students are expected to be able to do the following:</i></p> <p>Reasoning and analyzing Use logic and patterns to solve puzzles and play games Use reasoning and logic to explore, analyze, and apply mathematical ideas Demonstrate and apply mental math strategies Model mathematics in contextualized experiences</p> <p>Understanding and solving 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</p> <p>Communicating and representing Explain and justify mathematical ideas and decisions Communicate mathematical thinking in many ways Represent mathematical ideas in concrete, pictorial, and symbolic forms</p> <p>Connecting and reflecting Reflect on mathematical thinking Connect mathematical concepts to each other and to other areas and personal interests</p>
What the students will understand		<p>Big Idea: That number relationships are the foundation of mathematical understanding. They help us identify patterns, make generalizations, and solve problems.</p> <p>Student's understanding will develop within the following concepts:</p> <ul style="list-style-type: none"> • Logic • Relationships • Measurement • Patterns • Quantity • Representation • Simplification
Summative assessment	Post Math Readiness Assessment, Final Self-Assessment	

Evaluation:

Students who **Meet Expectations** can...

- Demonstrate engagement and effort with the mathematical concepts covered.
- Show growth by applying themselves throughout the course.
- Show meaningful self-reflection on their skills and learning strategies.

Students who are **Not Yet Meeting Expectations**...

- Are unwilling to engage with the course in a meaningful way.
- Do not apply themselves throughout the course.
- Do not show significant reflection on skills and learning strategies.

Celebration of learning:

The 2018 Celebration of Learning is shaped around “Ways of Knowing”

- *How do we know how much we have of something?*
- *How do we know there is a pattern?*
- *How do we know that two things are equal?*

Our class will collaborate to create one Pecha Kucha presentation. A Pecha Kucha presentation uses imagery and spoken word. Each student is responsible for preparing 3 slides of images and 30 seconds of spoken content about the ways in which we know.

Resources:

Students should bring the following items each day of the course:

Resources/Supplies
<ul style="list-style-type: none">• Binder with lined paper• Pencils• Pen(s)• Eraser• Highlighters (3 colours)• Dividers (1 set of 5)• Scientific Calculator