

## Quiz 7

### Innate & Learned Behavior

1. Innate behavior develops independently of the environmental context.
  - a. innate behavior arises as a part of normal development, controlled by genes and are inherited from parents.
  - b. (ex) feeding is a part of innate behavior of all animals
  - c. (ex) Fixed Action Pattern - a highly stereotypical behavior that must be carried to completion once begun. (A sign stimulus, or external sensory stimulus, triggers it.) Graylag Goose - rolling the egg back to her nest (even if it is taken away, or turns out to be a rock).
2. Learned behavior reflects conditions experienced by individuals during development.
  - a. (ex) captive animals often learn that they will be fed immediately after their owner returns from work, etc. (they may become excited, or salivate, etc.).
  - b. (ex) much of human behavior (such as driving a car) is learned.

### Taxis & Kinesis

1. Taxis -
  - a. Definition - the locomotion of an organism toward or away from a directional stimulus.
  - b. (EX) positive phototaxis in euglena - helps it find light to do photosynthesis.
  - c. (EX) fly larvae live in carcass - negative phototaxis ensures they remain inside carcass - more food, predators less likely to catch it.
  - d. (EX) trout have positive rheotaxis - they swim upstream - so they won't be swept away by the current.
2. Kinesis -
  - a. the movement of an organism or cell in response to a non-directional stimulus, such that the rate depends on its intensity but NOT its direction.
  - b. (EX) Woodlice show kinesis to humidity (hygrokinesis). In dry air - they move quickly. In moist air - they move slowly. They need moisture to use their gills. Moving faster makes them more likely to get out of dry air.
3. Tropic Responses
  - a. Plants GROW (not movement) towards or away from a stimulus
  - b. ex. Positive phototropism of leaves
  - c. ex. Negative geotropism of stems, positive geotropism of roots