

NAME \_\_\_\_\_

HR \_\_\_\_\_

## Humans and the Environment Outline

### Human Requirements

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- 
- 
- 

### Human Interactions

■ In order to survive, humans need to interact with many different

\_\_\_\_\_ and the

\_\_\_\_\_.

■ Interactions may provide us with

\_\_\_\_\_.

■ Humans affect the \_\_\_\_\_

■ Some organisms \_\_\_\_\_ on human presence for their

\_\_\_\_\_.

■ The way we change our \_\_\_\_\_ will

determine the \_\_\_\_\_ of all living things.

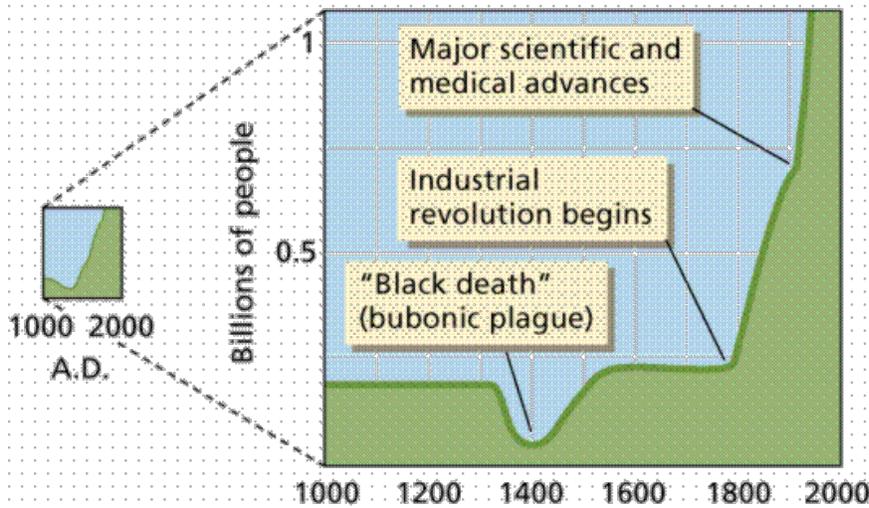
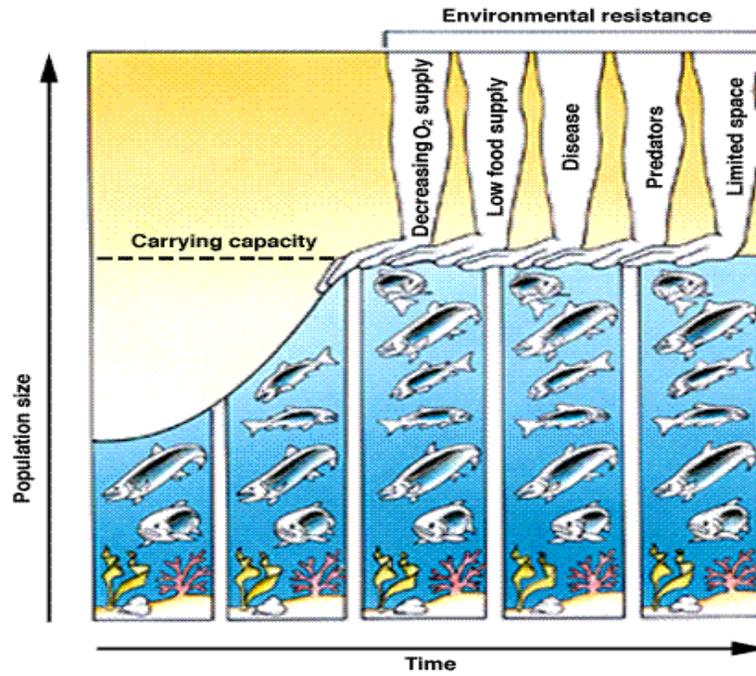
### Human Population

- How many people can the Earth sustain?
- How big will the world population get?

### Population Dynamics

- Dynamics of Population Growth
- Factors that Increase or Decrease Populations
- Factors that Regulate Population Growth

# Carrying Capacity



## Human Population Growth

- Unlike naturally occurring species, human population growth is

\_\_\_\_\_

- \_\_\_\_\_ and \_\_\_\_\_ has

\_\_\_\_\_ the death rate from \_\_\_\_\_.

- Many ecosystems are unable to produce enough food and

\_\_\_\_\_ results.

- In other ecosystems, food production has been increased by

\_\_\_\_\_

### Environmental Pollution

- A **pollutant** is

- Many substances become pollutants when the natural systems cannot

\_\_\_\_\_, or they are \_\_\_\_\_.

- A **carcinogen** is

### Water Pollution

- Interferes with our ability to obtain



- Pollutants:

■ Phosphates are eaten by lake algae causing rapid growth known as **algal bloom**. The algae die and decompose, using up all the oxygen. Other aquatic organisms suffocate and die from lack of oxygen.

### Air Pollution

- Interferes with our ability to obtain

- Produces \_\_\_\_\_ that are destructive to our \_\_\_\_\_ and \_\_\_\_\_.

- Pollutants:

- Too much \_\_\_\_\_ in the air causes

\_\_\_\_\_ known as the

“ \_\_\_\_\_ ”.



■ \_\_\_\_\_ and \_\_\_\_\_ combine with \_\_\_\_\_ to create \_\_\_\_\_. Acid rain is harmful to organisms that live in lakes and forests.

■ **Smog**

■ \_\_\_\_\_ binding to \_\_\_\_\_ causing \_\_\_\_\_, which leads to \_\_\_\_\_ and a decrease in \_\_\_\_\_.

Soil Pollution

■ Interferes with our ability to obtain

■ Pollutants:



Negative Human Activities

■ Some human activities have led to the \_\_\_\_\_ or \_\_\_\_\_ of many plant and animal species

■ An \_\_\_\_\_ species is a species that may soon \_\_\_\_\_ without some form of human \_\_\_\_\_.

■ An \_\_\_\_\_ species has already disappeared \_\_\_\_\_.

Overhunting and Exploitation

■ Unregulated hunting, fishing, and trapping have resulted in the \_\_\_\_\_ of species.

■ Many species that have been \_\_\_\_\_, are close to \_\_\_\_\_.

■The **exploitation** ( \_\_\_\_\_ ) of wild plants and animals for products and pets has \_\_\_\_\_ ecosystems and \_\_\_\_\_ populations.

■Example: The trees of the tropical rain forests have been cut for the manufacture of plywood.

### Importation of Organisms - (Invasions of Alien Species)

■Humans have accidentally and sometimes intentionally \_\_\_\_\_ organisms into areas where they have no natural \_\_\_\_\_.

■Without natural \_\_\_\_\_, organisms reproduce in large numbers.

■This leads to the \_\_\_\_\_ of an existing ecosystem.

### Poor Land Management

■The rapid growth of cities and suburban areas around cities has reduced the land available for \_\_\_\_\_ and \_\_\_\_\_ the natural \_\_\_\_\_ of many organisms.

■Attempts to increase agricultural productivity have led to \_\_\_\_\_

■This has resulted in \_\_\_\_\_ and loss of \_\_\_\_\_

■Excessive use of \_\_\_\_\_ and \_\_\_\_\_ has led to contamination of \_\_\_\_\_ and damage to \_\_\_\_\_.

### Use of Biocides

■A **biocide** is a

■**Pesticides**

■**Herbicides**



■ These chemicals have contaminated the \_\_\_\_\_.

They have also disrupted \_\_\_\_\_.

■ This is because chemicals are taken in by organisms at the bottom of food chains. As these organisms are eaten by larger organisms, the chemicals collect in animal body tissues in increasingly greater amounts. This is known as \_\_\_\_\_.

### Waste Disposal

■ There are three types of wastes that have become a pollution problem

■ \_\_\_\_\_ Materials

■ **Biodegradable** –

■ Examples: Paper and Cotton

■ **Nonbiodegradable** –

■ Examples: Plastics, Aluminum, Glass, Disposable Diapers

■ \_\_\_\_\_ Materials

■ \_\_\_\_\_ Materials



### Improving The Environment

■ If \_\_\_\_\_ and

\_\_\_\_\_ are not slowed down, they will become limiting factors for our species, as well as other species.

### Environmental Laws

■ Governmental agencies have begun to take responsibility for environmental

protection by passing laws to \_\_\_\_\_.

- Freshwater Wetlands Act
- Hazardous Waste Disposal Regulations
- Air Pollution Control Laws
- State Environmental Quality Review Act
- Returnable Container Law
- Endangered Species Act



### Conservation of Natural Resources

■ Conservation involves the \_\_\_\_\_ and \_\_\_\_\_ use of

our \_\_\_\_\_.

■ Natural Resources include the basic things in the natural world

- |         |              |
|---------|--------------|
| ■ Soil  | ■ Energy     |
| ■ Water | ■ Wildlife   |
| ■ Air   | ■ Open Space |



## Renewable Resources

- Some resources can be \_\_\_\_\_ or \_\_\_\_\_
  - Water
  - Air
  - Soil
  - Wildlife
  - Wind



## Nonrenewable Resources

- Some resources cannot be \_\_\_\_\_
  - Gas, coal, and oil
  - Metals – gold, silver, iron, copper and aluminum
  - Sand, gravel and limestone
- Conservation of the limited natural resources is necessary to the \_\_\_\_\_.



- Communities encourage individuals to \_\_\_\_\_ nonrenewable resources to conserve them.

## Wildlife Preservation

- Efforts are being made to help \_\_\_\_\_ and to protect other \_\_\_\_\_.



- Endangered species also have protected \_\_\_\_\_ provided by \_\_\_\_\_ and \_\_\_\_\_.

- \_\_\_\_\_ have been passed regulating \_\_\_\_\_ and \_\_\_\_\_ to protect various species.

## Biological Pest Controls

- Substitution of \_\_\_\_\_ methods of pest control for \_\_\_\_\_ methods are less likely
  - to affect species that are helpful
  - to disrupt food webs
  - to contaminate the land
- Biological pest controls include the use of \_\_\_\_\_ to attract pests into traps, and the introduction of \_\_\_\_\_ of pests.

“We don't inherit the Earth from our ancestors, we borrow it from our children.”

Pennsylvania Dutch saying