

## USGS Data Exploration Unit: Glossary

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### Day 1

**bias** – A prejudiced presentation of material; a consistent error in estimating a value.

**hypothesis** - An educated guess; a testable proposal.

**independent duplication** – Two or more scientists from different institutions investigate the same question separately and get similar results.

**malaria** – A human disease that is caused by sporozoan parasites (genus *Plasmodium*) in the red blood cells, is transmitted by the bite of anopheline mosquitoes, and is characterized by periodic attacks of chills and fever.

**measurement bias** – A bias caused by making mistakes in data collection or altering the environment so that measurements are not made correctly.

**original source** – A publication in which a research result or idea is first reported by the person who did the research or developed an original idea. Not a report about research results or ideas from a source other than the original researcher.

**peer-review journal** – A journal that accepts articles for publication only after the articles have been checked for quality by several expert scientists from different institutions.

**persistence** - Attribute of a substance that describes the length of time that the substance remains in a particular environment before it is physically removed or chemically or biologically transformed.

**pesticide** - An agent used to kill pests such as insects, fungi and bacteria.

**random sample** – Sample selected in such a way that every individual has an equal likelihood of being chosen.

**resistance** – An ability to not succumb to or resist. Pesticide resistance occurs when a chemical is used to control a pest, but over time, the surviving pests no longer are susceptible to the pesticide.

**sample** – A group of units selected from a larger group that are “measured” for an experiment.

**sampling bias** – A bias caused by a sample not accurately reflecting the larger group (population) from which it was selected.

**supernatural forces** – Forces that relate to an order of existence beyond the visible, observable universe.

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**typhus** – A severe human disease that is caused by bacteria transmitted especially by body lice and is marked by high fever, stupor alternating with delirium, intense headache, and a dark red rash.

**versatility** – Having many uses or applications. In the case of DDT, DDT was used on both crops and in wetlands for mosquito control.

**West Nile Virus** - West Nile Virus (WNV) is spread by mosquitoes and primarily affects humans, equines, and birds.

### Day 2

**bioaccumulation** – Accumulation of a contaminant or toxin in or on an organism from all sources (e.g., food, water, air). The result is an increase in the concentration of a chemical in a biological organism over time, compared to the chemical's concentration in the environment. Compounds accumulate in living things any time they are taken up and stored faster than they are broken down (metabolized) or excreted.

**bioconcentration** - Process leading to a higher concentration of a substance in an organism than in environmental media to which it is exposed.

**biomagnification** - Sequence of processes in an ecosystem by which higher concentrations are attained in organisms at higher trophic levels (at higher levels in the food web); at its simplest, a process leading to a higher concentration of a substance in an organism than in its food.

**food chain** - Sequence of transfer of matter and energy in the form of food from organism to organism in ascending or descending trophic levels.

**food web** – A summary of the feeding relationships within an ecological community.

**immune system** - The complex group of organs and cells that defends the body against infection or disease.

**nervous system** - The entire nerve apparatus, composed of a central part, the brain and spinal cord.

**primary consumers** – Animals that eat plants.

**primary producers** – Plants and phytoplankton: organisms using the sun for energy.

**secondary consumers** – Animals that eat animals that eat plants.

**tertiary consumers** – Animals that eat animals that eat animals.

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**thyroid** - Endocrine gland of animals lying at the base of the neck and producing especially the hormones that control metabolism.

**trophic level** - Amount of energy in terms of food that an organism needs: organisms not needing organic food, such as plants, are said to be on a low trophic level, whereas predator species needing food of high energy content are said to be on a high trophic level. The trophic level indicates the level of the organism in the food chain.

### Days 3 & 4

### Day 5

**angler** – A man or woman who fishes.

**artificial incubation** – When eggs cannot hatch naturally, eggs are taken from the nest and put in a clean, safe and warm environment. Under these ideal conditions the egg is able to hatch.

**benthic** - Occurring at the bottom of a body of water.

**carcass** – A dead body.

**diffusion** - The process whereby particles of liquids, gases, or solids intermingle as the result of their spontaneous movement caused by thermal agitation and in dissolved substances move from a region of higher to one of lower concentration.

**dissolve** – To cause to pass into solution.

**dummy eggs** – When eggs are removed from a nest for artificial incubation, artificial eggs are put in the birds' nest to keep the parent birds interested in their offspring. The artificial eggs are called dummy eggs.

**fish consumption advisory** – A warning not to eat fish from areas where the aquatic ecosystem is toxic.

**fledge** – To rear until ready for flight or independent activity.

**foster eagle chick** – An eagle chick taken from one nest and put into another nest in order to restore an eagle population.

**neurological damage** – brain damage.

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**reintroduction of bald eagles** – A process where bald eagles are brought back to a location where they had been extinct.

**resin** – Any of various solid, natural organic substances that are usually transparent or translucent and yellowish to brown, and are formed especially in plant secretions.

**scavenger** – An organism that feeds habitually on refuse or carrion.

**volatilization** – The process where a compound turns to gas or vapor.