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Abstract: This paper investigates how differential equations models have been used to study works in literature, poetry and film. We present applications to works by William Shakespeare, Francis Petrarch, Ray Bradbury, Herman Melville, Ridley Scott and others, as well as applications to Greek mythology and the Bible. This paper gives a range of useful examples for teaching, and we discuss how these models have been used in the classroom.

Here we have 16 pages of rich illustrations which merit deeper examination and exposition.

From the paper, “This paper discusses ways in which differential equations have been utilized to study works of literature, poetry and film and presents how these models might be incorporated into the classroom. Section 2 gives a brief introduction to differential equations for the non-specialist. Applications of various DE models appear in Section 3. We outline how each model was created to capture a behaviour of interest and discuss the implications of the model’s solutions, but the details of the mathematics behind finding a solution to a differential equation are not presented here. Readers should refer to the original articles for full explanations of the details. Section 4 suggests ways to use these models in an undergraduate classroom.”

Keywords: art, differential equations, humanities, literature, film, poetry, religion