

Macroevolution

- If you sacrifice yourself helping your relatives, you'll actually see an increase in fitness
- Alleles that cause this altruistic trait will then become more common because your relatives survived
 - Reciprocal altruism
 - One individual helps another with the hope they'll return the favor
 - Vampire bats share blood meals with unrelated individuals in hopes of getting repaid in the future
- Mating behaviors
 - Females tend to be the "choosier" sex
 - Much larger investment in mating: eggs are more costly to produce than sperm, and females usually raise offspring
 - For a female, mating with the wrong male can be an expensive waste
 - Thus, females want to mate with a male that has certain traits/behaviors
 - Courtship rituals takes a long time, and indicates a male will stay even after the offspring is born
 - Nuptial gifts are gifts, often food, that the male gives to the female up front to help give the female energy to reproduce
 - Males also want to ensure their reproductive success
 - In some animals, a male might take the sperm of another male out of the female
 - Mate guarding are ways that males block other males from mating with a female after sex
 - Produces a mucus plug that blocks any more sperm
 - Physically mating with a female for a prolong period of time to prevent other matings
 - Some frogs actually stay engaged with the female for weeks
 - Want to actually get offspring out of the energy investment
- Communication is the ability to convey information to other individuals, and is needed for cooperation, reproduction, warning signals, hunting, etc
 - Chemical molecules called pheromones are released to trigger responses
 - Marking territory, mating signals, etc
 - Acoustic communication is producing sound
 - Alarm sounds when a predator is coming
 - Visual forms of communication
 - Displays of threat (showing teeth), or health (male peacock)
- Language in humans
 - Created by your larynx which is located in the Adam's Apple
 - Two folds of tissue (vocal cords) that sit on top of the trachea
 - Air passes by the folds, causing them to vibrate (like guitar strings)
 - Plays no role in homeostasis or body functioning
 - However, important in human behavior and the formation of society