**Ecology, Pyramids, and Populations Review**

Use this as a **guide** to study: **completing this study guide is not enough studying to ensure you understand the material**. Also use your other tools: the quizzes you have taken, your note blanks, and your classwork. Use active strategies to study: explain to a friend, draw, or write.

What is the difference between a food web and a food chain?

 Be able to read a food web

 Producer, consumers (Primary, secondary, etc), decomposers

Relationship among organisms

 Commensalism

 Predation

 Parasitism

 Mutualism

Abiotic vs. Biotic

 Give examples for population limiting factors for each abiotic and biotic

10% rule for ecological pyramids –less is available as you go up the pyramid

Be able to do simple math to calculate how much energy/biomass/numbers are left at the top of the pyramid

What are the units for energy/biomass/number pyramids?

Be able to turn a food web or chain into a pyramid

Trophic levels

 Autotrophs

 Heterotrophs

 Saprotrophs

Population growth graph

 What is the difference between a logistic graph and an exponential graph?

 What are the different parts of a logistic graph?

 Humans grow at an exponential rate. Why?

 What is carrying capacity?

What are limiting factors, and what are examples of some?

 Logistic graphs demonstrate negative feedback and exponential demonstrate positive feedback.

Population calculations

Population totals take into account births, deaths, immigration, and emigration.

Population density= individuals/unit area. Practice with at least 3 populations

Population independent vs. dependent factors

 What are some examples of both?

Population dispersion: Define and draw the following

 Uniform

 Random

 Clumped

Succession

 What is ecological succession, and what are the stages?

 What is aquatic succession and what are the stages?

**Vocabulary:***Define all terms and provide an example.*

Population

Ecosystem

Birthrate

Death Rate

Growth Rate

Immigration

Emigration

Limiting factors

Carrying Capacity

Density Dependent

Density Independent

Habitat

Ecosystem

Community

Adaptation

Autotroph

Heterotroph

Predator

Prey

Producer

Consumer

Food Chain

Food Web

Predation

Symbiosis

Commensalism

Parasitism

Mutualism

Decomposer

Trophic Level

10% Rule

Primary Consumer

Secondary consumer

Tertiary Consumer

Biomass

Succession

Aquatic Succession

Logistic Growth Rate

Exponential Growth Rate