



Glossary

- adaptation** a trait of an organism that helps it survive and reproduce; an aspect of its form, function, or behavior that changes over many generations which helps it out-compete other organisms.
Example: If plants have deep roots, they are more likely to survive and reproduce during dry years. In this way, future generations are more likely to have the adaptation of deep roots, as well.
- animal** organism that eats or absorbs nutrients from other organisms, which typically has specialized sense organs and can quickly respond to stimuli
- behavioral adaptation** what an organism does which helps it to survive
- biodiversity** the variety of life in a community, habitat, or ecosystem
- biology** the study of living things
- CDC** Centers for Disease Control and Prevention; U.S. agency which seeks to protect the public from health threats, including vector-borne illnesses
- climate** the average weather conditions of a place, such as temperature and rainfall levels, over a long period of time
- climate change** the change in Earth's global climate or in regional climates over time, particularly the average warming of global temperatures in recent decades and related climate disruptions which scientists attribute to the burning of fossil fuels and other human activities
Rates of vector-borne illnesses have more than tripled in the U.S. recently according to the CDC, and climate change has been cited as a leading factor, because warmer, wetter conditions make it easier for vectors such as mosquitoes and ticks to survive, reproduce, and spread.
- collaboration** working with one or more other people to produce something (verb: collaborate)
- common name** a name by which a species is known, rather than its scientific name; can vary by region or country, unlike scientific names
- ecological community** (or simply a community): all the organisms in a habitat, which interact in a complex food web; a community is also a group of people who interact
- controlled experiment** a scientific test (an experiment) in which only one variable at a time is changed and others are held constant so they will not affect the experiment's outcome; this lets researchers isolate the results

disease	an abnormal health condition of an organism caused by factors such as infection, genetic defect, environmental factors, or a vector such as mosquitoes and ticks; characterized by identifiable symptoms, signs, or both
diversity	a variety of different things; the number of different species, communities, or habitats; can also apply to human communities
ecosystem	a community of organisms (living things such as animals, plants and fung) and nonliving things (such as soil, water, air, sunlight), which interact with one another through a flow of energy and cycling of materials in the environment
epidemic	<i>noun:</i> an outbreak of a disease which spreads rapidly and extensively <i>adjective:</i> spreading quickly and widely by infection, affecting many individuals in a population
epidemiology	the study of the causes, spread, distribution, and control of diseases
epidemiologist	a scientist which specializes in the study of how diseases spread
engineering design	method used by engineers to identify and solve problems; involves learning about the problem and possible solutions at every stage of the process with a specific goal in mind, planning and designing solutions under constraints, modeling, testing, and improving designs
flea	any of various species of tiny, wingless, bloodsucking insects of the order Siphonaptera that are parasitic on mammals and birds and can jump very long distances relative to their size
flower	the reproductive part of some plants; mosquitoes use nectar from flowers and fruits for energy
food chain	a succession of organisms in an ecological community linked to one another by the transfer of energy and nutrients; most often begins with plants and other organisms which create food from sunlight through the process of photosynthesis
food web	the system of interdependent food chains in an ecosystem
habitat	the place or type of site where an organism lives
host	<i>meaning used in the curriculum:</i> an organism on which or in which another organism lives, such as a mammal or bird from which a mosquito sucks blood
hypothesis	a prediction of what might happen in a scientific experiment
infection	the invasion of bodily tissue by microscopic pathogens which proliferate, resulting in tissue injury that can progress to disease
investigation	careful examination or search in order to discover facts or learn new information; inquiry

larva	immature, wingless form of many insects, such as mosquitoes and flies, after they hatch from an egg; the six-legged immature form of a tick or mite after it hatches from an egg
larvae	plural of larva
life cycle	the progression through a series of different stages in an organism's development, from its inception through reproduction
metamorphosis	change in the form and often habits of an animal during normal development of an organism; includes the transformation from larva to pupa to adult in many insects, such as butterflies and mosquitoes
microscopic	so small as to be invisible without a microscope
model	<i>meaning used in the curriculum:</i> a representation of something, such as a system or phenomenon, that accounts for its properties and is used to study its characteristics
mosquito	any of numerous species of thin, two-winged insects in the family Culicidae having aquatic larvae; adult females have a long proboscis used by most species for sucking blood
nymph	<i>meaning used in the curriculum:</i> the eight-legged immature form of certain arachnids, such as ticks and mites; also describes the immature form of an insect that does not pass through a pupal stage during metamorphosis, such as a grasshopper
organism	individual living thing that can react to stimuli, reproduce, and grow
outbreak	a sudden and dramatic increase in something, such as a disease
pathogen	an agent that causes disease, especially a virus, bacterium, or fungus
photosynthesis	the process in which plants and other organisms produce carbohydrates from carbon dioxide and water, with light as a source of energy
predator	an organism that lives by preying on other organisms
prey	an animal hunted or caught by another for food
proboscis	a thin, tube-like organ in the head region of organisms such as mosquitoes; usually used for sucking and/or piercing
pupa	an insect in the nonfeeding stage between the larva and adult, when it typically undergoes complete transformation within a protective cocoon or hardened case; only insects such as mosquitoes that undergo complete metamorphosis have pupal stages
pupae	plural of pupa

scientific method	the process of systematically testing an idea through these steps: observation of a phenomena, formulation of a hypothesis about it, experimentation to test the hypothesis, and development of a conclusion based on evidence which confirms, rejects, or modifies the hypothesis
scientific control	group in an experiment that is not changed so it can be compared with a similar group that is changed
scientific name	the two-part Latin name assigned to a species
species	a particular kind of living thing; the populations of organisms whose members interbreed under natural conditions and produce fertile offspring
stagnant	still; not moving
structural adaptation	physical structure of an organism which helps it to survive
symptom	something that indicates the possibility of a disease
tick	an arachnid which bites warm-blooded vertebrate animals to suck their blood; a dangerous vector on disease to these organisms, including humans
variable	the part of an experiment that changes during the investigation
vector	an organism, such as a mosquito or tick, that carries disease-causing pathogens from one host to another
vector-borne disease	disease spread by a vector
transmission	<i>meaning used in the curriculum:</i> the passage of something, such as a disease or a radio signal, between two places
wetlands	areas that are covered with shallow water or have soil saturated with moisture

wetland ecosystem interacting plants, animals, and other living and nonliving things in **wetlands**

