



Animal Behaviors Affecting Successful Reproduction

**Next Generation Science Standard
MS-LS1-4**

Animal Reproductive Behavior Basics

Animals use a variety of methods to increase their chances of reproducing. They use communication devices like songs, calls, fancy plumage, odors, and dances to attract a mate.



The environment can provide helps or hindrances to animal reproduction. Such things as temperature, stress from predators, and availability of food and water can all affect animals' health and their ability to reproduce. Animals that adapt stand a better chance of survival.





Larger animals have a higher chance of survival. They tend to have fewer offspring. It takes longer for their species to grow up and reach the age of maturity, so the parents spend more time and effort caring for them.

Many animals are pretty smart and have either learned or have an instinct that helps them survive and protect their young. Some animals build nests that protect their offspring. They may be in burrows, in treetops, in the water, or near a predator's enemy where predators can't or won't reach them.



Some animals protect their young by herding. They keep the young in the middle of a group of adults to help shield them from predators.



Specific Animal Reproductive Behaviors



Reproductive behavior in animals includes any event or action that is involved in perpetuating a species so that an animal reproduces at least one replacement of itself.

There are numbers of behaviors that help announce and guarantee successful reproduction, including environmental,

hormonal, visual, olfactory, auditory,

courtship, post-fertilization care, and parental care.

Let's take a look at some examples of each of these!

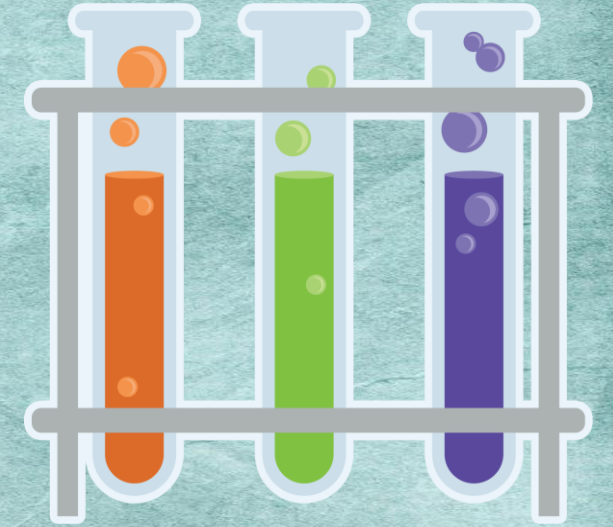


Environmental

- Ability to adapt to changing environments
- Length of day (light) increases favorability
- Food and protein resources
- Water resources
- Space
- Available shelter



Hormonal



- Production of estrogen in females and testosterone in males
- Secretion of pheromones to leave clues and attract males and females to one another

Hormones are chemicals in the body that determine what the cells in body parts do. These hormones are released into the blood stream from organs called glands.

A pheromone is a chemical produced in the body that sends messages to other members of the same species. Some pheromones are designed to send “alarm” messages, while others send food trail messages or sexual attraction messages.

Visual



- 🦚 Prenuptial molt of some birds to replace plumage
- 🦚 Bright red hindquarters of a baboon
- 🦚 Aggressive behavior among males
- 🦚 Territoriality among males lessens competition

Auditory

- 🐸 Vocal signals among animals like frogs usually reveal to the receiver the caller's species, its sex, and whether or not it is mated.
- 🐸 Some vocalizations let females know how many males are present.
- 🐸 Territorial songs of some birds repels other males.





Courtship

- 🦆 Communication signals that reduce fear and hostility between potential reproductive partners
- 🦆 Appearance of female coloring non-threatening to males. Males take on different coloring, etc., that females interpret as non-fighting
- 🦆 Persistence, appeasement, persuasion, and even deception

🐻 Number of eggs or young produced guarantees some will survive

🐻 Mammals who stay with young for a time have fewer offspring for which to care.

🐻 Some larvae or eggs distasteful, inedible

🐻 Camouflage, “startle display” to scare off predators

🐻 Mimicry



Post-Fertilization Care

Parental Care

- 🐛 Bird nests in “safe” location, e.g. near wasps or stinging ants
- 🐛 Some fish and frogs build “bubble nests” to protect and provide oxygen
- 🐛 Some fish incubate eggs in their mouth
- 🐛 Some birds abdomen feathers are lost and skin thickens to provide warmth to eggs
- 🐛 Mammals lick young for cleanliness and socialization
- 🐛 Newborn mammals born sucking



Olfactory (Smell)

- 🐾 Urine, feces, and scent marking used by most mammals to identify their breeding territories and to advertise their sexual state
- 🐾 Birds find their mates through odor.
- 🐾 Some bird species have ways of detecting their genetic similarity with those of prospective partners so that they do not inter-breed with relatives.
- 🐾 Pheromones send messages to potential mates.

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