Topics List for Unit 2 Test (Ecological Organization)

The following are topics or concepts that you should know for the Unit 2 test.   
This test covers all of Chapters 3-6. You should also know the vocab from these chapters (see vocab list)

**Chapter 3**

Levels of ecological organization

Ecological methods

Autotrophs  
-two types

Heterotrophs  
-3 kinds of Consumers

Terms: Herbivore, carnivore, omnivore, scavenger, decomposer

Trophic levels

Food chains vs food webs

10% rule

3 types of Ecological Pyramids, differences

The Water Cycle  
-major processes

Nitrogen cycles  
-main forms of nitrogen  
-Nitrogen fixation  
-Denitrification

Phosphorus Cycle  
-main forms of phosphorus

Carbon Cycle  
-4 types of processes that move carbon

Human Impact on the Carbon cycle  
-Global warming  
-examples of problems with this

Nutrient limitation & human impact  
-what is a limiting nutrient  
-Crop rotation & synthetic fertilizers  
-water pollution by nutrients (dead zone)

**Chapter 4**

Climate vs Weather

Latitude & Climate  
-3 climate zones of earth

Heat Transport in the Biosphere

Biotic & Abiotic factors shaping ecosystems

Habitat & niche

Community Interactions  
-Competition  
-Predation  
-Symbiosis (3 types)

Ecological succession  
-Primary & Secondary

Terrestrial Biomes  
-What defines a biome?  
-Variations in Tolerance  
-Microclimates  
-**Can bring in 10 Terrestrial Biomes Chart**

Mountain Ranges & Polar Ice caps

4 abiotic factors that affect Aquatic Ecosystems

3 types of Freshwater Ecosystems

Blending Fresh & Salt Water Ecosystems

Several ways to divide up Marine Ecosystems

**Field Trip**

Examples of plants & animals in grasslands

Examples of community interactions

Examples of glaciation & succession

How first nations historically interacted with the land & ecosystems

**Chapter 5**

Characteristics of Populations

4 Population Growth Factors

Open & Closed Populations

Types of Population Growth

David Suzuki & Overpopulation

Density Independent Factors

Major Density Dependent Factors

Texas Mosquito Mystery

Reducing Limits on Human Population Growth

Ecological Footprint

R vs K Selected Species  
-what are the differences?  
-which are we?

Demographic Transition

Age Structure Diagrams (Pop. Histograms)

**Biome Project**

Describe your biome

Major plants and animals in your biome

Climate in your Biome

Human impact on your Biome

**Chapter 6**

Ecosystem Services  
-Examples  
-Value

6 main human impacts

Human activities that change the landscape  
-hunting & gathering  
-agriculture  
-Industry  
-Urban development

Tragedy of the commons

Renewable & non-renewable resources

Sustainable Development

Problems & Sustainable Practices for  
-Land Resources  
-Forest Resources  
-Fishery Resources   
-Air Resources  
-Water Resources

Biodiversity  
-importance & value  
-threats  
-invasive species  
-conservation

Pollution & Bio-magnification

Ozone Depletion

Climate Change