**Guided Notes: Behavioral Adaptation in Animals**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = anything an animal does in response to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in its environment.

What is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for bears beginning to hibernate?

What is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for a dog beginning to bark?

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = behaviors that animals inherit from parents

These behaviors are typically \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples:

* Toad using tongue to catch \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Fight or flight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Herding \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for protection
* Graylag goose \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eggs that roll out of the nest
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ behavior – newborns are able to suckle at nipple to obtain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This is an innate behavior.
* [Courtship behavior](file:///E:\Biology%20F13\Spring%2014\Unit%2011%20-%20Ecology\Mating_Rituals_of_Birds_of_Paradise.asf)
* [Territoriality](file:///E:\Biology%20F13\Spring%2014\Unit%2011%20-%20Ecology\A_Chimpanzee_Community_Defends_Its_Territory.asf)
* Migration/hibernation/estivation
* Pheromones/chemical messages

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - [Birds of Paradise](http://www.youtube.com/watch?v=nS1tEnfkk6M) are among the many examples of bird species that have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dance/courtship behavior in an effort to \_\_\_\_\_\_\_\_\_\_\_\_\_ a mate. They will clean the “performance area” off, and then practice their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Male \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will strut and display \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as a way to attract a mate.

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a physical space an animal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ against other members of its species. It may contain the animal’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ area, potential mates, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ area, or all three. Setting up \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reduces conflict, controls \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ growth, and provides for efficient use of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This means animals don’t compete for the same resources within a small space, and improves chances of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the young, and therefore, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

EX: Betta fighting fish, three-spined stickleback \_\_\_\_\_\_\_\_\_\_\_\_\_ red belly to warn off other males

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Cues/stimulus from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ environment causes animals to migrate/move to different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. EX: birds and butterflies \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ south for the winter.

6. ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** is a state where the body temperature drops substantially, oxygen consumption \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and breathing rates decline to a few breaths per minute. (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy).

Animals that go into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to survive the cold winter months when food is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ usually eat vast amounts food to build up body fat before entering \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. EX: bears, squirrels, bats

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a state of reduced metabolism that occurs in animals living in conditions of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ heat. EX: desert animals may \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ due to lack of food or during periods of drought.

8. Insects such as ants, bees, and termites can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with each other by leaving \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ behind. Ants leave \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ trails that are followed by other members of their nest. A honey bee performs a carefully choreographed ["waggle" dance](http://video.nationalgeographic.com/video/animals/bugs-animals/bees-and-wasps/weirdest-bees-dance/) that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the rest of the hive where to find a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ source.

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Rhythm - 24 hour, sleep/wake cycle of behavior in animals

* + Controlled by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by environment
  + Most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during night, awake during day
  + Some sleep during day, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at night

10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BEHAVIOR = takes place when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes through practice or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. More common in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than invertebrates. Learning allows an animal to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to change (thus, live longer)

11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: getting used to a stimulus (sensory \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_). Horses are usually skittish, but horses in a busy city \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ disregard noisy cars and horns. This \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is called habituation.

12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: forming an attachment to another object

* + Ducklings \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mother
  + Happens at a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ time in life
  + Usually \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Trial-and-error: learn by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* + Birds \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nests (coarse vs soft trash)
  + Animals must have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in order to learn!

14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conditioning is learning by association.

* EX: new kitten meows when it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ aroma of food in the can you open. After a few weeks, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the can opener alone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the kitten, causing it to meow.
* EX: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dogs and salivation

15. *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* is the phenomenon whereby bacteria, and other single-cell or multicellular organisms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ their movements according to certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their environment. This is important for bacteria to find food (move to the greatest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of particles) or to move away from toxins.

16. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a kind of taxis, or locomotory movement, that occurs when a whole organism moves in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the stimulus of light. This is advantageous for phototrophic organisms as they can orient themselves most efficiently to receive light for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Phototaxis is called positive if the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is in the direction of increasing light intensity and negative if the direction is opposite.