Ecology of Populations

**What is ecology?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Population Growth** **-** Populations grow when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

rate exceeds rate of mortality \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Age Distribution -** Age-Structure Diagram shows growth

patterns of populations grouped into

categories





**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What is the difference in population density between developed and less-developed countries?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Humans are part of the Earth's \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Human activities can either \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ alter the balance of an ecosystem.

**How do human activities affect the environment?**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Human impacts on the Environment:**

***Global warming***

Use of machinery by humans \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to be increasing \_\_\_\_\_\_\_\_\_ levels in the air. CO2 prevents heat from escaping, possibly causing slight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ temperature increases.

***Deforestation***

• Caused by demand for \_\_\_\_\_\_\_\_\_\_\_\_ products, need for \_\_\_\_\_\_\_\_\_\_\_\_, farmland, housing, and roads.

• \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ causes habitat \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Animals and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are forced into confined areas.

***Ozone depletion***

• Caused by aerosol chemicals called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (CFCs).

• CFC’s

– Escape into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, reacts breaking down the ozone (\_\_\_\_\_\_, a protective atmospheric layer).

– \_\_\_\_\_\_\_ rays penetrate the atmosphere and cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to many organisms.

***Fishing activities***

• Demand for fish and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

• Commercial Fishing can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to environment in many ways.

***Invasive species (EXOTIC SPECIES)***

• Introduced by people \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or intentionally.

• Can cause problems if no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ enemies are present.

**Do you know of any invasive species?**

**1.**

**2.**

**3.**

**4.**

**5.**

***Exotic pet trade***

•\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and sell wild animals from exotic locations.

• Wealthy buyers and collectors desire \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ animals

• Animals removed from their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ causes an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the ecosystem.

**Importance of the Environment:**

Biodiversity - Many different types of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

• Organisms depend upon \_\_\_\_\_\_\_\_\_\_\_\_ another.

• Interfering with one organism can have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ effect to many within the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Natural resources***

\_\_\_\_\_\_\_\_\_\_\_-renewable includes fossil fuels (petroleum, coal).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ includes animals, plants, water, wind, etc.

–even renewable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can run out.

Renewable energy sources include \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, geothermal energy, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ currents.

***Agricultural***

–DDT

–Fertilizers

–Animal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (nitrogen)

***Homes***

–Strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ agents

***Industry***

–\_\_\_\_\_\_\_\_\_\_\_ gases and wastes

–\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rain

**Sum it Up!**

**What are three new things you learned about Ecology?**

**1.**

**2.**

**3.**

**Has your opinion changed about the environment? Explain.**

**What can you do to help the environment? Explain.**