Module 5:	Population Biology

Key Concepts

Explain the basic distinctions of arithmetic and exponential growth
Explain Thomas Malthus' view on the role of population growth in society
How many humans are there on this planet? In the USA?
What are the current growth patterns on this planet? in the USA? in NH?
The calculation of population doubling time
What are the 'good points' and 'bad points' of China's one-child policy?
What are environmental resistors and how do they control population growth rate
How has population growth rate compared to resource consumption rates?
What is meant by a population's momentum? (best example is China)
In rough terms, explain global demographics (the 'New Ark' thing)
What is the difference between population density and population growth?
What are factors that influence population growth?
Be able to explain what happens during a 'demographic transition' (Bongaarts)
Explain the shifts in DR as a country goes through a demographic transition
The difference between r- and K-selected species
Explain the lynx-hare population cycles - how do we know they cycle? why do they cycle?
How do you explain the differences between survivorship curves?
What is an age distribution diagram and how do you read them?

What are some of the design considerations for an 'eco-city'?
What makes cities more sustainable than suburbs? Green cities vs 'normal cities"?

Key Words

biotic potential	ecological footprint	population
carrying capacity	infrastructure	sex ratio
demography	life expectancy	survivorship
demographic transition		urbanization

Other Readings:	E.O. Wilson's *The Bottleneck* Bongaart's *Human Population Growth and the Demographic*..

Homework:

Labs: Sustainable Cities Project