Go to http://www.biologylabsonline.com, click Demography Lab and logon.

**Part 1: Demographic Differences Among Nations**

Countries differ with respect to population numbers, age structure, and fertility and mortality rates. These differences are caused by many factors, such as geographic size and location, level of economic development, government policies, and religious practices. The following exercises are designed to help you understand the influence of some of these factors on the size and growth of human populations.

1. Click the Population Structure button on the left side of the Demography Lab window. Using the Country popup menu, examine the estimated 1998 population structure of each nation.

   **Question 1.** How would you describe the population structures of India and Sweden?

   a. India has a young population; Sweden is evenly distributed.
   b. India is evenly distributed; Sweden has a young population.
   c. India has a young population; Sweden has an old population.
   d. Both India and Sweden have young populations.

2. Click the Fertility Rate view on the left side of the Demography Lab screen. Using the Country popup menu, examine the estimated 1998 fertility rates of each nation. (Try changing the scale to magnify these differences by clicking the Scale arrows on the lower right side of the chart).
Question 3. Do you see any trends in the fertility rates? What are they?

a. Females in less developed nations (India, Nigeria) tend to have more children at a later age than females in more developed nations (USA, Sweden).
b. Females in less developed nations (India, Nigeria) tend to have fewer children at an earlier age than females in more developed nations (USA, Sweden).
c. Females in less developed nations (India, Nigeria) tend to have more children at a younger age than females in more developed nations (USA, Sweden).

3. Click the Mortality Rate view on the left side of the Demography Lab screen. Using the Country popup menu, examine the estimated 1998 mortality rates of each nation.

Question 4. Which statement best describes the child mortality rates for the two groups of countries?

a. Less developed countries have higher child mortality rates than more developed countries.
b. Less developed countries have lower child mortality rates than more developed countries.
c. More developed countries have lower child mortality rates than less developed countries.
d. Both (a) and (c)
e. Both (a) and (b)

Question 5. Ignoring child mortality rates (Under 5), how would you describe the overall mortality trends between Sweden and India?

b. More people live longer in Sweden than in India.
c. There aren’t really any differences; everyone eventually dies anyway.

Part 2: Historical Effects on Demographic Changes

For a variety of reasons, populations sometimes undergo periods when there are large changes in reproduction or mortality. For example, desert plant populations may produce a large cohort of seedlings following heavy rains, or a fish population may experience a peak in reproduction due to a La Niña weather year. Human populations exhibit similar demographic changes. For example, the history of human civilization includes many well-documented events, such as plague (Black Death of medieval Europe) and famine (Irish Famine of 1845-1847), that produced pronounced demographic changes in human populations. The following exercises illustrate some examples.

1. In the United States, a peak in reproduction occurred after World War II from the late 1940s through the early 1960s (1946-1963); this produced the "baby boom" generation.
Click the Population Structure button. Using the Country popup menu, examine the estimated 1998 population structure of the USA.

**Question 6.** Can you find the baby boomers? In which age groups are they represented?

a. 15-39  
b. 30-60  
c. 35-54  
d. < 35

Click the Run button and choose the Population Structure view. (You may wish to use the Scale button to make the differences in age structure more obvious.) Use the arrow buttons at the top of the view to advance the population structure forward in time. Follow the baby boom generation as they age. Compare the population in 1998 with the projected population for 2028.

**Question 7.** What will happen to the population structure of the USA between 1998 and 2028?

a. Overall, the population will be younger  
b. Overall, the population will be older  
c. There will be more older people in 2028 than in 1998.  
d. Both (a) and (c).

2. In 1980, China’s government adopted a policy advocating one child per couple.

Click the Return to Lab button then click the Population Structure button. Examine the estimated 1998 population structure of China. (You may want to compare China with India to answer question 8).

**Question 8.** What evidence is there of China’s population policy?

a. There are fewer young people under 25 years of age.  
b. There are more young people under 25 years of age.  
c. There is no evidence that the policy has had any effect.

Click the Run button and choose the Population Structure view. (You may wish to use the Scale button to make the differences in age structure more obvious.) Use the arrow buttons at the top of the view to advance the population structure forward in time by 5-year increments until you reach 2098.
Question 9. What long-term changes will occur in China’s population structure as a result of its policy?

a. The population will become less evenly distributed and there will be more young people to sustain the overall population.
b. The population will become more evenly distributed and there will be fewer young people to sustain the overall population.
c. The total population will decrease significantly.
d. Both (b) and (c).
e. None of the above.

3. At the same time the baby boom was occurring in the United States, there was a "baby bust" in post-World War II Japan (after 1945) when fertility rates decreased because of the devastation of the war.

Click the Return to Lab button then click the Population Structure button. Using the Country popup menu, examine the estimated 1998 population structure of Japan.

Question 10. What evidence is there of the postwar baby bust?

a. There are fewer old people in 1998.
b. There are fewer young people in 1998.
c. There is no evidence.