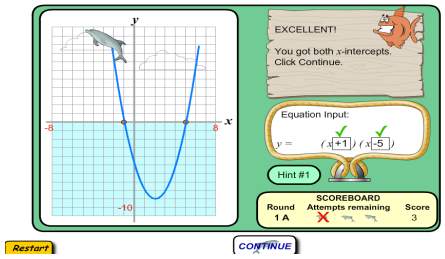
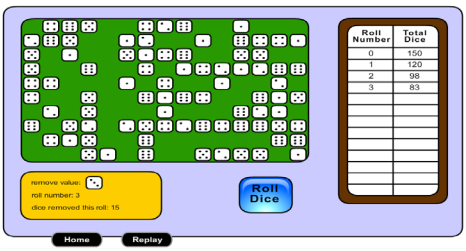
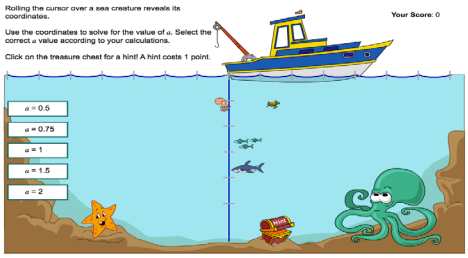
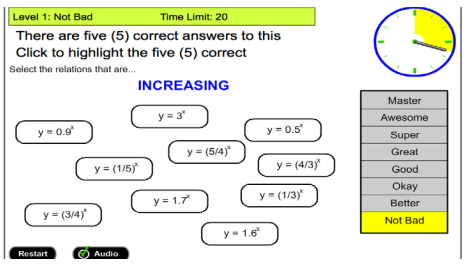
MBF3C
Ontario Educational Resources Bank (OERB) Activities

Mathematical Models	
Activity	**Description**
Buoy-Oh-Buoy  **Resource ID: ELO1199050**	Build understanding of the roles of *a, s* and *t* in quadratics of the form *y=a(x-s)(x-t)* by viewing a scripted tutorial. Practise determining the values of *a, s* and *t* when the x-intercepts and the vertex of a quadratic function are given in a graph, by completing a simulation activity.
A Dicey Situation  **Resource ID: ELO119090**	Build understanding of exponential growth and decay by collecting realistic data through dice rolling simulations and viewing a graphical model for each.
Go Fish  **Resource ID: EL01195080**	Practise determining the stretch or compression factor given the vertex and one other point by finding the value of *a*, and ultimately the equation of a quadratic in vertex form, after viewing some model solutions.
Exponent - Chills  **Resource ID: ELO1199150**	Build understanding of exponential graphs of the form $y=b^x$ where $b>1$ and where $0<b<1$ by viewing an illustrated tutorial. Practise differentiating between these two sets of graphs by identifying the correct equations of various exponential relations.

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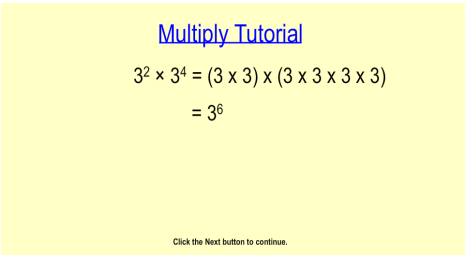
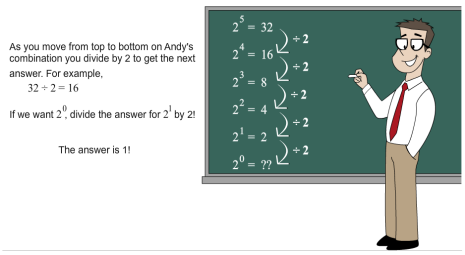
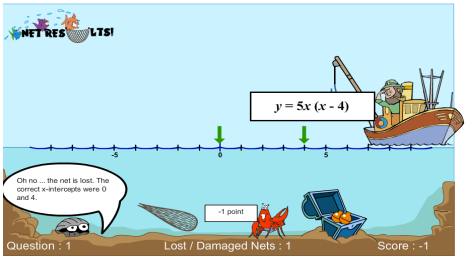
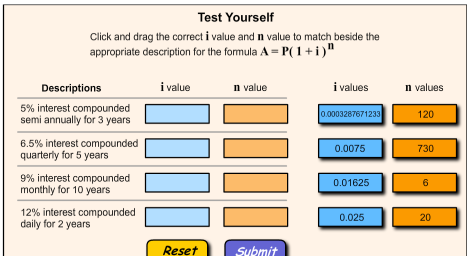
Mathematical Models (continued)	
Activity	**Description**
Exponent Laws  **Resource ID: ELO1150750**	Build understanding of the exponent laws by viewing a tutorial. Practise the exponent laws by simplifying expressions involving the multiplication and division of powers and the power of a power.
Exponent Locker Combinations  **Resource ID: ELO1150760**	Build understanding of zero and negative exponents by examining number patterns. Practise evaluating expressions with zero and negative exponents by answering questions and finding matches.
Net Results  **Resource ID: ELO1196410**	Build understanding of how to determine the x-intercepts given a quadratic in factored form by viewing a scripted tutorial. Practise determining the x-intercepts of a quadratic in factored form by dragging buoys to the appropriate x-intercepts on a number line in a fishing activity.
Personal Finance	
Activity	**Description**
Compound Interest  **Resource ID: ELO1150720**	Practise determining the appropriate *i* and *n* values in the compound interest formula, $A = P(1 + i)^n$ by dragging given *i* and *n* values to match a variety of investment scenarios after viewing worked examples of how to calculate future value using this formula and how to adjust *i* and *n* according to the compounding period.

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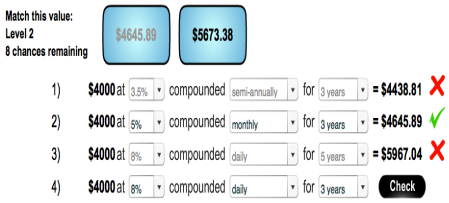
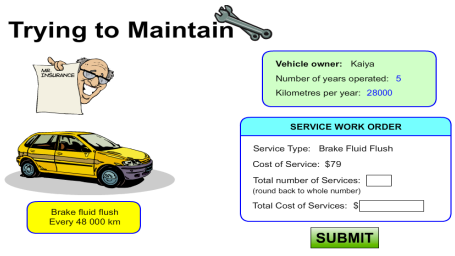
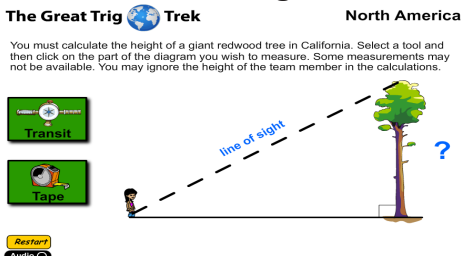
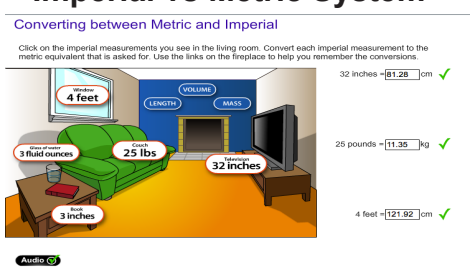
Personal Finance (continued)	
Activity	**Description**
Double Take / An Interesting Challenge  **Resource ID: ELO1199170**	Build understanding of how the interest rate, the compounding period and the time invested impacts on the future amount by manipulating these values in the compound interest formula to match a specific future value amount.
Vehicles are Wheely Expensive  **Resource ID: ELO1199190**	Build understanding of the costs associated with owning, leasing and operating a vehicle by selecting from and manipulating a variety of options to investigate the impact of each.
Geometry and Trigonometry	
Activity	**Description**
The Great Trig Trek  **Resource ID: ELO1194980**	Practise selecting an appropriate tool by deciding whether a trig ratio, the sine law or the cosine law should be used to solve for a missing measure in a triangle. Practise problem solving by calculating the measure of a missing side or angle in real-life examples involving triangles.
Imperial vs Metric System  **Resource ID: ELO1150730**	Practise converting within and between the imperial and metric systems of measurement by calculating equivalent measures for a variety of mass, volume and length problems, given the conversion formulae. Practise selecting an appropriate measure by matching examples to an appropriate measurement.

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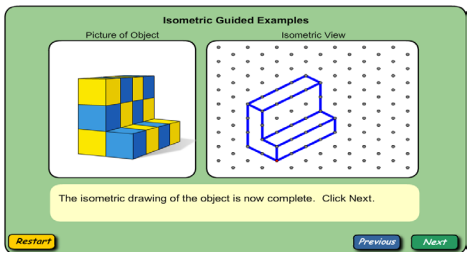
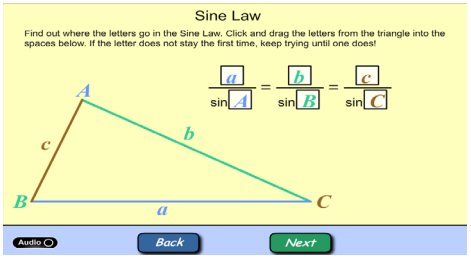
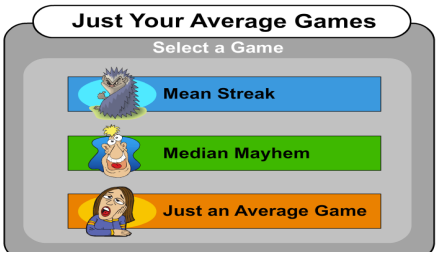
Geometry and Trigonometry (continued)	
Activity	**Description**
It's All in The Way You View It  **Resource ID: ELO1195030**	Build understanding of three-dimensional geometry, by constructing isometric and orthographic drawings for three-dimensional images, after viewing step-by-step demonstrations.
Sine and Cosine Law  **Resource ID: ELO1081410**	Practise using the sine law and cosine law by selecting the appropriate law and then solving for a missing side or angle after viewing animated "how to" examples.
Data Management	
Activity	**Description**
Just Your Average Games  **Resource ID: ELO1199210**	Build understanding of mean and median by selecting values from a set of data to get a target mean and median. Practise determining the mean and median for a set of data by participating in timed challenges.
Probability Fair  **Resource ID: ELO1199010**	Build understanding of theoretical probability by calculating the probability of a variety of events while participating in three different carnival games of chance.