

Abiotic



Non-living factors.

Amplify



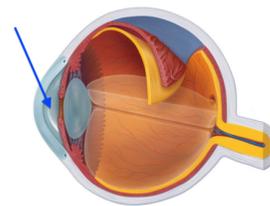
To make larger, louder, or more powerful.

Aposematic



Warning coloration

Aqueous Humor



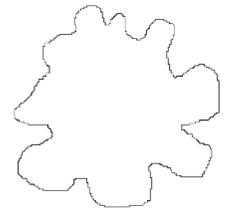
Clear fluid filling the space in the front of the eyeball between the lens and the cornea.

Assumption



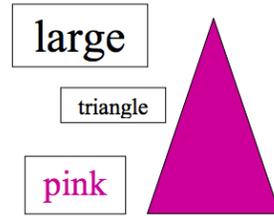
A belief or statement taken for granted without proof.

Asymmetrical



Irregular shape.

Attribute



Characteristic.

Average

$$\frac{\text{sum of terms}}{\text{number of terms}}$$

Mean; Found by adding all numbers and dividing that sum by the amount of numbers included.

Axiom



Universally recognized principle.

Balancing Selection

Balancing selection



No single phenotype is favored in all populations of a species at all times.

Genetic variation is maintained.

Occurs when natural selection maintains stable frequencies of two or more phenotypic forms in a population.

Bar Chart

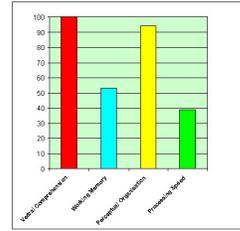


Chart with bars whose lengths are proportional to quantities.

Behavior



The way an organism reacts to changes in its internal condition or external environment.

Biotic



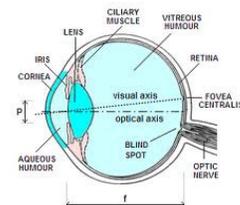
Living factors.

Black Box



Process whose operations or actions are unknown or unspecified.

Blind Spot



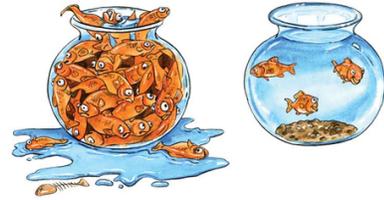
Point at which the optic nerve leaves the eye, creating a "blind" spot because no receptor cells are located there.

Cache



Hiding place.

Carrying Capacity



Largest number of individuals of a population that an environment can support.

Categorical Data

blue

tall

BIG

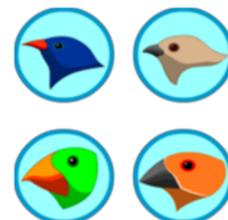
Data that consists of names, labels, or other nonnumerical values.

Cetacean



Member of the order of marine mammals that includes whales, dolphins, and porpoises.

Characteristic



Attribute; Quality of an organism.

Chemical Defense



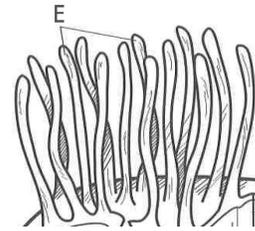
The use by organisms of bitter, distasteful, or toxic secretions that deter potential enemies.

Chi-Square Test

$$\chi^2 = \sum \frac{(\text{Observed} - \text{Expected})^2}{\text{Expected}}$$

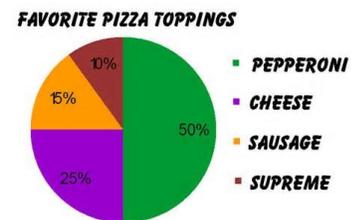
Statistical test used to determine the probability of obtaining observed proportions by chance, under a specific hypothesis.

Cilia



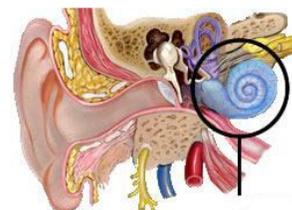
The hairlike projections on the outside of cells that move in a wavelike manner.

Circle Graph



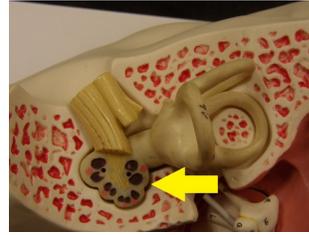
A graph of data where the entire circle represents the whole or 100%.

Cochlea



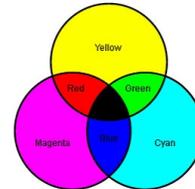
Coiled, bony, fluid-filled tube in the inner ear through which sound waves trigger nerve impulses.

Cochlear Nerve



Branch of the auditory nerve responsible for transmitting auditory info from the cochlea to the brain.

Color Pigment



Response of vision to the reflection of wavelengths of light reflected from off of surface of an object. You see what is reflected, not what is absorbed by the surface.

Combination



Mixture of different people or things.

Competition



Struggle between organisms to survive in a habitat with limited resources.

Composition



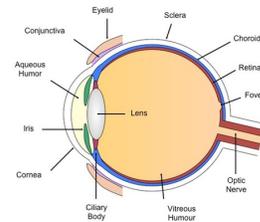
Makeup of something.

Compound Probability

$$P(A|B) = \frac{P(A \cap B)}{P(B)}$$

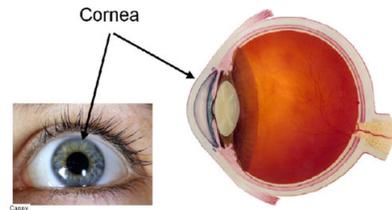
Probability of 2 or more events happening.

Cones



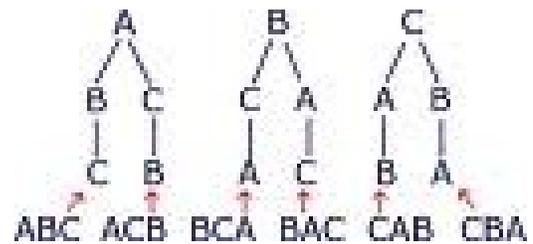
Retinal receptor cells that are concentrated near the center of the retina and that function in daylight or in well-lit conditions. Detecting fine detail and give rise to color sensations.

Cornea



Transparent layer forming the front of the eye.

Counting Principle



Simple way to find the number of outcomes.

Courtship



Process of finding a mate.

Cranial Nerve



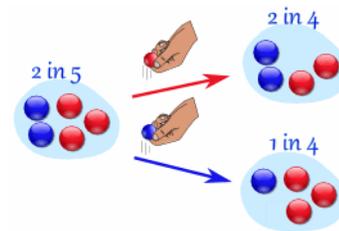
Nerve that is connected directly to the brain.

Degrees of Freedom

$$df = n - 1$$

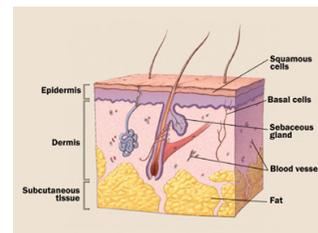
Number of scores that can vary in the calculation of a statistic.

Dependent Event



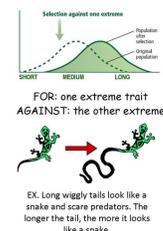
Outcome of one event does affect the outcome of the second event.

Dermis



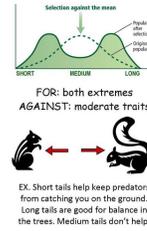
Inner layer of skin; beneath the epidermis.

Directional Selection



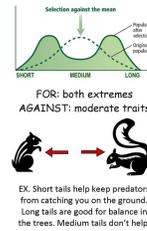
Occurs when natural selection favors one of the extreme variations of a trait.

Disruptive Selection



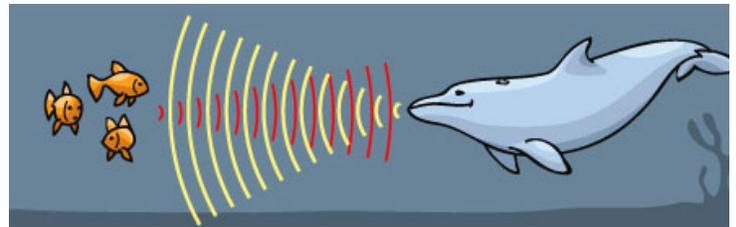
Natural selection in which individuals at the upper and lower ends of the curve have higher fitness than individuals near the middle of the curve (same as Diversifying Selection).

Diversifying Selection



Natural selection in which individuals at the upper and lower ends of the curve have higher fitness than individuals near the middle of the curve (same as Disruptive Selection).

Echolocation



Process of using reflected sound waves to find objects.

Ecto-



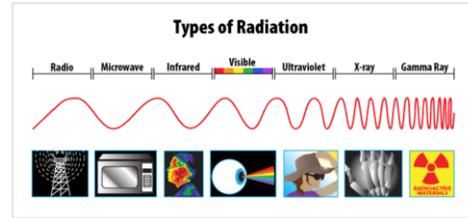
Prefix meaning "outer".

Ectotherm



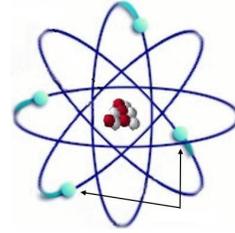
Cold-blooded organism.

Electromagnetic Radiation



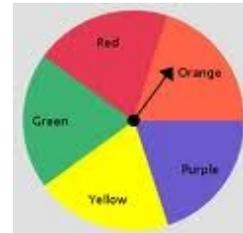
Kind of radiation including visible light, radio waves, gamma rays, and X-rays, in which electric and magnetic fields vary simultaneously.

Electron



Negatively charged particle; located outside of the nucleus.

Elementary Event



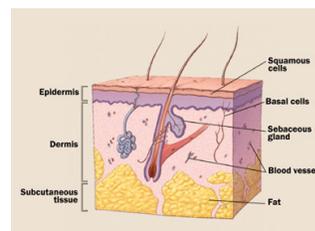
One possible outcome of an experiment.

Environment



Surroundings or conditions in which an organism operates.

Epidermis



Outer layer of skin.

Episodic Memory



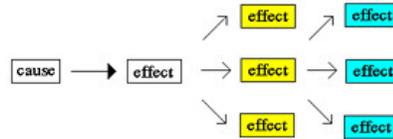
Memory for one's personal past experiences.

Ethogram

Behavior	Description
foraging	Searching for food
feeding	Consume food
incubation	Incubate an egg
circling	Swim swimming ahead of other fish
courtship: male dance	Swimming in a loop pattern
courting: following	Female swimming slowly closely behind male
courting: indicating	Male holds body at angle and repeatedly touches and releases with mouth
courting: entering nest	Female entering nest
courting: swimming	Male repeatedly nudging female
reproduction: egg laying	Female laying eggs
reproduction: entering nest	Male entering nest
parental care: nest building	Male moving gravel to nest site
parental care: guarding	Stationary position in vicinity of nest site
parental care: feeding	Male returning nest with fish
parental care: chasing	Aggression and rapid swimming behind other fish

Table used to record observations of animal behavior.

Event



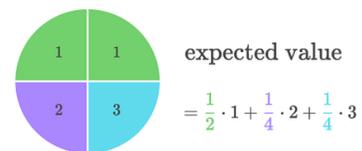
Action that causes something to happen.

Exhibit



To show or display in public.

Expected Value



Total benefit to be expected if a decision were to be repeated several times.

Experiment



Set of controlled observations that test the hypothesis.

Exploration



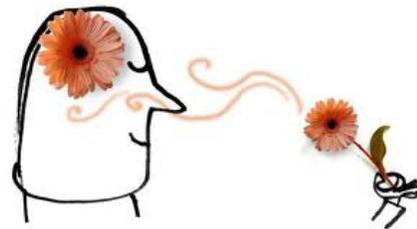
Travel for the purpose of discovery.

External Auditory Canal



The ear canal; leads to the tympanic membrane.

External Stimuli



Everything we see, hear, and respond to.

Factorial

$$P = \frac{n!}{x! (n-x)!} p^x q^{n-x}$$

Product of all whole numbers except zero that are less than or equal to a number.

Famine



Extreme shortage of food.

Fitness



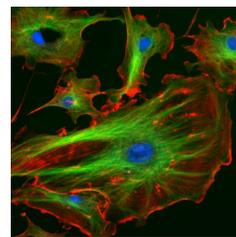
Ability of an organism to survive and reproduce in its environment.

Flehmen Response



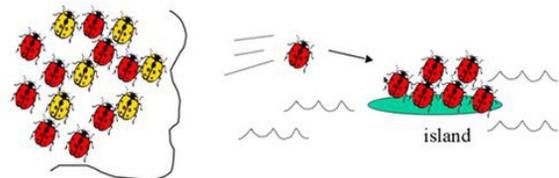
Sexual behavior in the male of several species in which the male curls his upper lip and inhales.

Fluoresce



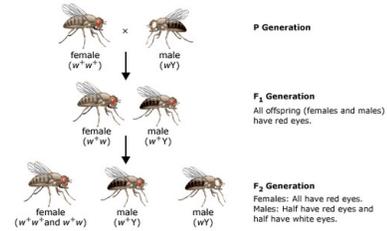
To emit visible light when exposed to light of a shorter wavelength.

Founder Effect



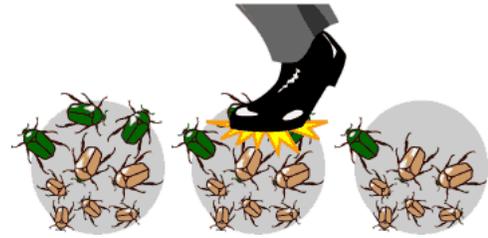
Genetic drift that occurs when a few individuals become isolated from a larger population and form a new population whose gene pool composition is not reflective of that of the original population.

Generation



Group of people born and living during the same time.

Genetic Drift



A change in the gene pool of a population due to chance.

Genotype

AaBb

An organism's genetic makeup, or allele combinations.

Geometric Characteristic



Qualities of an organism's shape.

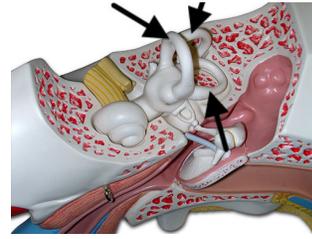
Graph

data collecting

car	X X X X X	car	truck	bus
truck	X X X X			
bus	X X			

Instrument for recording data.

Hair Cell



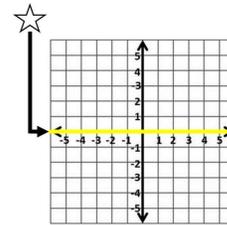
Auditory receptor cell of the inner ear.

Handedness



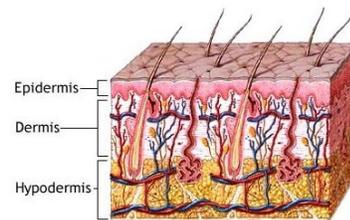
Preference of using one hand over the other.

Horizontal Axis



X-axis.

Hypodermis



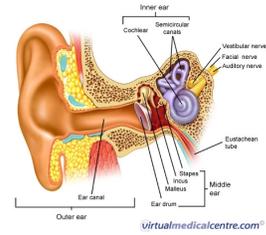
Layer of skin beneath the dermis, which serves as a storage repository for fat.

Hypothesis



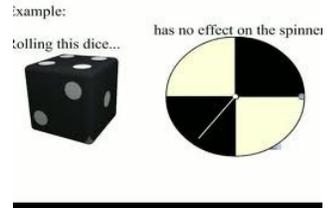
Educated testable guess.

Incus



Small anvil-shaped bone in the middle ear, transmitting vibrations between the malleus and stapes.

Independent Event



Two or more events in which the outcome of one event does not affect the outcome of the other event(s).

Individual



One organism.

Inherited



Passed from parent to offspring.

Insect Pollination



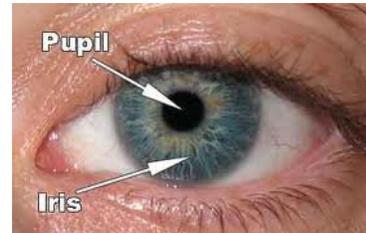
When insects gather nectar and pollen attaches to them and is transferred to the next flower. Insects are attracted by a plants colorful, fragrant flowers.

Internal Stimuli



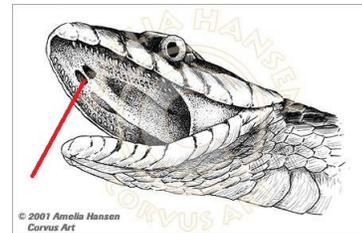
Cues from within an animal for survival; (hunger, thirst, sleepiness).

Iris



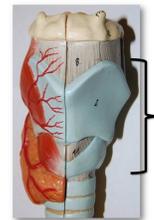
Ring of muscle tissue that forms the colored portion of the eye around the pupil and controls the size of the pupil opening.

Jacobson's Organ



Sense organ on snake's roof of mouth which detects airborne chemicals.

Larynx



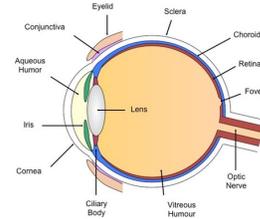
Hollow muscular organ forming an air passage to the lungs and holding the vocal cords in humans and other mammals; the voice box.

Lateral Line System



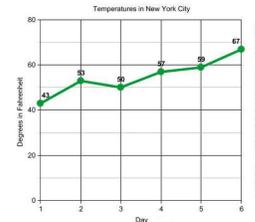
Sensory receptors that enable fishes to detect vibrations, or sound waves, in water.

Lens



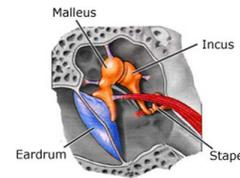
Transparent structure behind the pupil that changes shape to help focus images on the retina.

Line Graph



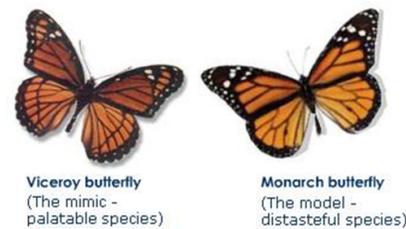
Graph that uses one or more lines to show changes in statistics over time or space.

Malleus



Small bone in the middle ear that transmits vibrations of the eardrum to the incus.

Mimicry



When an organism copies that of another organism for survival.

Model Species



The organism that another will mimic.

Mutually Exclusive Event

$$P(A \text{ and } B) = 0$$

Events A and B are mutually exclusive if they share no outcomes.

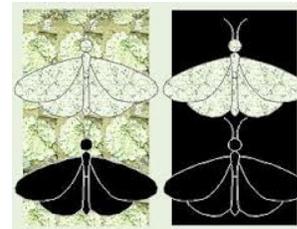
Events that have no common outcome, two events that cannot occur at the same time.

Nare



Openings into the nasal cavity, both internally and externally, in the head of a vertebrate.

Natural Selection



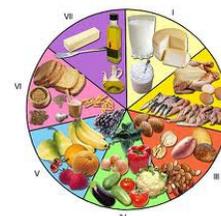
Process in which individuals that have certain inherited traits tend to survive and reproduce at higher rates than other individuals because of those traits.

Null Hypothesis

H_0

Hypothesis that there is no significant difference between specified populations, any observed difference being due to sampling or experimental error.

Nutritious



Nourishing.

Odorant



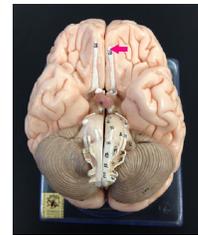
Any specific aromatic chemical.

Olfaction



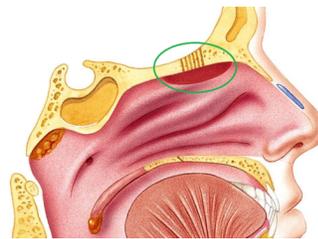
Sense of smell, which is the response to chemicals that contact the membranes inside the nose.

Olfactory Bulb



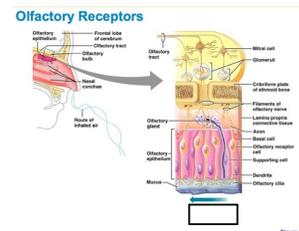
Brain center for smell, located below the frontal lobes.

Olfactory Epithelium



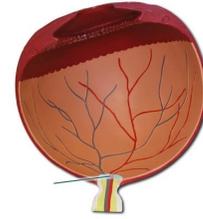
Thin layer of tissue, within the nasal cavity, that contains the receptors for smell.

Olfactory Neuron



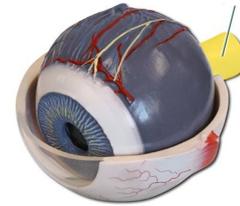
Receptors for the sense of smell.

Optic Disc



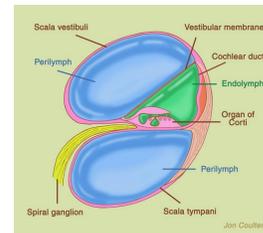
Region at the back of the eye where the optic nerve meets the retina. It is the blind spot of the eye because it contains only nerve fibers, no rods or cones, and is thus insensitive to light.

Optic Nerve



Carries neural impulses from the eye to the brain.

Organ of Corti



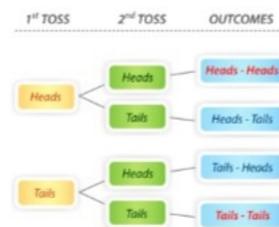
Sensory organ of hearing.

Ossicle



Small bone of the ear; includes the malleus, incus, and stapes.

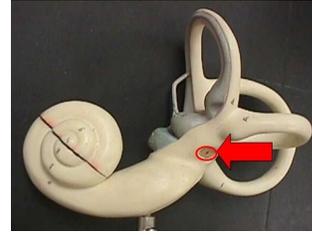
Outcome



a possible result of a probability experiment.

Result or consequence.

Oval Window



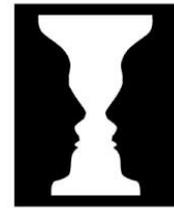
Membrane that covers the opening between the middle ear and inner ear.

Palatable



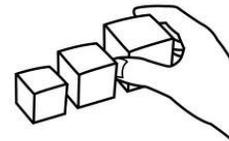
Agreeable to the taste.

Perception



Act of becoming aware through the senses.

Permutation



An arrangement of objects in which order is important.

Phenotype

Phenotypes	
Purple flowers	
Purple flowers	
White flowers	

Physical characteristics of an organism.

Pheromone

Pheromones in Animals



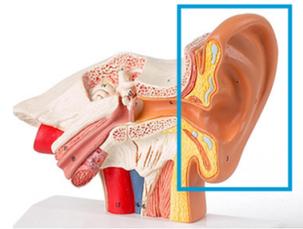
Substance that is released by the body and that causes another individual of the same species to react in a predictable way.

Photosensitive



Sensitive to light.

Pinna



Visible part of the ear.

Pinniped



An aquatic, fin-footed, carnivorous animal, such as a sea lion, walrus, or seal.

Plasticity



Brain's ability to change, especially during childhood, by reorganizing after damage or by building new pathways based on experience.

Poisonous



Toxic.

Population



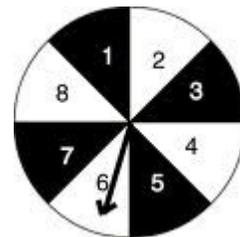
Group of individuals that belong to the same species and live in the same area.

Predation



An interaction in which one organism captures and feeds on another organism.

Probability



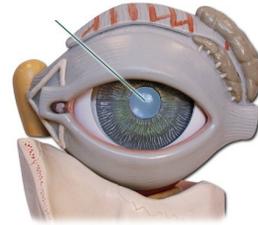
Likelihood that a particular event will occur.

Proboscis



Long snout of an animal; a nose, especially a prominent one; a tubular organ.

Pupil



Adjustable opening in the center of the eye through which light enters.

Qualitative



Data in the form of words.

Quantitative



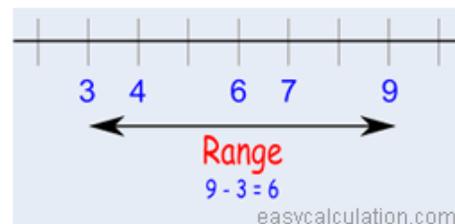
Data that is in numbers.

Random



By chance; not planned.

Range



Difference between the highest and lowest numbers in a distribution.

Ratio

colon

"to"

fraction

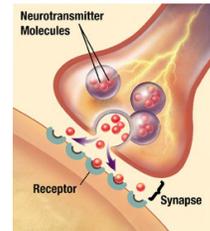
4:1

4 to 1

$\frac{4}{1}$

Comparison of two quantities by division.

Receptor



Small area on the dendrite that receives the signal from the other neuron.

Re-foraging



Finding cached food using cues produced by the cached items.

Refraction



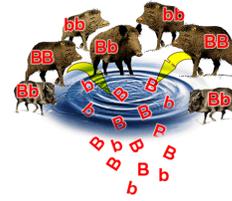
Bending of light.

Reject



Refuse to accept.

Relative Fitness



Contribution an individual makes to the gene pool of the next generation relative to the contributions of other individuals.

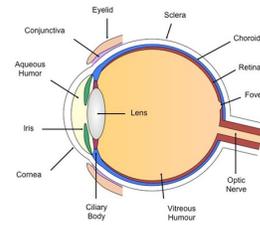
Relative Frequency

Relative Frequency Distribution

Main+ in equity distributions	Frequency	Relative Frequency	Relative frequency (%)
61 or less	2	0.07	7
62-63	5	0.17	17
64-65	7	0.23	23
66-67	7	0.23	23
68-69	4	0.13	13
70-71	5	0.17	17
72 or more	0	0.00	0
Total	30	1	100

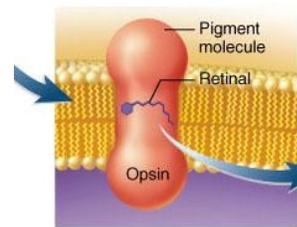
Ratio that compares the frequency of each category to the total.

Retina



Light sensitive layer of the eye; contains rods and cones.

Rhodopsin



Pigment in rod cells that causes light sensitivity.

Rods



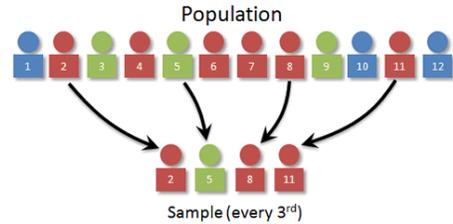
Specialized visual receptors that play a key role in night vision and peripheral vision.

Round Window



Membrane that relieves pressure from the vibrating waves in the cochlear fluid.

Sample



Part of a population.

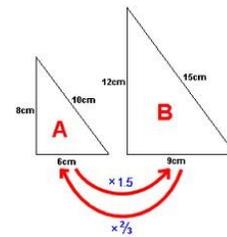
Sample Space



The sample space is 1, 2, 3, 4, 5, 6.

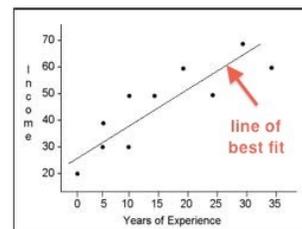
Set of all possible outcomes of an experiment.

Scale



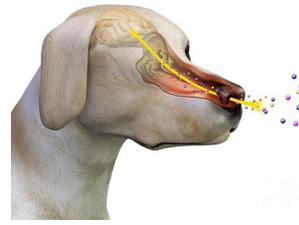
Percentage of original size to enlarge or reduce the size of an object.

Scatter Plot



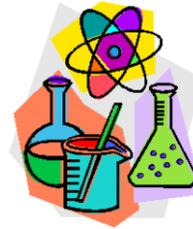
A graphed cluster of dots, each of which represents the values of two variables. The slope of the points suggests the direction of the relationship between the two variables. The amount of scatter suggests the strength of the correlation.

Scent Receptor Cell



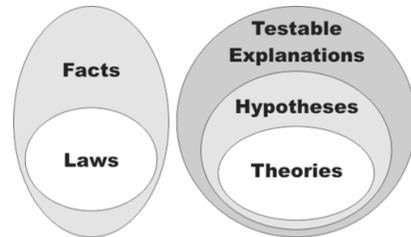
Chemoreceptors located in the nasal cavity.

Science



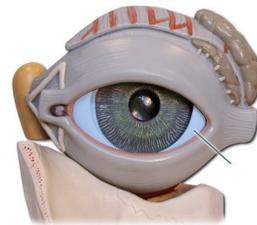
An organized way of gathering and analyzing evidence about the natural world.

Scientific Theory



Well-tested concept that explains a wide range of observations.

Sclera



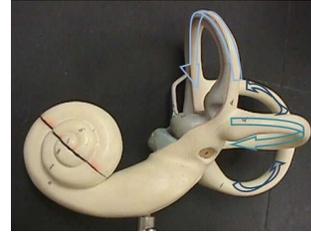
White part of the eye.

Scrounger



Individuals in a group that exploit the food discoveries of others.

Semicircular Canal



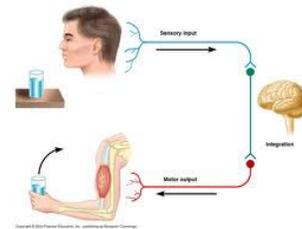
One of three structures within the inner ear that help monitor the position of the body.

Senses



Provides an organism with access to external information determining what an organism tunes into and what it does not

Sensory Cell



Nerve endings that may detect pressure/weight, temperature, pain, and other stimuli.

Significance



A critical probability associated with a statistical hypothesis test that indicates how likely an inference supporting a difference between an observed value and some statistical expectation is true.

Simple Probability



Likelihood of a single (simple) event occurring by itself.

Simple Theoretical Probability

$$\frac{\text{Number of favorable outcomes}}{\text{Number of possible outcomes}}$$

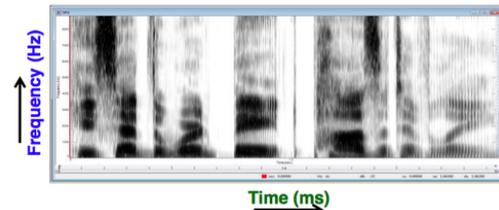
Ratio of the number of equally likely outcomes in an event to the total number of possible outcomes.

Species



Group of similar organisms that can breed and produce fertile offspring.

Spectrogram



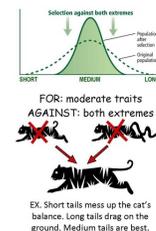
In sound analysis, a three-dimensional display that plots time on the horizontal axis, frequency on the vertical axis, and amplitude (intensity) on a color or gray scale.

Spherical



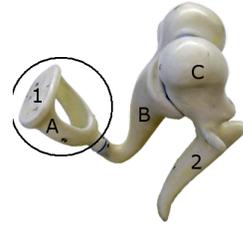
Shaped like a sphere.

Stabilizing Selection



Natural selection in which individuals near the center of a distribution curve have higher fitness than individuals at either end of the curve.

Stapes



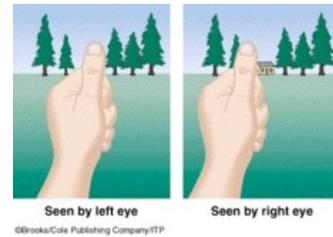
Stirrup; last of the three auditory ossicles of the middle ear.

Statistical Test



Analytic tool that estimates the probability that obtained results from a sample reflect true population values.

Stereoscopic Vision



Ability to determine an object's depth based on that object's projections to each eye.

Stimuli



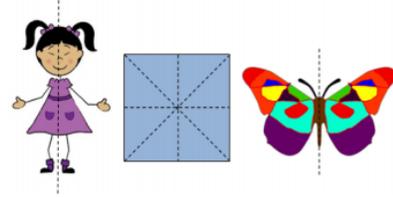
Changes in the environment.

Support



Back up with details.

Symmetrical



Well proportioned; balanced; the same on both sides.

Table

Data	Tally	Frequency
1		6
2		5
3		4
4		3
5		1
6		10

Arrangement of data made up of horizontal rows and vertical columns.

Tactile



Pertaining to the sense of touch.

Terrestrial



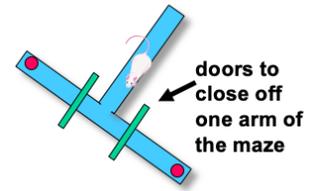
Relating to the Earth or to land; worldly.

Therm-



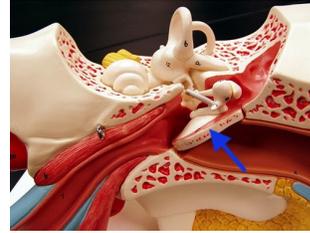
Prefix meaning "heat".

T-Maze



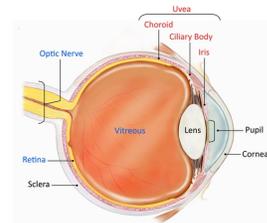
Maze constructed in the shape of a T, with the start box at the end of the longest stem of the maze and goal boxes at the ends of the other stems. After leaving the start box, the subject can choose either the right or the left goal box.

Tympanic Membrane



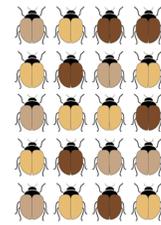
Eardrum; structure that separates the outer ear from the middle ear and vibrates in response to sound waves.

Uvea



Pigmented layer of the eye.

Variation



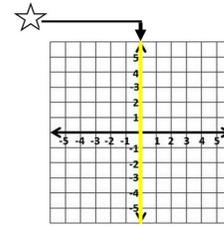
Any difference between individuals of the same species.

Venom



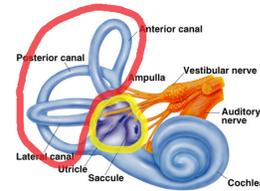
Poisonous secretion.

Vertical Axis



Y-axis.

Vestibular Nerve



Nerve that conducts impulses related to maintaining balance to the brain.

Viable Offspring



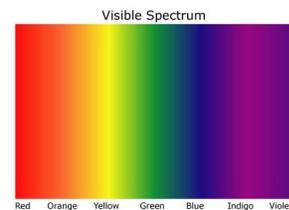
Members of the next generation who survive to maturity and are able to reproduce successfully.

Vibration



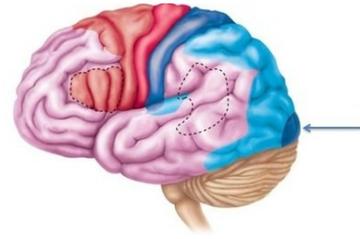
Repeated back-and-forth or up-and-down motion.

Visible Light



Electromagnetic waves that you can see.

Visual Cortex



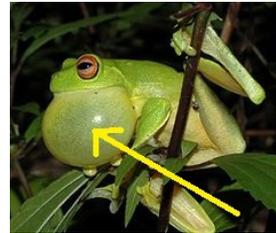
Visual processing areas of cortex in the occipital and temporal lobes.

Vitreous Humor



Transparent jellylike tissue filling the eyeball behind the lens.

Vocal Sac



Flexible membrane of the skin found in male frogs and toads that inflates and acts as amplifier for their mating calls.

Volatile Substance



Substance that readily evaporates at room temperature because of a high vapor pressure.