

| Enduring Understandings | Learning Objectives | Essential Knowledge |
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| (Students will understand that...) | (Students will be able to...) | (Students will know that...) |
| EU 2.3: The derivative has multiple interpretations and applications including those that involve instantaneous rates of change. | LO 2.3E: Verify solutions to differential equations. | <p>EK 2.3E1: Solutions to differential equations are functions or families of functions.</p> <p>EK 2.3E2: Derivatives can be used to verify that a function is a solution to a given differential equation.</p> |
| | LO 2.3F: Estimate solutions to differential equations. | <p>EK 2.3F1: Slope fields provide visual clues to the behavior of solutions to first order differential equations.</p> <p>EK 2.3F2: (BC) For differential equations, Euler's method provides a procedure for approximating a solution or a point on a solution curve.</p> |
| EU 3.5: Antidifferentiation is an underlying concept involved in solving separable differential equations. Solving separable differential equations involves determining a function or relation given its rate of change. | LO 3.5A: Analyze differential equations to obtain general and specific solutions. | EK 3.5A1: Antidifferentiation can be used to find specific solutions to differential equations with given initial conditions, including applications to motion along a line, exponential growth and decay, (BC) and logistic growth. |