Calgary Board of Education

Grade 8 Mathematics | CBE Scope and Sequence September 2020 – June 2021

This scope and sequence has been created to ensure alignment between Hub Learning and in-class programming, and smooth transitions following potential staff/student absence. It is intended to support teachers and teams in engaging in collaborative planning for instruction.

Each reporting period has been divided into two segments, defining four quarters across the school year. Each quarter lists the outcomes to be addressed in that approximate time period; the outcomes have been described and grouped using the K – 9 Assessment and Reporting Guide | Mathematics. Outcomes within a quarter are identified for concentrated teaching and learning, though it is acknowledged that spaced practice throughout the school year allows students multiple opportunities to deepen their learning and demonstrate their understanding. Although there is a suggested order shown within each quarter, teachers will design teaching and learning according to their context. Please note that these scope and sequences do not replace the Program of Studies.

<table>
<tr><th colspan="2">First Reporting Period</th><th colspan="2">Second Reporting Period</th></tr>
<tr><td colspan="4">The mathematical processes will be modelled and developed throughout all strands and outcomes as much as possible.
Communication Connections Mental Math and Estimation Problem Solving Reasoning Technology Visualization
*See the Program of Studies for processes tagged to specific outcomes.</td></tr>
<tr>
<td>▪ Demonstrate an understanding of congruence of polygons. (SS6)
▪ Demonstrate an understanding of percent, rate, ratio, and proportional reasoning. (N3, N4, N5)
▪ Demonstrate an understanding of multiplying and dividing fractions, concretely, pictorially and symbolically. (N6)</td>
<td>▪ Demonstrate an understanding of multiplying and dividing integers, concretely, pictorially and symbolically. (N7)
▪ Solve problems involving the probability of independent events. (SP2, N6)
▪ Graph and analyze two-variable linear relations. (PR1, N7)</td>
<td>▪ Model and solve problems using linear equations. (PR2, N7)
▪ Demonstrate an understanding of perfect squares and non-perfect squares and determine square roots. (N1, N2, SS1)
▪ Demonstrate an understanding of the Pythagorean Theorem. (SS1, N1, N2)</td>
<td>▪ Draw and construct nets, interpret views, and determine the surface area of 3-D objects. (SS2, SS3, SS5)
▪ Determine the volume of prisms and cylinders. (SS3, SS4)
▪ Critique ways in which data is presented. (SP1)</td>
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