

NUMERACY

Broad outcome: <i>By June 2019, students will demonstrate increased numeracy skills across subject areas.</i>		
Required STUDENT knowledge, skills & dispositions	Actions, Roles & Responsibilities (who will do what, how and by when?)	Monitoring Systems How will we know?
<p>Reasoning skills for determining the appropriate computational operations, including order of operations and algebra skills.</p> <p>Problem solving skills, cross-curricular. (application problems)</p> <p>Mental math skills and automaticity with basic facts.</p> <p>Data analysis e.g. interpreting tables and charts</p> <p>Measurement skills</p> <p>Estimation skills for reasonableness of answers.</p> <p>Conversions skills within systems.</p> <p>Operations with fractions</p> <p>Exponential and scientific notation</p> <p>Computational fluency and accuracy.</p>	<p>All Continue regular mental math in all courses and at all levels, where appropriate. E.g. metric conversions in foods and sciences, body measurements for costumes, art scaling, band counts and repetitions, etc.</p> <p>Use PLC time to review gr.9 report card data after each reporting period.</p> <p>Math Throughout the year, all teachers will provide students with frequent opportunities for rich problem solving tasks to enhance deductive reasoning skills. Vertical learning spaces will be used where appropriate.</p> <p>Throughout the year teachers will incorporate a variety of logic puzzles in order to develop deductive reasoning skills.</p> <p>Throughout the year, all teachers will provide weekly mental math task to enhance mental math skills and automaticity with basic facts.</p> <p>Throughout the year, all teachers will include application problems that require students to work with fractions, decimals and percentages to improve understanding.</p> <p>PE All teachers will teach calculations for HRR and target HR zones. Focus will be on determining these numbers mentally (estimating) as opposed to calculator or pencil and paper techniques zones to support the development of mental math skills.</p> <p>All teachers will develop informal question and answer strategies for workouts that are specific to weights and distances. Focus will be on estimating totals and conversions between units to support the development of mental math skills as well as accuracy and fluency with numbers.</p>	<p><i>Grade 9 report card data – Nov, Jan, April, June.</i></p> <p><i>Grade 12 provincial exam data</i></p> <p><i>Summative assessments</i></p> <p><i>Diagnostic assessments</i></p> <p><i>Common Rubrics</i></p> <p><i>Collections of student exemplars</i></p> <p><i>Student Self assessments</i></p>

Science

Throughout the year, all teachers will provide Increased opportunities for problem solving to improve a variety of required student numeracy skills.

Where appropriate in the semester, all teachers will provide more mental math strategies including Fermi Type Problems to improve mental math and automaticity with basic skills.

At least once per semester, all science teachers will incorporate, “One Pagers” to enhance data analysis skills.

Humanities

At least once per unit, all teachers will use charts and graphs to enhance the analysis of data from research and identify implications.

Once per semester, grade 9 Social Studies and Grade 11 Psychology teachers will teach concepts in statistics (significance, error margins, polls, etc.) to develop students’ reasoning skills and data analysis.

Once per semester, all teachers will use content area word problems involving manipulation of data (coalition seat proportions, economic data, and demographics) to support the development of reasoning skills and fluency with numbers.

ELA

1. Annotation of articles for factual and numeracy information across all grades.
2. Deductive reasoning in debating.
3. Use techniques of interpreting graphs when analyzing visuals.

Arts

Students will use deductive reasoning, on a daily basis, when working within the arts in order to challenge their perspectives regarding new material within each discipline.

Students will use estimation, on a daily basis, in order to meet deadlines and work within those limitations.

Students will use personal reflection and descriptive feedback to improve performances and meeting deadlines.

Students will use visualization, when appropriate; to help them with understanding the end goal of the product they are creating in both the visual arts and performing arts.