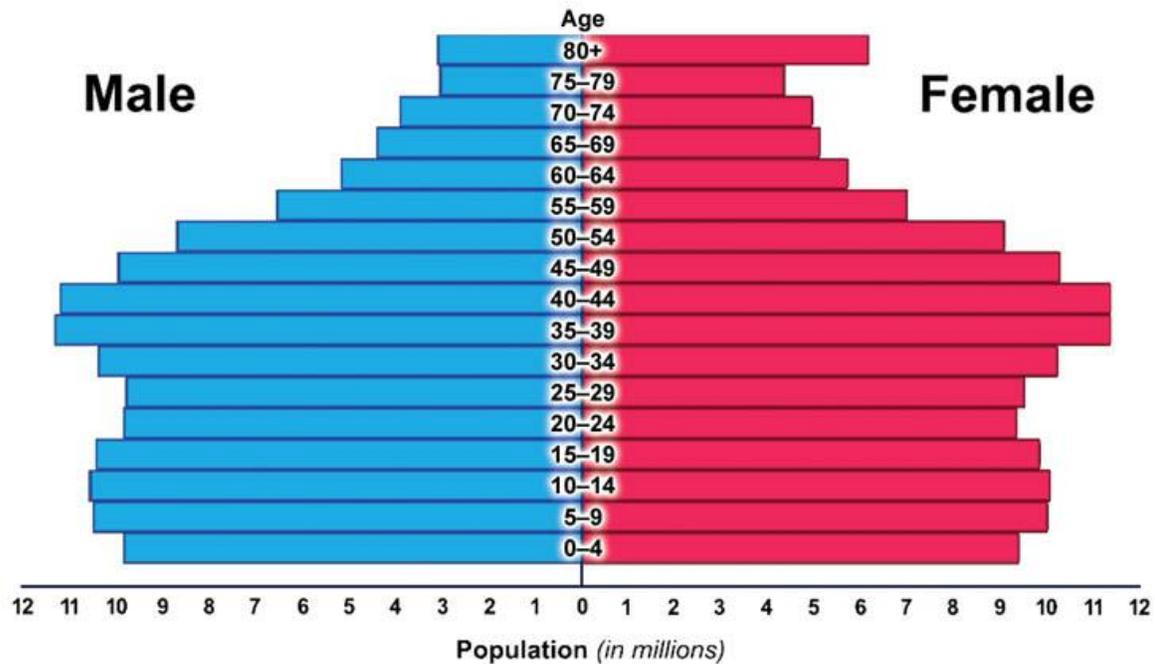


Name _____

Age Structure Diagram Worksheet

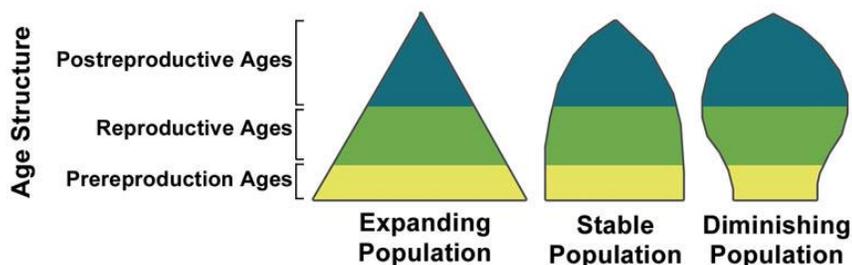
United States Population (2000)



Refer to the population pyramid also known as an age structure diagram above to answer questions

1. In which categories are the populations the highest? Prereproductive & post reproductive ages
2. In which age category is the population of males and females the most different? Why do you think that is? Post reproductive - Men die earlier; health, job or due to being more physical
3. How many millions of males and females are shown in your age category? 22 million

Theoretical Population Comparison



Name _____

Age Structure Diagram Worksheet

Age structure diagrams can help us understand a lot of trends about a population such as predicting population changes. For example if the bottom of the pyramid is wide meaning that there is a large young population, the population is expanding. Where if the base is very narrow indicating that there is a small young population, the population will diminish in the future.

4. Based on the United States population diagram at the top of the page, is the population of the United States expected to increase or decrease? Explain your answer.

Increase-large part of the population is prereproductive age or more than the post reproductive age, which will be dying

5. One concern about the Hawaiian Monk Seal, which is a highly endangered species, is that there are few "teenage" (8-15 years old) females. Monk Seals have a life expectancy of 25-30 years, and the females reach reproductive age at about 6 years old.
- a. Sketch the age structure diagram for the Hawaiian Monk Seal, focus on drawing the shape of the diagram (Expanding, Stable, or Diminishing) rather than identifying the ages.

Draw the diagram from the previous page that shows the diminishing population & label the areas where you would find the pre, reproductive, and post reproductive ages

- b. Explain why this is a concern to biologists.

Not enough of the population in the younger ages, so the population will continue to decline.

6. Studies show that the sex of sea turtle hatchlings is determined by the temperature of the environment. When eggs are incubated at a temperature warmer than 30 degrees Celsius, the sex is a female. When the incubated temperature is below 30 degrees Celsius, the sex is a male. A typical nest varies in temperature due to depth, proximity to cool sand, etc.

As a whole the Earth is getting warmer. How could this affect sea turtle populations? Draw an age structure diagram to support your thoughts.

Expanding - if the increase in temperature allows more females to be born, it is possible to have more females laying eggs to increase the population.

If the temperature becomes too high though and only female turtles are born then you would see a decline in the population because there would be no offspring being born.