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Population modelling in an applied calculus class using spreadsheets

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In this talk I will describe a series of population modelling computer labs used in an applied calculus class. The labs showcase different types of population growth, including Fibonacci, exponential, and logistic. Exponential growth is revisited as a differential equation, which is approximated by discrete growth, that is, approximation via tangent lines, using different time intervals. In some semesters, students used the world population data to examine the issue of whether the population is growing exponentially or logistically. Each lab requires the students to use a spreadsheet program, such as Excel, giving students practice with this essential computer skill.

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