What to Know – Chapter 4
Biology B

- Greenhouse effect
  - Define
  - Major substances that create effect
- 3 main climate zones of biosphere
  - Factor that creates 3 zones
- Heat transport in biosphere
  - Cause of heat transport
  - Influence of land masses
- Biotic & abiotic
  - Define
  - Examples
- Niche
  - Define
- Community Interactions
  - Competition
    - Competition Exclusion Principle
  - Symbiosis
    - Mutualism
    - Commensalism
    - Parasitism
- Ecological succession
  - Primary
  - Secondary
- Biomes
  - Define
  - Climate Graph Lab
    - Interpret graphs
    - Compare climate graphs from different locations
    - Hypothesize factors influencing climate based upon biotic and abiotic factors
  - Simpson's Diversity Index Lab
    - What factors affect biodiversity in ecosystems
    - Apply formula for Simpson's Diversity Index

Ecology Chapter 5: What to Know
Biology B

- Populations – 3 main characteristics – define, examples
  - Be able to calculate population density
  - Range – relate to 1 main characteristic
- 3 things that affect population growth – list
  - Immigration vs. emigration – compare, contrast
- Logistic growth – define, identify characteristic graph curve shape
- Exponential growth – define, identify characteristic graph curve shape
- Carrying capacity – define, relate to exponential and logistic growth – when is it reached?
  - Effect on population growth
- Infer causes of population growth graph curves
- Limiting factors – define, examples
  - Density-dependent
  - Density-independent
- Demography – define
- Demographic transition hypothesis – explain, know the steps in the progression of this model
  - Examples of countries that have completed demographic transition
  - Examples of countries that have not completed demographic transition
- Age structure diagrams – interpret
  - Predict future population growth based on a diagram
  - Explain predictions using information from a diagram