Chapter 6 Population Biology

Natural populations can grow either exponentially or logistically. An exponential growth curve, or a J curve, is characterized by continuous growth, while logistic growth, or an S curve, is characterized by a sigmoid curve that is limited by resources and levels off, indicating carrying capacity.

It is important to know the characteristics of r-selected species and K-selected species. In order to explain whether a species may go extinct, it is necessary to understand how these reproductive strategies may affect survival. You will also need to understand Type I, II, and III survivorship curves, and be able to give examples of each.

A fundamental concept is the Rule of 70, in particular in reference to human populations. Knowing how to calculate doubling time or growth rate is essential.

To know how biotic and abiotic factors limit population growth, you must examine both density-dependent and density-independent factors. In order to answer ecological questions, you will need to integrate applications of conservation biology and concepts about communities from previous chapters.