

# Populations and the Use of Natural Resources

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# Resources & Organisms

What 4 factors do all organisms need to survive?

# Resources & Organisms

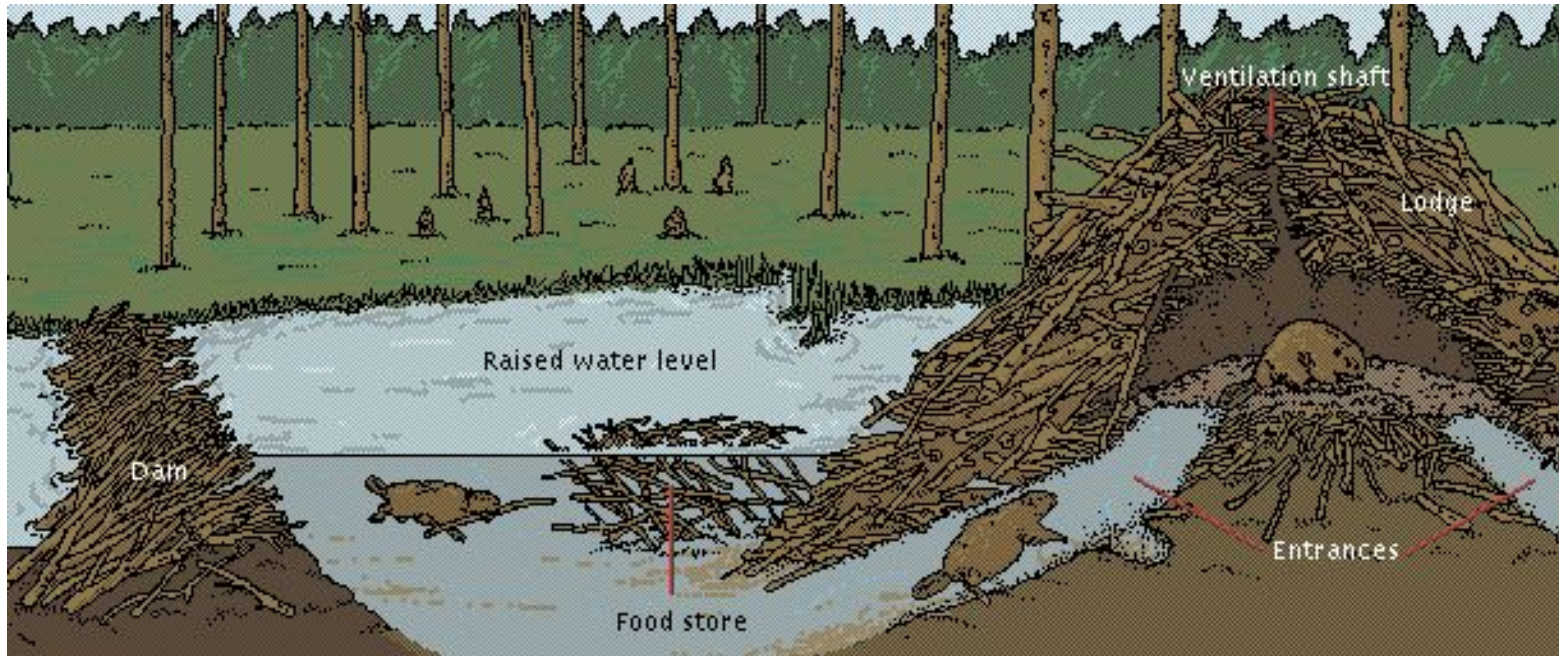
- Air
- Water
- Food
- Shelter

# Resources & Organisms

What organisms alter their environment to better meet their needs?

# Resources & Organisms

- Beavers build dams and create wetlands



# Beaver Dams



# Resources & Organisms

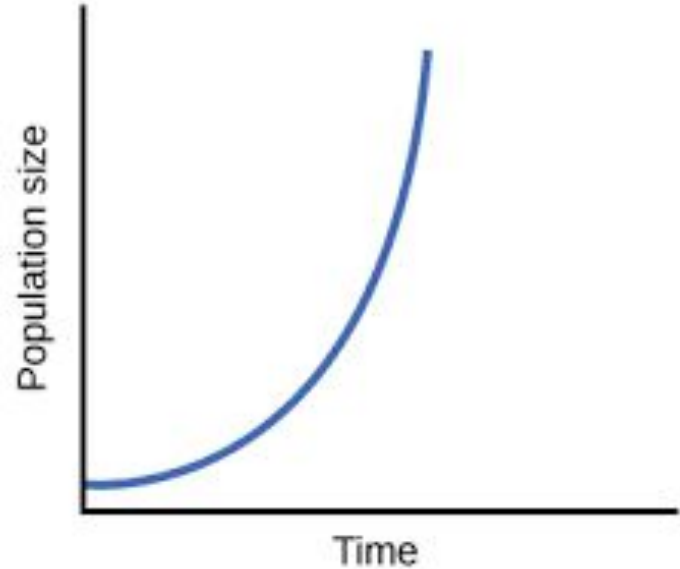
Of all the organisms on Earth, humans have an unequalled capacity to modify their environments

# Resources & Organisms

As a result, humans also have the greatest impact on the Earth's natural resources

# Population Growth

- An increase in the size of a population over time
- Represented by a J-shaped curve



# Limits to Population Growth

After exponential growth occurs, one or more limiting factors will cause a population to stop increasing

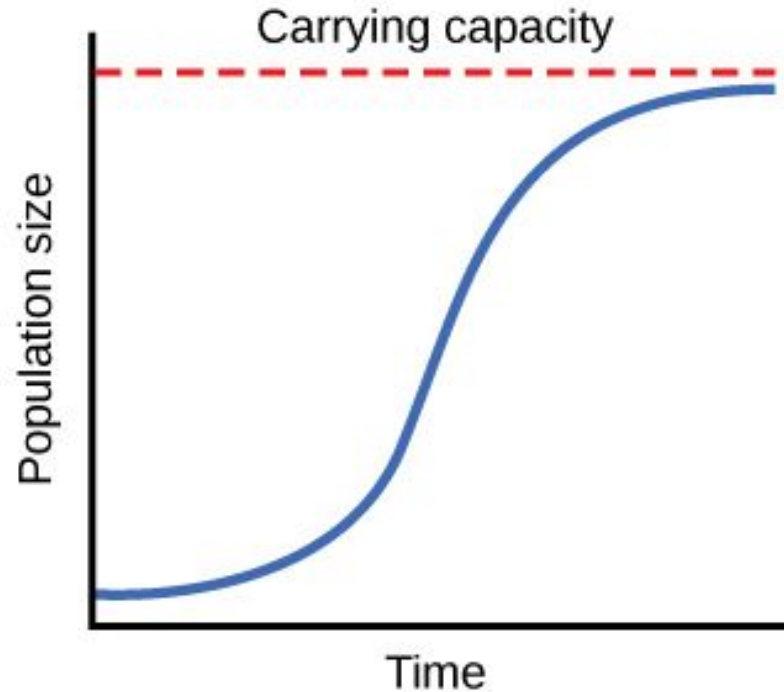
# What is Carrying Capacity?

The number of organisms that any given environment can support

# Carrying Capacity

A population at carrying capacity for its environment is in equilibrium

# Carrying Capacity



# Environmental Limits

Density-independent factors such as storms and fires

# Environmental Limits

Density-dependent factors such as disease, predators, and competition for food that depend on population size