

## Big Quiz: Chapter 3 & 5: What to Know

### Biology B

- Chapter 3
  - Ecology – define
  - Levels of organization – from species → biosphere
  - Energy in ecosystems
    - Source
    - How energy moves through ecosystems
    - Energy pyramid – explain
    - Producers, consumers (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> level, etc.) – define, examples
      - Decomposers – define, examples
    - Autotroph, heterotroph – define, examples
    - Food chains & food webs – define, interpret diagrams
      - Trophic level – define
    - Biomass pyramid – explain
      - Primary productivity – define
  - Matter in ecosystems
    - How movement in ecosystems is different from energy
    - Matter cycles – water, carbon, nitrogen – describe generally
      - Nitrogen fixation - explain
    - Nutrient – define, examples
- Chapter 5
  - 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