

Chapter Fourteen: Animals and Behavior

Teacher Notes

Lesson One: What is an Animal

- Animal Diversity
 - some scientists feel that there may be as many as 3 million species on Earth
 - Vertebrates-an animal with a backbone
 - include fishes, amphibians, reptiles, birds, mammals, and humans
 - Invertebrates-animals without backbones
 - 95% of species
 - includes insects, snails, jellyfish, worms
- Animal Characteristics
 - Multicellular Makeup
 - made up of many cells
 - animal cells are eukaryotic (have a nucleus)
 - cells don't have cell walls
 - Reproduction and Development
 - most animals reproduce sexually
 - produce sex cells-egg and sperm
 - when egg and sperm join they form an embryo
 - embryo-a plant or animal at an early stage of development
 - a few animals do reproduce asexually
 - Many Specialized Parts
 - an animal's body has distinct parts that do different things.
 - cells may become skin cells, nerve cells, bone cells
 - tissues-similar cells that work together
 - example-muscle cells form muscle tissue
 - organs-a group of tissues that carry out a special function of the body
 - examples-heart, lungs, kidneys
 - Movement
 - most animals can move from place to place
 - may fly, run, swim, or jump
 - most use movement to find food, shelter, or mates
 - may be less active at certain stages of life
 - Consuming
 - animals can't make their own food
 - consumers-an organism that eats other organisms or organic matter
 - this sets animals apart from plants

Lesson Two: Animal Behavior

- Kinds of Behavior
 - Innate Behavior-an inherited behavior that does not depend on the environment or experience.
 - inherited through genes
 - examples-humans walk; puppies chew; whales swim

- Learned Behavior-a behavior that has been learned from experience.
 - example-speaking a language
- Survival Behavior
 - Finding Food
 - animals can be predators-animals that eat other animals
 - animals can be prey-animals eaten by other animals
 - Marking Territory
 - Territory-an area that is occupied by one animal or a group of animals that do not allow other members of the species to enter.
 - animals claim territory to save energy by avoiding competition
 - animals use territories for mating, raising young, and finding food
 - Defensive Action
 - allows animals to protect resources including territories
 - animals defend food, mates, and offspring
 - helps to protect themselves from predators
 - may make themselves hard to see, may run, inject poison
 - Courtship
 - animals need to find mates to reproduce
 - essential for the survival of an individual's genes
 - have special behaviors to find a mate
 - Parenting
 - adults taking care of young for survival
- Seasonal Behaviors
 - Migration-to travel from one place to another (usually from cold to warm)
 - how do they know where to go?
 - short trips-they use landmarks-fixed objects that an animal uses to find its way.
 - mountain ranges, rivers, and coastlines
 - Slowing Down
 - Hibernation-a period of inactivity and lowered body temperature that some animals undergo in winter as a protection against cold weather and lack of food.
 - animals that hibernate include mice, squirrels, and skunks
 - Estivation-a period of inactivity and lowered body temperature that some animals undergo in summer as a protection against hot weather and lack of food.
 - A Biological Clock-the internal control of an animal's natural cycles
 - may use clues like the length of day and temperature to set their clocks
 - Circadian Rhythms-a biological daily cycle
 - waking up and sleeping about the same time each day
 - Cycles of Change
 - seasonal cycles-hibernate and reproduce at certain times of the year

Lesson Three: Social Relationships

- Communication
 - Social Behavior-the interaction between animals of the same species

-Communication-a transfer of a signal or message from one animal to another that results in some type of response.

-helps animals survive

-find food

-warn others of danger

-identify family, frighten predators, and find mates

-Ways to Communicate

-Sound

-signal that can reach many animals over large areas

-Touch

-used to communicate

-example-grooming each other

-Chemicals

-Pheromone-a substance that is released by the body and that causes another individual of the same species to react in a predictable way.

-used to warn danger

-used to find a mate

-Sight

-visual communication

-body language-visual message to communicate

-Living Together

-The Benefit of Living in Groups

-safer than living alone

-spot predators more quickly

-work together to defend themselves

-help animals find food

-animals in a group can kill larger animals

-The Downside of Living in Groups

-must compete with others for food

-must compete with others for mates

-may attract predators

-can spread disease