

TOPIC 3.5

Population Growth and Resource Availability

Required Course Content

ENDURING UNDERSTANDING

ERT-3

Populations change over time in reaction to a variety of factors.

LEARNING OBJECTIVE

ERT-3.F

Explain how resource availability affects population growth.

ESSENTIAL KNOWLEDGE

ERT-3.F.1

Population growth is limited by environmental factors, especially by the available resources and space.

ERT-3.F.2

Resource availability and the total resource base are limited and finite over all scales of time.


ERT-3.F.3

When the resources needed by a population for growth are abundant, population growth usually accelerates.

ERT-3.F.5

When the resource base of a population shrinks, the increased potential for unequal distribution of resources will ultimately result in increased mortality, decreased fecundity, or both, resulting in population growth declining to, or below, carrying capacity.

SUGGESTED SKILL

 *Mathematical Routines*

6.B

Apply appropriate mathematical relationships to solve a problem, with work shown (e.g., dimensional analysis).



AVAILABLE RESOURCES

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- The Exam > [Chief Reader Report 2017, Q1](#)
- The Exam > [Samples and Commentary 2017, Q1](#)