Introductory Biology

Ecology Book Chapter 3 *Population: Checks and Balances*

**Population Video:**

Big Idea: Populations grow exponentially until something limits the amount of growth.

The key words:

* Dispersion
* Fecundity
* Limiting Factors (types and examples)
* Carrying Capacity
* Exponential Growth
* Logistic growth
* Calculating growth rate

Read each section of the book and relate the key words to the big idea. At the end tie the big ideas together and relate them to the video notes above.

Big Idea:

* Ecologists measure populations in different ways.

The key words:

* Population size
* Population density
* Dispersion
* Mark-recapture method
* Lincoln-Peterson estimate
* Census
* Sample
* Quadrats
* Transects

Another Big Idea:

* Births and deaths cause populations to grow and shrink.

The key words:

* Immigration
* Emigration

Another Big Idea:

* With abundant resources, populations can grow quickly.

The key words:

* Exponential growth
* Additive growth
* Per capita rate of growth
* Life table

Another Big Idea:

* Many factors limit how large a population can grow.

The key word:

* Limiting factors

Another Big Idea:

* Some limiting factors affect growth regardless of the population’s density; other limiting factors affect growth in relation to the population’s density.

The key words:

* Density-Independent factors
* Density dependent factors
* Compensatory mortality
* Additive mortality

Another Big Idea:

* Population growth slows as population size nears carrying capacity.

The key words:

* Carrying capacity
* Cultural carrying capacity

Now write a paragraph tying the big ideas together.

Finally, write a paragraph tying the big ideas of the book together with the big ideas in the video.