

# THE SGS - STUDY GUIDE SLIDE – ECOLOGY FINAL

## • Students must KNOW:

1. What is Ecology? What are the “levels of Ecological Organization” ordered from smallest to largest?
2. What is a Limiting Factor? What is Carrying Capacity? What are examples of Biotic and Abiotic Factors that could lead to Competition and/or reduced Population Growth?
3. What is a Producer, Consumer, Decomposer, Herbivore, Carnivore, and Omnivore?
4. What are examples of the four main Species Interactions (Cooperation, Competition, Predation, & Symbiosis) and the three types of Symbiosis (Mutualism, Commensalism, & Parasitism) and how are they different?

## • Students must be able to DO:

1. Contrast a Habitat & Niche and the difference in reading a Food Chain & Food Web.
2. Identify and Graph Eco Graphs with 2 Y-Axes such as “Predator VS Prey”.
3. Compare and Contrast “K” and “R” Species.
4. Describe the climate, location, issues, and other characteristics of the Major Land and Water Biomes.



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## Students must KNOW:

1. The study of Organisms and their Interactions with the Environment. Individual Organism/Species, Population, Community, Ecosystem, Biome, and Biosphere.
2. Factors that limit the growth of a Population (Less Births/Immigration or more Deaths/Emigration). The maximum number of individuals of a given Species that an area can support. See Pg. 6-7 & Pg. 34-38.
3. See Pg. 20-21.
4. See Pg. 38-39 and Pg. 44-50.

## Students must be able to DO:

1. Habitat = an Organism's Home, Niche = an Organism's Role/Job aka how they SURVIVE in their Ecosystem. Both Food Chains and Food Webs show the TRANSFER of energy in an Ecosystem via feeding relations, and both USUALLY start with the Sun. Food Chains only show one path while Food Webs are more complex and show many paths/relationships.
2. See QP 5-13, 5-14, 5-15, 5-16, and 6-5.
3. "K" Species (Ex: Chimps) are larger, have fewer offspring, and live longer. "R" Species (Ex: Snails) are smaller, have many offspring, but live shorter lives.
4. See Pg. 62-85 + the Tech Chex HW.

