

14.3 Population Density And Distribution

KEY CONCEPT

Each population has a density, a dispersion, and a reproductive strategy.



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- ▶ **Population density is the number of individuals that live in a defined area.**
 - Population density is a measurement of the number of individuals living in a defined space.
 - Scientists can calculate population density.

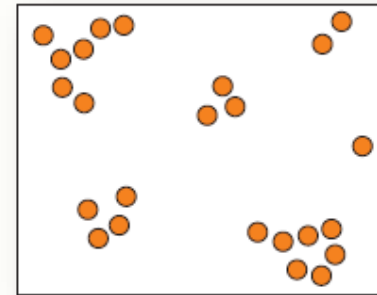
$$\frac{\text{\# of individuals}}{\text{area (units}^2\text{)}} = \text{population density}$$

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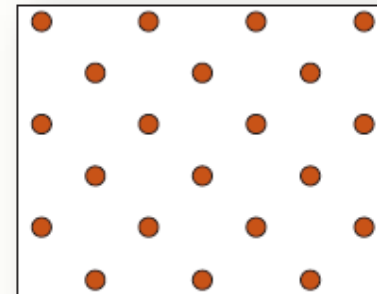
▶ **Geographic dispersion of a population shows how individuals in a population are spaced.**

- Population dispersion refers to how a population is spread in an area.

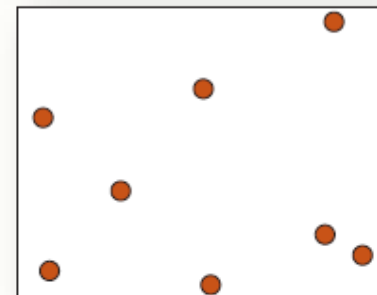
Clumped dispersion



Uniform dispersion



Random dispersion



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- There are three types of dispersion.
 - clumped



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- ▶ **Survivorship curves help to describe the reproductive strategy of a species.**
 - A survivorship curve is a diagram showing the number of surviving members over time from a measured set of births.

SURVIVORSHIP DATA			
Age (years)	Deaths	Survivors	% Surviving
0–5	I	$35 - 1 = 34$	97
6–10	I	$34 - 1 = 33$	94
11–15	0	$33 - 0 = 33$	94
16–20	IIII	$33 - 4 = 29$	83
21–25	I	$29 - 1 = 28$	80

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- Survivorship curves can be type I, II or III.
 - Type I—low level of infant mortality and an older population
 - common to large mammals and humans
 - Type II—survivorship rate is equal at all stages of life
 - common to birds and reptiles
 - Type III—very high birth rate, very high infant mortality
 - common to invertebrates and plants

