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This paper explores a number of models for the growth of a barnacle goose population. These geese spend their summers breeding in Spitsbergen and then winter in Caerlaverock on the Solway Firth. The population growth is modelled using exponential models and a variety of logistic models. The paper shows how each of the growth phases in the post-war history of this population can be related to conservation measures. Microsoft Excel spreadsheets have been used to find appropriate parameters for each of the models. The paper, and the student project it is based on, exemplify the use of modelling to generate understanding of the processes represented by raw data.

KEYWORDS: modelling, teaching, barnacle goose, population, differential equation, logistic, data