

What is the proximate cause of behavior?	The environmental stimulus that triggers a behavior.
What is the ultimate cause of behavior?	The evolutionary reason that this behavior was favored, and not another; how this behavior increases the organism's fitness (survival and reproduction). “Why” questions.
What is a fixed action pattern?	A sequence of unlearned acts; it is unchangeable and must be carried out once begun. The stimulus that triggers it is called a <i>sign stimulus</i> .
What is taxis?	An <i>innate behavior</i> (directed mostly by genes, the same despite environment) that is an automatic movement towards (positive) or away (negative) from a stimulus.
What is kinesis?	An innate behavior that is characterized by constant movement, faster when the organism is in unfavorable conditions and slower when the organism is comfortable. This increases the chance that an organism will find and stay in a favorable environment. Kinesis is evolutionarily simpler than taxis because it does not require sophisticated sensory organs.
What is a signal?	A behavior that causes a change in another animal's behavior; this constitutes <i>communication</i> . Signals can be sounds, sights, smells, chemicals, tactile, or electric, depending on lifestyle and environment. Signals are determined by environmental and genetic factors; they are used for mating and species identification (bird, insect song), to communicate threats, and to communicate the location of food (waggle dance in bees), among other uses.
What are pheromones?	Chemicals that are used for olfactory communication; usually, both production and response are controlled by genes, but environmental context is crucial determining response (more than one can apply).
What is learning?	The modification of behavior based on experience. <ul style="list-style-type: none"> • Habituation: stop responding to a meaningless stimulus (so it does not distract) • Spatial learning: when behavior is modified based on experiences of the spatial structure of the environment. This is influenced by the stability of the environment. Some animals used <i>landmarks</i>, others use <i>cognitive maps</i>, meaning that they internalize the spatial relationships between many objects and use that to find something. Cognitive maps are much more powerful. • Associate learning: a stimulus is associated with a consequence. <ul style="list-style-type: none"> ◦ Operant conditioning: trial and error learning. An animal does something, receives the reward or punishment that is the consequence of the action, and then associates the two. ◦ Classical conditioning: an arbitrary/neutral stimulus is associated with a reward or punishment. • Cognition: connection between nervous system's ability to collect and use sensory data and behavior. Critical thinking, problem solving, and tool use are in this category.
What is	A behavior that has innate components as well as learning and takes place in a

imprinting?	<i>sensitive period</i> , a specific time in an animal's development that is the only time when certain behaviors can be learned. Imprinting takes place when the animal senses the <i>imprinting stimulus</i> (often something moving away from it) and is usually irreversible.
What are social behaviors?	Interactions between individuals. <ul style="list-style-type: none"> • Communication • Agnostic behavior (threatening/submissive rituals; territoriality and competition) • Play (practice, only in mammals) • Cooperation (eg. pack hunting, school of fish) • Dominance hierarchy (social ranking within a group) • Mating behaviors • Altruistic behaviors
What are the selective advantages to mating behaviors?	<ul style="list-style-type: none"> • Species mate in a way that allows them to best care for the needs of their young (over maximizing reproduction opportunities) • Mate choice (mostly by females)—choose a healthy male for healthy offspring. This selects for the “best” males in some situation.
What are the selective advantages to agnostic behaviors?	When males compete and the most fit win, the most fit get the best resources. This selects for fitness. In species with competition among one sex (mostly male) for mates of the opposite sex, variation in that sex can evolve as a result, as well as alternative mating behaviors. None of the morphologies or mating behaviors is successful in all circumstances, so the variation is sustained.
What is altruism?	Behavior that reduces individual fitness but increases that of other individuals in the population.
What is kin selection?	The natural selection process in which altruistic behaviors on behalf of close relatives increases their reproductive success (related to <i>inclusive fitness</i> , the idea that an individual has effect by reproduction and also by aiding close relatives (who share genetic information) to reproduce).