


Objective: Students will be able to describe innate & environmental influences on the development of behavior and how different behaviors lead to survival.

behaviors help Survival

Why do the cranes dance?




internal (genes) & external (environment) cues?

The Fixed Action Pattern
Once initiated carried to completion


External ~ Stimulus

- red color
- other males
- territory

Internal ~ Fixed Action Pattern

- aggression
- color vision
- color display
- desire to mate

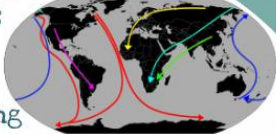
- How does it help it survive?
- Which behaviors favor survival?




Migration

How do birds do it over unfamiliar land and with changing climate?

Birds have magnetic iron ore in their heads



Oenanthe oenanthe	Northern Wheatear
Sterna bergii	Arctic Tern
Falco tinnunculus	Sharp-shinned Hawk
Puffinus tenuirostris	Short-tailed Shearwater
Prioniturus papuanus	Ruff
Bubo scandiakov	Scandinavian Hawk

- does earth's pull on magnetic ore trigger nerve impulses to the brain?
- does the earth's magnetic field act on photoreceptors, allowing birds to 'see' the magnetic field?

External	Internal
• seasons	• magnetic ore
• weather	• desire to migrate
• magnetic field	• brain receptors
•	• visual

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Animal Signals and Communication

Signal- stimulus transmitted from one animal to another

Visual Communication

Chemical Communication

Tactile communication

Auditory communication



Imprinting

- ★ Occurs for a brief time after birth
- ★ If bonding does not occur, parent will not care for infant

external: outside world is imprinting stimulus

internal: tendency to respond is innate

- ★ They respond to and identify with the first object they encounter



Associative Learning

★ The ability to associate one environmental feature or experience with another

- Classical conditioning- arbitrary stimulus with a particular outcome
- operant conditioning- (trial and error learning)- an animals OWN behavior is associated with a reward or punishment; animal will then tend to avoid OR repeat that behavior.

