

NOTES 10.1

Chapter 10 – Animal Behavior

Lesson 1 – Types of Behavior



What is behavior?

Have you ever watched a dog sniff the ground while it was outside? Why do they do this?



Dogs receive information about their surroundings by sniffing. Dogs have a much more developed sense of smell than humans do.

A dog's nose has about 220 million scent receptors, but a human's nose has only about 5 million.

Sniffing is a common dog **behavior**.

Q: What is a behavior?

A: the way an organism reacts to other organisms or to its environment.

NOTE: Behaviors are a way to maintain **homeostasis** when the environment changes.

Stimuli & Responses

When an animal carries out a behavior, it is reacting to a **stimulus**.

3 types of stimuli & responses –

1. **Stimuli** – many forms & results in different behaviors

Examples -

- External – temperature or pressure change (thunderstorm)
- Internal – hunger, thirst, illness, etc.



2. **Responses to Change** – happen in different ways

Examples -

External - Birds keep their feathers close in summer, but fluff them in the winter to trap heat.

Internal – Sick animals will have an increase in body temp (fever) to fight illness or will vomit to remove ingested material.



3.

Stress

- response to physical, mental, or emotional pressure



Examples -

- running away when scared - antelope running from a cheetah
- fighting back classic "Fight-or-Flight" response - a male buck vs. another male buck
- color change - chameleons

NOTE: These processes ALL maintain homeostasis.

2

types of behaviors -

1. **Innate Behaviors** - inherited behavior (born with)

- Insects rely on this type of behavior due to their short lifespans.

Examples - cricket's chirp, moths' attraction to light, bees flight, etc.

- In animals this happens automatically, the 1st time an event occurs.

Examples -

- a baby giraffe knows how to stand immediately after birth & walk
- tadpole knowing how to swim as soon as it hatches



3

types of Innate behaviors -

Reflexes

- an automatic response that does not involve a message from the brain; the simplest type of innate behavior

Example - an armadillo can jump 1 meter when startled; this can ward off predators to escape



Instincts

- a complex pattern of innate behaviors; steps performed in a certain order

Examples -

- web spinning in spiders
- feeding in all animals



&



Behavior Patterns

- a change in response to a change in seasons

3 Types of behavior patterns -

migration

- instinctive, seasonal movement of animals from one place to another; moving to warmer places during cooler weather

Reasons - food & water or to return to specific breeding locations

Examples - monarch butterflies



hibernation

- a response in which an animal's body temp, activity, heart & breathing rate, decrease during periods of cold weather; live on stored fat

Examples - chipmunks, bears, skunks, opossums, raccoons, toads & frogs, etc.



estivation

- a period of animal dormancy, similar to hibernation, that takes place in the summer rather than the winter

Example - rough green snakes



2. Learned Behaviors - behaviors developed through experience or practice

4 types -

Imprinting

- occurs when an animal forms an attachment to an organism or place within a specific time period after birth or hatching; this only occurs once

Examples of animals who imprint -

ducks, guinea pigs & raccoons



Examples of animals who do not imprint -

~~reptiles~~, ~~amphibians~~, ~~insects~~

Trial & Error

- trying several techniques before finding one that works and is performed correctly

Example - bears fishing for salmon



Conditioning

- behavior that is modified so that a response to one stimulus becomes associated with a different stimulus; learning new behaviors

Example - a pet turtle swimming to the surface to wait for food from a hand



Cognitive Behaviors

- thinking, reasoning, solving problems; solving for future events

Examples - primates, dolphins, elephants, & crows

