

# Describing Populations

Identify a population of organisms living in our area.



Students, write your response!

# How would you describe the population?



Students, write your response!

# Describing Populations

- Ecologists study 5 characteristics of a population:
  - ✓ **Geographic range**
  - ✓ **Population density**
  - ✓ **Distribution**
  - ✓ **Growth rate**
  - ✓ **Age structure**

# 1. Geographic Range

- **The area inhabited by a population** is called its geographic range.
- A population's range can **vary enormously in size**, depending on the species.



# 1. Geographic Range

Examples:

- **Small range** like bacteria in a rotting pumpkin
- **Larger range** like cod in the western Atlantic
- **Huge range** like hydrilla – every continent except Antarctica



## 2. Population Density

- Population density refers to **the number of individuals per unit area.**
- **Density = # of individuals / area**

## 2. Population Density

There are 500 ducks living in a 10-square kilometer pond.

**What is the duck's population density?**

Show your work.



Students, draw anywhere on this slide!



### 3. Distribution

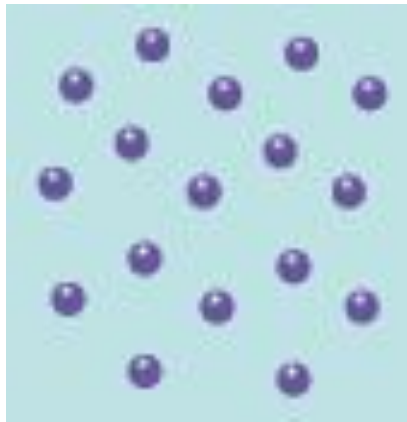
- Distribution refers to **how individuals in a population are spaced out across the range of the population**

✓ **Random**



Ex. Wildflowers

✓ **Uniform**



Ex. King penguins

✓ **Clumped**



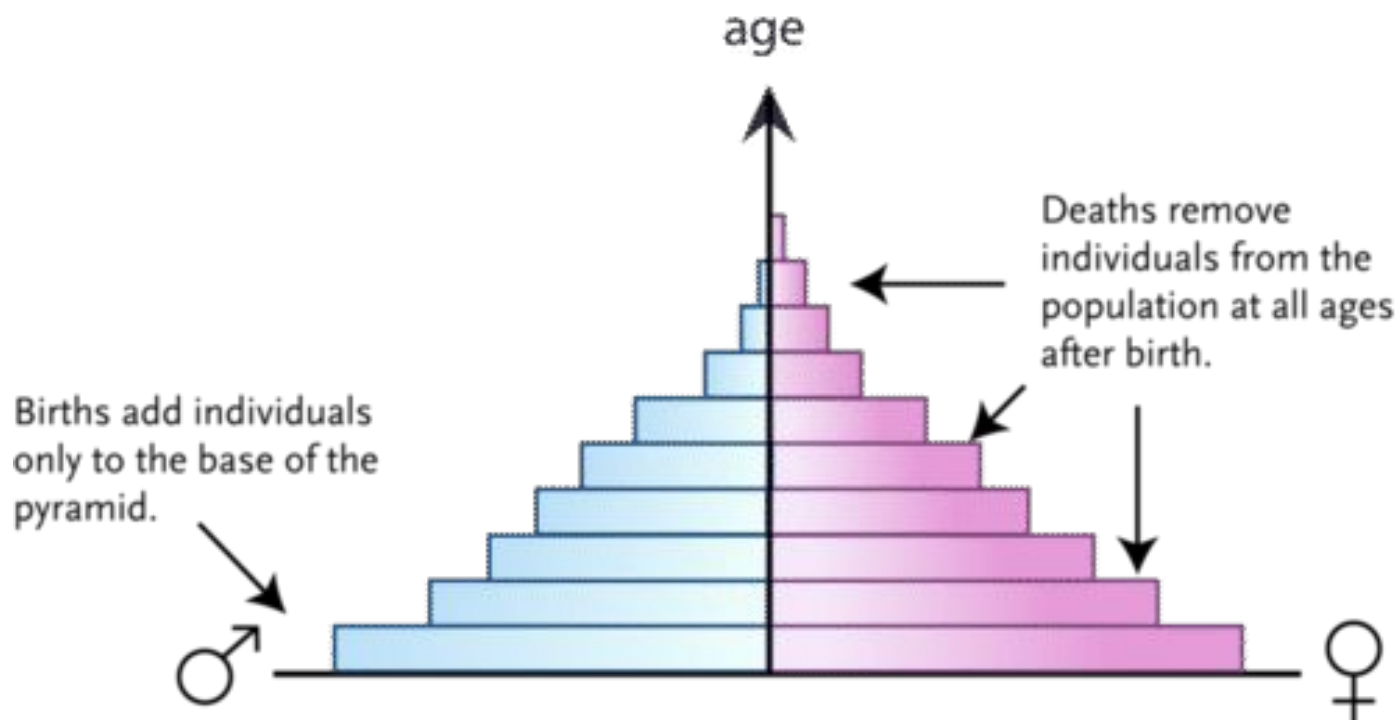
Ex. Schools of fish

## 4. Growth Rate

- A population's growth rate **determines whether the population size increases, decreases, or stays the same.**
- Example: White-tail deer population has a negative growth rate = **population size decreases**
- Example: Zebra Mussels population has a positive growth rate = **population size increases**

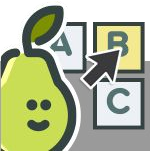
## 5. Age Structure

- Age structure refers to **the number of males and females of each age in a population.**



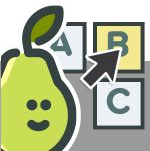
# Review

How quickly a population increases or decreases describes a population's \_\_\_\_\_.



# Review

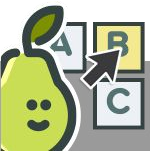
The area in which a population lives describes a population's \_\_\_\_\_.



# Review

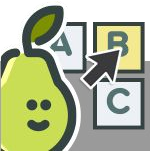
Count the number of males and females of each age in order to describes a population's

\_\_\_\_\_.



# Review

How the individuals are spaced in their geographic range describes a population's \_\_\_\_\_.



# Review

The number of individuals per unit area describes a population's \_\_\_\_\_.

