

# ECOLOGY APPENDICES

## **GLOSSARY**

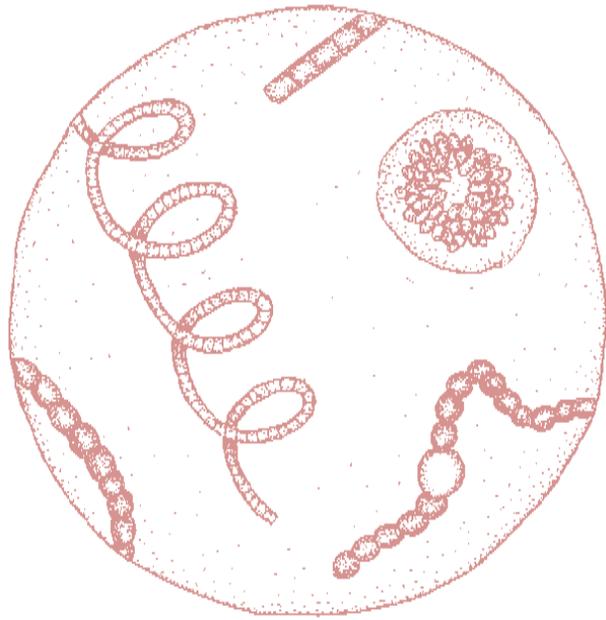
**MORE CURRICULUM CONNECTIONS**  
**(Folktales, Fiction, Poetry, Biographies, and Picture Books)**

**TEACHER RESOURCES**  
**(General and Section Specific)**

**FULL CITATIONS – ACTIVITY CURRICULUM CONNECTIONS**

**PLANNING TOOLS**  
**(Activities cross-referenced by grade, topic, grade, state standards)**





# GLOSSARY

**Absorption:** passage of nutrients into living cells.

**Abundance:** the total number of individuals, number of a species, or the amount of resources present in an area.

**Adaptation:** the process of adjusting to the environment. For example, a plant with unusually long roots that enable it to absorb water over a wide area has an adaptation that helps it survive during periods of drought.

**Aerobic:** (air-o-bik) needing or using oxygen in the form that appears in air.

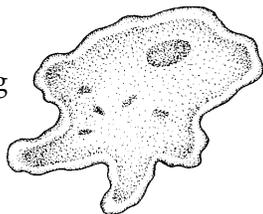
**Alevin:** the first stage of fish development after hatching. Alevin still have a yolk sac.

**Algae:** a large group of primitive plants with chlorophyll, but lacking true roots, flowers, stems, and leaves.

**Alpine tundra:** cold, windy, treeless environments occurring at high elevations above tree line throughout the world. Also called high elevation tundra.

**Amoeba:** (a-me-ba) any one-celled organisms from the genus *Amoeba*. Amoebas move about on “false feet” which are temporary extrusions of the cell. These microscopic creatures are found in fresh and salt water, in soil, and as parasites.

**Anaerobic:** (ann-air-o-bik) living or functioning in an environment that lacks oxygen in the form that appears in air.



**Analogy:** an inference that if two unrelated things are alike in some ways they are probably alike in others.

**Animal:** a living thing that takes in food, moves about, and is made of many cells. Unlike plants, animals do not have to stay in one place. They cannot make their own food. Jellyfish, clams, mosquitoes, ravens, salmon, bears, and people are all animals.

**Annual plant:** a plant that completes its life cycle, from seed to reproductive stage, in only one year or season.

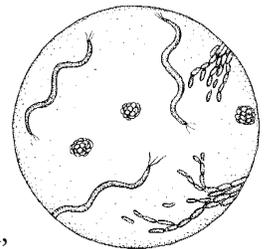
**Arctic tundra:** the cold, windy, treeless environment found in the Arctic and maritime Subarctic. Also called high latitude tundra and lowland tundra.

**Autotroph:** (aw-tow-troaf) an organism that can make its own food.

**Bacteria:** tiny living cells. Bacteria are so small that they can only be seen through a microscope. Some bacteria cause diseases. Others do useful things, like making soil richer.

**Biodiversity:** the variety and abundance of living things in a habitat, ecosystem, or specific area. Also called **biological diversity**.

**Biome:** (bi-om) a major regional plant community and its associated animal life. A way to classify regions of the Earth. Examples include grasslands, forests, tundra, and deserts.



**Blue-green algae:** now called *cyanobacteria*, they are single-cell organisms without a nucleus classified in the Kingdom Monera. They photosynthesize like plants but are structurally similar to other photosynthetic bacteria.

**Carbon:** an element that forms a major building block of all living things.

**Carbon dioxide:** a colorless, odorless gas that passes out of the lungs in respiration; compound made of carbon and oxygen. Needed by plants for photosynthesis.

**Carnivore:** an animal that eats other animals; meat eater.

**Camouflage:** (kam-o-flaj) coloration and patterning (or, rarely, behavior) that provides a disguise from predators.

**Cellular respiration:** the living cells of animals and plants



## GLOSSARY CONTINUED

combine some types of digested food with oxygen to produce energy, water, and carbon dioxide.

**Chlorophyll:** (klor-o-fill) a group of pigments that produce the green color of plants; essential to photosynthesis.

**Cilia:** (sil-ee-a) tiny, hair-like projections found on some cells.

**Classify:** to sort into groups.

**Climate:** the average condition of the weather (*temperature, wind velocity, precipitation, sunlight*) at a location over many years.

**Cold:** absence of heat; something that has a temperature which is lower than the surrounding area.

**Commensalism:** (co-men-sa-lism) a form of symbiosis; a relationship between two kinds of living things, where one benefits and the other is not harmed or helped.

**Community:** a group of plants, animals, and other organisms that live together in the same area and depend on each other for survival.

**Compound:** a combination of elements, such as “H<sub>2</sub>O” (water) or “CO<sub>2</sub>” (carbon dioxide).

**Compost:** a mixture of decomposing vegetable refuse, plant detritus, and manure that make soil better for growing plants.

**Conservation:** the use of natural resources in a way that assures their continuing availability for future generations. The wise and intelligent use or protection of natural resources.

**Consume:** to eat and digest and thereby gain the eaten organism's energy and minerals.

**Consumer:** a living thing that obtains energy and minerals by eating other living or dead things.

**Cover:** protection from the elements for many purposes including hiding, traveling, resting, and nesting. Also referred to as **shelter**. One of the four elements necessary for survival.

**Create:** to bring into being; to cause to exist.

**Cycle:** events that happen in the same order, over and over again. Spring, summer, autumn, and winter are the cycle of the four seasons of the year.

**Cyanobacteria:** *see blue-green algae.*

**Deciduous:** (dee-sid-you-us) a tree that loses all of its leaves during some time of year, usually in fall. Birch trees are deciduous. Spruce trees are not.

**Decomposer:** an organism that breaks down organic materials. (All consumers fit this category, but it is used to refer to organisms that break organic material down completely and return the raw materials to the environment.)

**Decomposition:** an act of breaking down or separating into basic components or parts.

**Defense:** the act of defending against attack, danger, or injury; a means or method of defending or protecting.

**Denitrify:** breakdown of ammonia (from the decomposition of organic debris) and returning the nitrogen to the atmosphere rather than the soil. Denitrifying bacteria do this job. *See also nitrify.*



**Destruction:** the act or process of tearing down; demolishing.

**Detritivore:** a living thing that eats wastes and living things that have died.

**Detritus:** (dee-tri-tus) organic waste material, such as dead or partially decayed plants and animals, or excrement. Detritus can also be small particles of minerals such as



## GLOSSARY CONTINUED

sand or silt.

**Diversity:** the variety of living things that fill different jobs or niches in an ecosystem.

**Domesticated:** formerly wild plants or animals that now receive all their habitat needs (food, water, shelter, and space) from humans.

**Dominance:** priority access to preferred or limited resources.

**Ecologist:** a scientist who studies the inter-relationships of living things to each other and to the environment.

**Ecology:** the study of the inter-relationships among and between living things and their nonliving surroundings.

**Ecosystem:** (ee-co-sis-tem) a community of living things and its nonliving surroundings linked together by the flow of energy and by nutrient exchange.

**Element:** one of the materials from which all other materials are made. Each element has its own kind of atom. There are more than one hundred known elements. Iron, oxygen, gold, and carbon are elements.

**Energy:** a nonliving part of the environment that can be observed in the form of electricity, heat, light, and motion in living and nonliving things. It has the capacity to move, do work, or change something.

**Environment:** the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival.

**Erosion:** the wearing away of the land surface by wind or water.

**Euglena:** (u-glE-na) green freshwater flagellates often classed as algae. One-celled animals from the kingdom Protista. Euglenas have qualities of both plants and animals: they photosynthesize their own food but many can also eat tiny particles of food. They have 1-3

flagella for swimming and lack a rigid cell wall typical of most plants.

**Eukaryote:** (u-kar-E-ott) descriptive term for an organism composed of one or more cells containing visibly evident nuclei and organelles. All higher unicellular and multicellular organisms are eukaryotes.

**Extinct:** an organism no longer alive anywhere on earth. Gone forever.

**Extinction:** the process by which species become extinct; the condition of having been removed from existence. A plant or animal facing extinction is one in danger of vanishing from our world forever.

**Fertile:** able to produce young, seeds, fruit, pollen, spores. Producing abundantly.

**Food:** energy and minerals in a form living things can use. One of the four elements necessary for survival.

**Food chain:** the transfer of food energy from living things in one nutritional level to those in another. In a simple food chain, for example, a mammal eats a bird that ate an insect that ate a plant.

**Food pyramid:** also called an “energy pyramid,” a diagram representing the loss of available energy at each trophic level in a community of living things. Generally, 90% of the usable energy in each transfer between producers, herbivores, and carnivores is lost as heat.

**Food web:** many interconnecting food chains.

**Forest:** any ecosystem that contains many trees.

**Fossil fuel:** the remains of prehistoric plants and animals that are burned to obtain energy; includes oil, natural gas, and coal.

**Fruit:** the ripe ovary of a seed plant that includes both the seeds and the coverings.



## GLOSSARY CONTINUED

**Fungi:** (fun-jee) living things in the Kingdom Fungi, one of the five major groups of living things. Includes mushrooms, yeasts, molds, fungi, lichens, and slime molds. All are detritivores and feed by absorption, not photosynthesis. Singular: fungus.



**Gas:** a substance, without shape or volume, that tends to expand indefinitely. Air is a gas.

**Gizzard:** the second stomach of a bird; it has thick muscular walls and a tough lining for grinding food that has been partially digested in the first stomach.

**Habitat:** the place where an animal lives that provides food, water, shelter (or cover), and space in a suitable arrangement that an organism needs to survive.

**Half-life:** the time it takes for something to lose half of its radioactivity.

**Herbivore:** (erb-uh-vor) any living thing that eats producers (plants and algae).

**Heterotroph:** (het-er-o-troaf) a living thing that cannot make its own food, but instead eats (consumes) other organisms.

**High latitude tundra:** another term for lowland or arctic tundra; refers to the cold, windy, treeless environment found in the Arctic and Subarctic.

**Host:** an organism that serves as the habitat for a parasite.

**Humus:** (hyoom-us) the brown or black part of the soil that comes from decayed plants and animals; a highly complex mixture of organic and inorganic substances.

**Inorganic:** any substance that was not formed by living things.

**Insect:** a class of animals that has an exoskeleton divided into head, thorax, and abdomen. The thorax bears three pairs of legs and in most species, two pairs of wings.

**Insect:** a class of animals that has an exoskeleton divided into head, thorax, and abdomen. The thorax bears three pairs of legs and in most species, two pairs of wings.

**Interaction:** when one thing affects another.

**Interdependence:** needing each other.

**Invertebrates:** (in-vert-a-brets) animals without a backbone or internal bony skeleton. Includes insects, crustaceans, worms, corals, and mollusks.

**Kingdom:** the highest classification or taxonomic division of living things. Today, living things are grouped into five kingdoms: Monera, Protista, Fungi, Plantae, and Animalia – characterized by their cell structure.

**Landfill:** the disposal of garbage by burying it under a shallow layer of ground. A specially engineered site for disposing of solid waste on land, designed to confine the refuse to the smallest practical area.

**Larvae:** any of the immature forms of living things that undergo metamorphosis. Tadpoles, grubs, and caterpillars are all in the larval stage that is radically different from the adult frogs, beetles, and butterflies that they become after metamorphosis. Singular: larva.

**Latitude:** a measure of the distance of a given point on earth from the equator.

**Lemming:** small arctic rodent. Lemmings resemble mice but have short tails and fur-covered feet.

**Lichen:** (like-en) a living thing formed by an alga and fungus growing in symbiosis. They often grow in harsh conditions that are too exposed for other plants. Because of their sensitivity to air pollution, many are useful as air quality indicators.

**Limited resources:** resources that may be irreplaceable when diminished.



## GLOSSARY CONTINUED

**Limiting factor:** something that keeps a population of animals or other organisms from increasing such as a shortage of food, water, shelter, or space. Other examples include diseases, predation, climatic conditions, pollution, hunting, poaching, and accidents that affect either the number of births, the number of deaths, or both.

**Liquid:** a substance that flows; it has volume, but no shape and does not expand much. Water is a liquid.

**Living thing:** any organized material that responds to the environment, moves, and is able to reproduce itself.

**Mammals:** a class of vertebrate animals that are warm-blooded, have hair or fur, and suckle their young.

**Microscopic:** so small as to be invisible except through a microscope.

**Migration:** the periodic movement of animal populations from one region to another and back again.

**Minerals:** any substance found in nature that is not living; may be a single element (nitrogen) or a compound (carbon dioxide, water).

**Mold:** a downy or furry growth on the damp surfaces of living or decayed things. Mold is a fungi.

**Monerans:** organisms that make up the Kingdom Monera (one of the five groups of living things). Monerans are single-celled and do not have a nucleus. Bacteria and cyanobacteria (blue-green algae) are monerans.

**Multicellular:** living things made of more than one cell. The cells in multicellular living things usually have specialized functions.

**Mutualism:** (mute-chew-al-ism) a kind of symbiosis. An interaction between two kinds of organisms from which both species benefit.

**Mycorrhizae:** (my-cor-rise-zee) fungi that live in or on the

roots of plants and assist the plant in absorbing minerals from the soil. They are nitrogen-fixers.

**Nitrogen:** a chemical element that is absorbed by producers and used in the formation of all living things. Earth's atmosphere is 78% nitrogen.

**Nitrogen-fixing:** taking nitrogen gas from the air and changing it into a form that dissolves in water. This soluble nitrogen is deposited in the soil and can be used by plants. Nitrogen-fixing bacteria do this job.

**Nitrify:** breakdown ammonia (from the de-composition of organic debris) and release nitrogen into the soil in a form that can be dissolved in water and used by plants. Nitrifying bacteria do this job. *See also denitrify.*

**Nocturnal:** (nok-turn-al) becoming active only after dark.

**Nonliving:** any thing which cannot reproduce itself.

**Nonliving environment:** the air, water, and minerals that surround a person, animal, or plant.

**Nonrenewable resources:** nonliving resources such as rocks, oil, and minerals that are not able to regenerate themselves. Once used, they cannot be replaced.

**Nutrient:** (new-tree-ent) something that an organism takes in and assimilates, thereby promoting growth and replacing worn or injured tissue.

**Omnivore:** (ahm-nee-vor) a living thing that eats plants and other animals.

**Organic:** having to do with or coming from living things.

**Organism:** a living thing.

**Owl pellets:** indigestible parts of an owl's meal (fur, feathers, bone) that is regurgitated.

**Oxygen:** a colorless, tasteless, odorless element that most living things breathe and need in order to live; plants and algae produce this gas during photosynthesis.



## GLOSSARY CONTINUED

**Parasitism:** (pair-i-sit-ism) a win/lose kind of symbiosis. An interaction between two kinds of living things from which one species benefits and the other is harmed.

**Peat:** (peet) moist, semi-decayed organic matter.

**Permafrost:** soil that is 32°F (0°C) or less all year round. It may or may not contain ice. In the arctic tundra, permafrost may extend anywhere from a few feet to more than 1,000 feet below the surface.

**Phosphorous:** an element that is needed by living things.

**Photosynthesis:** (foto-sin-this-iss) the combining of sunlight, water, and carbon dioxide to create sugars. Oxygen is a by-product. Photosynthesis takes place in the leaves of plants and in algae.

**Plants:** one of the five kingdoms of living things; includes all the living things that have leaves, roots, and stems. Nearly all plants are green and live without moving from place to place. Nearly all plants are producers. Trees are plants.

**Population:** the number of people, animals, or plants living in a place.

**Predation:** the act of hunting and eating other animals.

**Predator:** an animal that kills and eats other animals.

**Prey:** animals that are killed and eaten by other animals.

**Producer:** any living thing that is able to make food from nonliving things such as air, water, sun, and soil. Plants and algae are examples of producers.

**Prokaryotic:** (*“before kernels or nucleus”*) descriptive term for organisms whose cells have no enclosed nucleus nor special cell structures. Monerans (bacteria, cyanobacteria) are prokaryotae.

**Protist:** (pro-teest) one of the five kingdoms of living things. The majority of these organisms are single-celled (with a nucleus) but lacking in specialized cell structure. Protists include microscopic protozoans and slime molds as well as large seaweed and kelp.

**Pupa:** a stage in the metamorphosis of some kinds of insects between larvae and adult forms. Plural: pupae.

**Radioactive isotope:** a chemical element with the same atomic number and identity as another element but differing in atomic weight. Radioactive isotopes tend to disintegrate and emit particles. These particles often give scientists evidence about the age of substances.

**Revolution:** the journey that the earth takes around the sun. One revolution is 365 days, or one year, and has four seasons.

**Recycle:** to reuse the remains of things; to make fit to be used again.

**Rehabilitate:** to restore to its former condition.

**Renewable resources:** living resources, such as plants and animals, that have the capacity to renew themselves when conditions for survival are favorable.

**Respiration:** the opposite of photosynthesis; the process whereby sugar and oxygen are converted into water and carbon dioxide with a release of energy.

**Rotation:** the spinning or turning of the earth on its axis. The earth rotates once every 24 hours.

**Sediments:** a general term for particles that are left behind by an agent of transport such as water, ice, or wind.

**Shelter:** protection from the elements for many purposes including hiding, traveling, resting, and nesting. Also referred to as **cover**. One of the four elements all living things need to survive.



## GLOSSARY CONTINUED

**Soil formation:** the making and mixing of small particles of inorganic minerals and organic (formerly living) particles to form the layer of material on the surface of the earth that is the natural medium for plant growth.

**Solar energy:** heat and light from the sun.

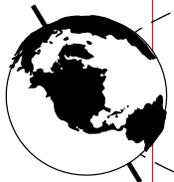
**Solid waste:** material that has shape and dimension (not liquid or gas) that has been thrown away or left over.

**Solution:** a mixture formed by a substance dissolved in a liquid. Salt in water forms a solution.

**Spores:** (sporz) any small organism or cell that can develop into a new individual. Ferns, mushrooms, bacteria, and certain other living things produce spores.

**Sulfur:** a pale-yellow, nonmetallic chemical element.

**Symbiosis:** (sim-by-o-sis) the relationship of two or more different organisms living in close association, often (but not necessarily) to the advantage of each.



**Taiga:** the sparse forests of stunted trees near the edge of the tree limit before the start of tundra. Russian for *land of little sticks*.

**Temperature:** the degree of hotness or coldness as shown by a thermometer.

**Tilt:** the relationship of the earth's axis to the sun. The earth's axis is angled at 23.44 degrees.

**Transect:** a straight line or profile that makes a cross-section of plant life in an area that is useful for studying the number and types of plants.

**Tundra:** the windy, treeless, and periodically cold environments that occur at high latitudes and at high elevations.

**Vertebrates:** animals with backbones. Humans, birds, fish, and bears are examples of vertebrates.

**Wetlands:** areas of land that have waterlogged soils, support plants adapted to wet soil, and are covered by water for a least part of the year. Examples include swamps, bogs, freshwater and saltwater marshes, and river or stream banks.

**Yeast:** tiny single-celled fungi that produce air bubbles as they live.





## MORE ALASKA'S ECOLOGY CURRICULUM CONNECTIONS

### Folktales, Fiction, Poetry, Biographies, and Picture Books Supplementing *Alaska's Ecology*

- Anderson, Margaret J. *Carl Linnaeus: Father of Classification*. Springfield, NJ: Enslow, 1997. (Biography)
- Anderson, Peter. *Henry David Thoreau: American Naturalist*. New York: Franklin Watts, 1995. (Biography)
- Archer, Jules. *To Save the Earth: the American Environmentalist Movement*. New York: Viking, 1998. (Biographies of environmental activists, Gr. 7-12)
- Babbitt, Natalie. *Tuck Everlasting*. New York: Farrar, Straus, Giroux, 1975. (Fiction)
- Baker, Jeannie. *Window*. New York: Greenwillow, 1991. (Picture Book)
- Base, Graeme. *The Sign of the Seahorse: A Tale of Greed and High Adventure in Two Acts*. New York: H.N. Abrams, 1992. (Fiction)
- Big Book for Our Planet*. New York: Dutton, 1992. (Stories, poems and non-fiction by a variety of authors)
- Burton, Virginia Lee. *The Little House*. Boston, Houghton Mifflin, 1990. (Picture Book)
- Caduto, Micheal. *Earth Tales From Around the World*. Golden, CO: Fulcrum Publishers, 1997. (Folklore)
- Cary, Alice. *Jean Craighead George*. Santa Barbara, CA: Learning Works, 1996. (Biography)
- Cecil, Laura. *Noah and the Space Ark*. Minneapolis, MN: Carolrhoda, 1998. (Picture Book)
- Committee on Management of Wolf and Bear Populations in Alaska. *Wolves, Bears, and their Prey in Alaska*. Washington, DC: National Academy Press, 1997.
- Cooney, Barbara. *Miss Rumphius*. New York: Viking, 1982. (Picture Book)
- De Felice, Cynthia. *Lostman's River*. New York: Atheneum, 1994. (Fiction)
- Douglas, William O. *Muir of the Mountains*. San Francisco: Sierra Club Books for Children, 1994. (Biography)
- DeSpain, Pleasant. *Eleven Nature Tales: a Multicultural Journey*. Little Rock: August House Publishers, 1996. (Folklore)
- Earth Care: World Folktales to Talk About*. New Haven, CT: Linnet Books, 1999. (Folklore)
- Esbensen, Barbara Juster. *Echoes for the Eye: Poems to Celebrate Patterns in Nature*. New York, HarperCollins, 1996.
- Eckert, Allan W. *Incident at Hawk's Hill*. New York: Little Brown, 1998. (Fiction)
- The Earth is Painted Green: a Garden of Poems About our Planet*. New York: Scholastic, 1994. (Poetry)
- Gallop, Louise. *Owl's Secret*. Homer, AK: Paws IV, 1993. (Picture Book)
- George, Jean Craighead. *The Case of the Missing Cutthroats: an Ecological Mystery*. New York: HarperCollins, 1995. (Fiction)
- George, Jean Craighead. *The Fire Bug Connection: an Ecological Mystery*. New York: HarperCollins, 1993. (Fiction)
- George, Jean Craighead. *Frightful's Mountain*. New York: Dutton, 1999. (Fiction)



## MORE ECOLOGY CURRICULUM CONNECTIONS CONTINUED

- George, Jean Craighead. *The Missing 'Gator of Gumbo Limbo: an Ecological Mystery*. New York: HarperCollins, 1992. (Fiction)
- George, Jean Craighead. *The Talking Earth*. New York: Harper & Row, (1983). (Fiction)
- George, Jean Craighead. *The Tarantula in My Purse; and 172 Other Wild Pets*. New York: HarperCollins, 1996. (Memoir)
- George, Jean Craighead. *There's an Owl in the Shower*. New York: HarperCollins, 1995. (Fiction)
- George, Jean Craighead. *Who Really Killed Cock Robin? an Ecological Mystery*. New York: HarperCollins, 1991. (Fiction)
- Greene, Carol. *The Old Ladies Who Liked Cats*. New York: HarperCollins, 1991. (Picture Book)
- Gindley, Sally. *Peter's Place*. San Diego: Harcourt Brace, 1996. (Picture Book)
- Harrison, David. *Wild Country: Outdoor Poems for Young People*. Honesdale, PA: Wordsong/Boyd's Mills Press, 1999. (Poetry)
- Howker, Janni. *Walk with a Wolf*. Cambridge, MA: Candlewick Press, 1998. (Picture Book)
- Hubbell, Patricia. *Earthmates: Poems*. Tarrytown, NY: Marshall Cavendish, 2000. (Poetry)
- Jezer, Marty. *Rachel Carson (American Women of Achievement)* New York: Chelsea House, 1988. (Biography Gr. 7-12)
- Johnson, Donald. *Henry Hikes to Fitchburg*. New York: Houghton Mifflin, 2000. (Picture Book on Henry Thoreau)
- Mother Earth, Father Sky: Poems of our Planet*. Honesdale, PA: Wordsong/Boyd's Mills Press, 1996. (Poetry)
- Norman, Howard. *The Girl Who Dreamed Only of Geese; and Other Tales of the Far North*. New York: Harcourt Brace, 1997. (Folklore)
- Peet, Bill. *Farewell to Shady Glade*. Boston: Houghton Mifflin, 1966. (Picture Book)
- Peet, Bill. *The Wump World*. Boston: Houghton Mifflin, 1970. (Picture Book)
- Rand, Gloria. *Prince William*. New York: Henry Holt, 1994. (Picture Book)
- Ransom, Candice F. *Listening to Crickets: a Story about Rachel Carson*. New York: Carolrhoda Books, 1993. (Biography Gr. 1-3)
- Santore, Charles. *William the Curious: Knight of the Water Lilies*. New York; Random House, 1997. (Picture Book)
- Seuss, Dr. *The Lorax*. New York: Random House, 1971. (Picture Book)
- Skurzynski, Gloria. *Cliff Hanger: National Parks Mystery*. Washington: National Geographic, 1999. (Fiction)
- Skurzynski, Gloria. *The Hunted: National Parks Mystery*. Washington: National Geographic, 2000. (Fiction)
- Skurzynski, Gloria. *Rage of Fire: National Parks Mystery*. Washington: National Geographic, 1998. (Fiction)
- Skurzynski, Gloria. *Wolf Stalker: National Parks Mystery*. Washington: National Geographic, 1997. (Fiction)
- Sloat, Teri. *There was an Old Lady Who Swallowed a Trout*. New York: Henry Holt, 1998. (Picture Book)
- Svedberg, Ulf. *Nicky the Nature Detective*. New York: Farrar, Straus & Giroux, 1993. (Picture Book)
- Stanley, Phyllis M. *American Environmental Heroes*. Springfield, NJ: Enslow Publishers, 1996. (Biographies)



## MORE ECOLOGY CURRICULUM CONNECTIONS CONTINUED

- Thompson, Colin. *The Paper Bag Prince*. New York: Knopf, 1992. (Picture Book)
- Van Allsburg, Chris. *Just a Dream*. Boston: Houghton Mifflin, 1990. (Picture Book)
- Westcott, Nadine Bernard. *I Know an Old Lady Who Swallowed a Fly*. New York: Little Brown, 1988. (Picture Book)
- Wildsmith, Brian. *Professor Noah's Spaceship*. New York: Oxford University Press, 1985. (Picture Book)
- Wood. A.J. *Look Again! The Second Ultimate Spot-the-Difference Book*. New York: Puffin, 1995. (Picture Book)
- Yolen, Jane. *Owl Moon*. New York: Philomel, 1987. (Picture Book)
- Zolotow, Charlotte. *When the Wind Stops*. New York: HarperCollins, 1995. (Picture Book)



# TEACHER RESOURCES

## Most useful resources for teaching general and specific activities in Alaska's Ecology

### *Useful for All*

#### **Books and Publications:**

*Alaska Ecology Cards – Alaska Wildlife Curriculum.* Alaska Department of Fish and Game, 2000.

Alaska Northwest Books. *The Alaska Almanac: Facts About Alaska.* Anchorage: Author, published annually.

*Alaska Wildlife Notebook Series.* Alaska Department of Fish and Game. Available to download on-line <[www.alaska.state.us/adfg](http://www.alaska.state.us/adfg)> or from Wildlife Education, ADF&G, 333 Raspberry Rd. Anchorage, AK 99518.

Allaby, Michael. *Biomes of the World.* Danbury CT: Grolier Educational, 1999. (9 volumes)

Butzow, Carol. *Exploring the Environment through Children's Literature: an Integrated Approach.* Englewood, CO: Teacher Ideas Press, 1999.

*Clearing Magazine.* A bi-monthly Pacific Northwest environmental education resource and activity guide for K-12 teachers. Address: P.O. Box 5176, Oregon City, OR 97045 or <[www.teleport.com/~clearing](http://www.teleport.com/~clearing)>

Cornell, Joseph. *Sharing Nature with Children.* Nevada City, CA: Dawn Publishing, 1998.

Davis, Neil. *Science Nuggets.* Fairbanks: Geophysical Institute, University of Alaska. Reprinted 1999.

The Diagram Group. *Facts on File Biology Handbook.* New York: Facts on File, 2000.

The Diagram Group. *Nature Projects on File.* New York: Facts on File, 1992.

*DK Science Encyclopedia.* New York: Dorling Kindersley, 1998. (also on CD)

Ewing, Susan.. *The Great Alaska Nature Factbook: A Guide to the State's Remarkable Animals, Plants, and Natural Features.* Anchorage: Alaska Northwest Books, 1996.

Gardner, Robert. *Science Projects about the Environment and Ecology.* Springfield, NJ: Enslow Publications, 1999.

*The Green Teacher.* A magazine for inspiration and classroom materials in environmental education. Address: 95 Robert St. Toronto, Canada M5S2K5 or <[www.web.net/~greentea](http://www.web.net/~greentea)>

Hefner, Christine. *Literature-Based Science: Children's Books and Activities to Enrich the K-5 Curriculum.* Phoenix: Oryx Press, 1995.

*Junior Environment on File.* New York: Facts on File, 1996.

Lingelbach, J. *Hands-On-Nature Information and Activities for Exploring the Environment with Children.* Woodstock, VT: Vermont Institute of Natural Science, 1986. Available <[www.vinsweb.org](http://www.vinsweb.org)>

*Macmillan Encyclopedia of the Environment.* New York: Macmillan, 1997. (6 volumes)

National Audubon Society. *Audubon Adventures: Alaska.* Address: National Audubon Society, 700 Broadway, New York, NY 10003 or <[www.audubon.org](http://www.audubon.org)> or 212-979-3183.

Roberts, Patricia. *Language Arts and Environmental Awareness: 100+ Integrated Books and Activities for Children.* New Haven, CT: Linnet Professional Publications, 1998.



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USDA Forest Service. *Investigating Your Environment*. Available for download <[www.fs.fed.us/outdoors/nrceliye/contents.htm](http://www.fs.fed.us/outdoors/nrceliye/contents.htm)>

VanCleave, Janice. *Janice VanCleave's Ecology for Every Kid: Easy Activities that Make Learning Science Fun*. New York: Wiley, 1996.

Weigel, Marlene. *U-X-L Encyclopedia of Biomes*. Detroit, MI: U-X-L, 2000. (3 volumes)

### Media:

Environmental Media Corporation. Variety of media to support environmental education. Some with free teaching guide. Contact <[www.envmedia.com](http://www.envmedia.com)> or 1102 11th St., Port Royal, S.C. 29935-2304.

Bullfrog Films. Environmental videos. Contact <[www.bullfrogfilms.com](http://www.bullfrogfilms.com)> or P.O. Box 149, Oley, PA 19547 or 610-779-8226 or 800-543-3764.

### Websites:

Alaska Native Knowledge Network <[www.ankn.uaf.edu](http://www.ankn.uaf.edu)> *Alaska Standards for Culturally Responsive Schools* and *Guidelines for Preparing Culturally Responsive Teachers for Alaska's Schools* are available on-line. Ordering information for *Curriculum Resources for the Alaskan Environment* and *Inuuqatigiit* (curriculum from the Inuit perspective) are also available. Science Projects are available from <[www.ankn.uaf.edu/Alaska\\_Alive](http://www.ankn.uaf.edu/Alaska_Alive)>

*Alaska Natural Heritage Program* <[www.uaa.alaska.edu/enri/aknhp\\_web](http://www.uaa.alaska.edu/enri/aknhp_web)> Current status of Alaska's biodiversity, annotated species at risk project, and excellent links to Alaska biodiversity.

*Alaska Science Forum* <[www.gi.alaska.edu/ScienceForum](http://www.gi.alaska.edu/ScienceForum)> Treasure of new and archive articles written for general audiences answering science questions and highlighting

Alaska's natural science phenomena and research.

*Alaska Sea Grant Program* <[www.uaf.edu/seagrant](http://www.uaf.edu/seagrant)> Has a useful list of Marine Education publications. Includes ordering information for the Alaska Sea Week Curriculum materials.

*Alaska Statewide Databases*, accessed through your local library website or <[sled.alaska.edu](http://sled.alaska.edu)> Magazine and newspaper articles from more than 2,000 magazines and journals, 100 newspapers, plus other information.

*Anchorage Daily News* <[www.adnsearch.com](http://www.adnsearch.com)> Staff-written newspaper articles, current and past. Article citations can be located at no charge. For full text, a fee must be paid.

*Audubon On Line Field Guides* <[www.enature.com](http://www.enature.com)> Has on-line field guides and habitat information.

BLM Environmental Education homepage <[www.blm.gov/education](http://www.blm.gov/education)>

EE-Link <[eelink.net](http://eelink.net)> Environmental education resources on the Internet.

Environmental News Network <[www.enn.com](http://www.enn.com)> Searchable by subject. Good for current news articles.

Fairbanks *Daily News-Miner* <[www.newsminer.com](http://www.newsminer.com)> Staff-written newspaper articles, current and past, available on file, no fee.

National Wildlife Federation <[www.nwf.org](http://www.nwf.org)> Has information on environmental education programs including the *Animal Tracks* Program, *NatureScope*, and National Wildlife Week information.

*Project Learning Tree* <[www.plt.org](http://www.plt.org)> Environmental education curriculum K-12 of the American Forest Foundation <[www.affoundation.org](http://www.affoundation.org)> Locally supported by the Alaska Department of Natural Resources.



## TEACHER RESOURCES CONTINUED

*Project WILD* <[www.projectwild.org](http://www.projectwild.org)> Environmental education curriculum K-12 of the Western Regional Environmental Education Council. Supported locally by the Alaska Department of Fish and Game.

US Geological Survey. Alaska Biological Science Center <[www.absc.usgs.gov](http://www.absc.usgs.gov)>

USDA Forest Service <[www.fs.fed.us](http://www.fs.fed.us)> Resource, career, and special issue information and photos including Nature Watch and Woodsy Owl. Alaska Region <[www.fs.fed.us/r10](http://www.fs.fed.us/r10)>

### Section 1: Elements of Ecosystems

#### Books and Publications:

Brady, Nyle and Ray R. Weil. *The Nature and Properties of Soils*. Upper Saddle River, NJ: Prentice-Hall, 1996.

Margulis, Lynn. *Five Kingdoms: an Illustrated Guide to the Phyla of Life on Earth*. New York: W.H. Freeman, 1998.

#### Websites:

*Animal Diversity Web* <[animaldiversity.ummz.umich.edu/index.html](http://animaldiversity.ummz.umich.edu/index.html)>

*Protist Image Data* <[megasun.bch.umontreal.ca/protists/protists.html](http://megasun.bch.umontreal.ca/protists/protists.html)>

### Section 2: Ecosystems – Community Connections

#### Books and Publications:

Caduto, Michael and Joseph Bruchac. *Keepers of the Animals: Native American Stories and Wildlife Activities for Children*. Golden, CO: Fulcrum Publishing, 1995.

Leopold, Aldo. *Round River: From the Journals of Aldo Leopold*. New York: Oxford University Press, 1972.

Murray, John. *Out Among Wolves: Contemporary Writings on the Wolf*. Anchorage: Alaska Northwest Books, 1993.

National Wildlife Federation. *Birds, Birds, Birds!* (Ranger Rick's NatureScope) Washington, DC: Author, 1989. Contact <[www.nwf.org](http://www.nwf.org)> for ordering information.

Trautmann, Nancy and Marianne Krasny. *Composting in the Classroom: Scientific Inquiry for High School Students*. Dubuque, IA: Kendall/Hunt Publishing, 1997. Contact 800-228-0810 or <[www.kendallhunt.com](http://www.kendallhunt.com)>

#### Media:

Bird Treatment and Learning Center. Captive owls may be available for classroom visits. Contact 907-562-4852 or <[www.birdtlc.org](http://www.birdtlc.org)>

*Into the Forest, Krill, Predator, Onto the Desert* (Food Chain Games). Ampersand Press, 750 Lake St., Port Townsend, WA 98368 or 800-624-4263 or 360-379-5187 or <[www.ampersand.com](http://www.ampersand.com)>

Owl Pellets from a variety of commercial suppliers, for example:

Acorn Naturalists <[www.acornnaturalists.com/p2262.htm](http://www.acornnaturalists.com/p2262.htm)>

Carolina Biological Supply Company <[www.carolina.com](http://www.carolina.com)>

Pellets, Inc. <[www.pelletsinc.com](http://www.pelletsinc.com)>

Redworm suppliers can be found on the Internet by searching “redworms” and include <[www.wormwoman.com](http://www.wormwoman.com)> and <[www.wormworld.com](http://www.wormworld.com)>

#### Websites:

*Composting in Schools*. Cornell Composting <[www.cfe.cornell.edu/Compost/schools.html](http://www.cfe.cornell.edu/Compost/schools.html)>

*OBIS: Outdoor Biological Instructional Strategies* <[www.lhs.berkeley.edu/OBIS/OBISpubs.html](http://www.lhs.berkeley.edu/OBIS/OBISpubs.html)> Outdoor activities revolving around ecosystems developed by Lawrence Hall of Science, University of California, Berkeley.



## Section 3:

### Living Things in Their Habitats

#### Books and Publications:

Alaska Department of Fish and Game. *Alaska Wildlife Curriculum: Alaska's Forests & Wildlife* and *Alaska's Tundra & Wildlife* (companion books to *Alaska's Ecology*). Wildlife Education, ADF&G, 333 Raspberry Rd., Anchorage, AK 99518. (also on CD) Can be ordered from Wizard Words, P.O. Box 1125, Homer, AK 99603 or 907-235-8757.

Alaska Sea Grant College Program. *Alaska Sea Week Curriculum*. (Curriculum Guides include *Discovery: an Introduction*, Kindergarten; *Animals of the Seas and Wetlands*, Grade 1; *Shells and Insects*, Grade 2; *Birds and Wetlands of Alaska*, Grade 4; *Fish and Fisheries*, Grade 5; and *Marine Mammals: Coastal and River Issues*, Grade 6. Can be ordered from <www.uaf.edu/seagrant/Pubs\_Videos/edu.html> or Alaska Sea Grant College Program, P.O. 755040-INT, Fairbanks, AK 99775-5040 or 907-474-6707 or 888-789-0090.

US Fish and Wildlife Service-Alaska. *Wetlands and Wildlife: Curriculum*. Separate sets (teacher's guide, activities, field trip manual) available for grades K-6 and grades 7-12. For information on this curriculum and others available <www.r7.fws/ea/curricu.html> Can be ordered from Wizard Words, P.O. Box 1125, Homer, AK 99603 or 907-235-8757.

#### Media:

National Geographic Society  
<www.nationalgeographic.com> Has videos available which cover regions of the world. National Geographic Society, P.O. Box 98199, Washington, DC 20090.

#### Websites:

*Animal Diversity Web* <animaldiversity.ummz.umich.edu/index.html> Includes an internet activity on mammals.

*The State of the Nations' Ecosystems* <www.us-ecosystems.org>

## Section 4:

### Human Impacts in Ecosystems

#### Books and Publications:

American Forest and Paper Association. *National Wood Recycling Directory—Wood Recycling Resources, How to Recycle Waste Paper, Youth Action Kit, posters and pamphlets* are available by calling 800-244-3090 or <www.afandpa.org>

*Endangered Species: Critical Issues, Critical Thinking*. (ES0030) Part of the National 4-H Council's "On Common Ground" series. Booklet contains role-playing activities for students in which all sides are examined. Available from On Common Ground, National 4-H Council, 7100 Connecticut Avenue, Chevy Chase, MD 20815. (For ages 12-14)

Hungerford, Harold. *Investigating and Evaluating Environmental Issues and Actions: Skill Development Program*. Champaign, IL: Stipes Publishing Co., 1996.

Jay, Tom and Brad Matsen. *Reaching Home: Pacific Salmon, Pacific People*. Anchorage: Alaska Northwest Books, 1994.

Lewis, Barbara. *The Kid's Guide to Social Action: How to Solve the Social Problems You Choose – and Turn Creative Thinking into Positive Action*. Minneapolis, MN: Free Spirit Publishing, 1998.

Milner, Alexander and Mark W. Oswood. *Freshwaters of Alaska: Ecological Syntheses*. New York: Springer, 1997. Chapter 10 "Gold Placer Mining and Stream Ecosystems of Interior Alaska."

Moses, S. *Changing Waste in Changing Times: Solid Waste and Natural Resources Issues in Rural Alaska – A Teacher's Guide* (Gr. 9-12). Seattle: Northwest Renewable Resources, 1994. Address: Northwest Renewable Resources Center, 1411 Fourth Ave., Suite 1510, Seattle, WA. 98101-2216 or call 202-623-7361



## TEACHER RESOURCES CONTINUED

US Fish and Wildlife Service. *Sea Otter Conservation: Report from the Sixth Joint US-Russian Sea Otter Workshop*. Technical Report MMM 00-1, 2000. Available from the Marine Mammals Management office: 800-362-5148.

### Media:

*Alaska Resources Kit: Minerals and Energy*. Alaska Department of Education. For information contact Jennifer at 907-276-0700 or [coggins@bmol.com](mailto:coggins@bmol.com). For a listing of the contents of the kit, see <[www.eed.state.ak.us/tls/minerals/akresources.html](http://www.eed.state.ak.us/tls/minerals/akresources.html)>

Bullfrog Films. P.O. Box 149, Oley, PA, 19547 or 610-779-8226 or <[www.bullfrogfilms.com](http://www.bullfrogfilms.com)> Numerous videos are available for purchase or rent including these titles useful with the Ecology Puzzler activity:

*Drumbeat for Mother Earth* (Toxic chemicals and the survival of Indigenous Peoples) (Gr. 7-12)

*Global Warming: Turning up the Heat* (Gr. 7-12)

*The Green Zone* (About the riparian zone along streams) (Gr. 7-12)

*Silent Sentinels* (Global Warming) (Gr. 7-12)

*Troubled Waters: Plastic in the Marine Environment* (Gr. 7-12)

*Turning Down the Heat* (Global Warming) (Gr. 7-12)

### Websites:

Alaska Department of Natural Resources, Division of Mining, Land and Water. <[www.dnr.state.ak.us/mine\\_wat/index.htm](http://www.dnr.state.ak.us/mine_wat/index.htm)> For information of statutes and regulations pertaining to Alaska lands. Division of Geological & Geophysical Surveys <[www.dggs.dnr.state.ak.us](http://www.dggs.dnr.state.ak.us)> For information on the Alaska mining industry.

Alaska Science Forum. *Plastic Pollution in North Pacific Seabirds*. Article #388. <[www.gi.alaska.edu/ScienceForum](http://www.gi.alaska.edu/ScienceForum)>

American Forest Foundation. *Exploring Environmental Issues: Municipal Solid Waste*. Washington, DC: Project Learning Tree, American Forest Foundation, 1997. <[www.affoundation.org](http://www.affoundation.org)>

Anchorage Recycling Center

<[www.anchoragerecycling.com](http://www.anchoragerecycling.com)> For information on school recycling programs. Also, 6161 Rosewood, Anchorage, AK 99518 or 907-562-2267.

Cincinnati Zoo. *Project Action* <[www.cincyzoo.org/mainhtm/3c1a.htm](http://www.cincyzoo.org/mainhtm/3c1a.htm)> Describes an environmental problem-solving process.

Citizens for Recycling Solutions <[www.recyclingsolutions.org](http://www.recyclingsolutions.org)> Alaska organization, publications for download, links to other recycling projects.

Environmental News Network <[www.enn.com](http://www.enn.com)> Searchable by subject. Useful for the Ecology Puzzler activities.

EPA Office of Solid Waste. *Students' and Teachers' Page* <[www.epa.gov/epaoswer/osw/students.htm](http://www.epa.gov/epaoswer/osw/students.htm)>

*School Resources for Waste Prevention and Recycling* <[www.deq.state.ok.us/waste/education/resources2.html](http://www.deq.state.ok.us/waste/education/resources2.html)> Has a list of resources for students and teachers.

University of Alaska Fairbanks. *Reindeer Research Program* <[reindeer.salrm.alaska.edu/index.htm](http://reindeer.salrm.alaska.edu/index.htm)>

US Fish and Wildlife Service. *Biological Sources* <[www.r7.fws.gov/sitepg.html](http://www.r7.fws.gov/sitepg.html)> For other useful biology websites.

US Fish and Wildlife Service. *Where Can I Find It? Endangered Species Resources for Educators and Students* <[endangered.fws.gov/kids/wherfind.htm](http://endangered.fws.gov/kids/wherfind.htm)>

US Fish and Wildlife Service. Marine Mammals Management <[www.r7.fws.gov/mmm/seaotter.html](http://www.r7.fws.gov/mmm/seaotter.html)> For sea otter information. Also, for a listing of available literature on sea otters <[www.r7.fws.gov/mmm/otter/lit.html](http://www.r7.fws.gov/mmm/otter/lit.html)> or 800-362-5148.

US Geological Survey. Alaska Biological Science Center <[www.absc.usgs.gov](http://www.absc.usgs.gov)> For information on their Sea Otter Research Program.

World Resources Institute <[www.wri.org](http://www.wri.org)> information, ideas, and solutions to global environmental problems.



# FULL CITATIONS – ACTIVITY CURRICULUM CONNECTIONS

## Books and Publications

- Alaska Department of Fish and Game. *Alaska Wildlife Notebook Series*. Available to download on-line <www.alaska.state.us/adfg> or from Wildlife Education, ADF&G, 333 Raspberry Rd. Anchorage, AK 99518.
- Alaska Geographic Society. *Mammals of Alaska*. Anchorage: Author, 1996.
- Allaby, Michael. *Biomes of the World*. Danbury, CT: Grolier, 1999. (9 volumes)
- Anderson, Bob. *Pollution: Examining Causes and Effect Relationships*. San Diego: Greenhaven Press, 1992.
- Appelhof, Mary. *Worms Eat My Garbage*. Kalamazoo, MI: Flower Press, 1999. Can be ordered on-line <www.wormwoman.com>
- Armstrong, Robert. *Guide to the Birds of Alaska*. Anchorage: Alaska Northwest Books, 1995.
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- Baker, Jeannie. *Window*. New York: Greenwillow, 1991.
- Bang, Molly. *Chattanooga Sludge*. New York: Harcourt Brace, 1996.
- Base, Graeme. *The Sign of the Seahorse: A Tale of Greed and High Adventure in Two Acts*. New York: H.N. Abrams, 1992.
- Bash, Barbara. *Ancient Ones, The World of the Old-Growth Douglas Fir*. San Francisco: Sierra Club Books for Children, 1994.
- Bash, Barbara. *Desert Giant, The World of the Saguaro Cactus*. New York: Little Brown, 1989.
- Bash, Barbara. *Tree of Life, The World of the African Baobab*. San Francisco: Sierra Club Books, 1989.
- Berry, William D. *Deneki: An Alaskan Moose*. Sunnyvale, CA: Press North America, 1988.
- Bial, Raymond. *A Handful of Dirt*. New York: Walker, 2000.
- Bocknek, Jonathan. *The Science of Soil*. Milwaukee: Gareth Stevens, 1999.
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- Burnie, David. *How Nature Works*. Pleasantville, NY: Reader's Digest Association, 1991.
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- Cole, Joanna. *The Magic School Bus at the Waterworks*. New York: Scholastic, 1986.
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- Cooney, Barbara. *Miss Rumphius*. New York: Viking, 1982.
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- Daley, Michael J. *Nuclear Power: Promise or Peril?* Minneapolis: Lerner, 1997.
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- DK Science Encyclopedia*. New York: Dorling Kindersley, 1998. (also on CD)
- Earthworks Group. *50 Simple Things Kids Can Do to Recycle*. Berkeley, CA: EarthWorks Press, 1994.
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- George, Jean Craighead. *Frightful's Mountain*. New York: Dutton, 1999. (Fiction)
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# FULL CITATIONS – ACTIVITY CURRICULUM CONNECTIONS

CONTINUED

## Media

Banana Slug String Band. *Dirt Made My Lunch and Songs of the Earth* (Audio Tape or CD) Address: P.O. Box 2262, Redway, CA 95560 or <[www.bananaslugstringband.com](http://www.bananaslugstringband.com)>

*It's Gotten Rotten* (Video) (Gr. 9-12) Available from Bullfrog Films, P.O. Box 149, Oley, PA, 19547 or 610-779-8226 or. <[www.bullfrogfilms.com](http://www.bullfrogfilms.com)> or Cornell University Resource Center, 7 Business & Technology Park, Ithaca NY. 14850 or 607-255-2090 or <[www.cfe.cornell.edu/Compost/IGR.html](http://www.cfe.cornell.edu/Compost/IGR.html)>

*Lorax*. (Video) St. Louis, MO: BFA Educational Media.

*The Magic School Bus Gets Eaten*. (Video) New York: Kid Vision, 1995.

North Carolina Wildlife Commission. *All Things are Connected: Native Americans and the Environment* (Video) Available from Environmental Media Corporation, 1102 11th St., Port Royal, S.C. 29935-2304 or 800-366-3382 or <[www.envmedia.com](http://www.envmedia.com)>

Rodden, Remy. *Think about the Planet*. (Audio Tape) Available from Think About Products, Box 5451, Whitehorse, Yukon, Canada Y1A5H4 or <[www.yukon.net/thinkabout](http://www.yukon.net/thinkabout)>

*The Rotten Truth*. (Video) Children's Television Workshop, 1991.

*Wormania!* (Video) Flowerfield Enterprises. (Gr. 4 and above) (Live earthworm at work) Can be ordered on-line <[www.wormwoman.com](http://www.wormwoman.com)>

## Websites

Alaska Department of Fish and Game <[www.state.ak.us/adfg](http://www.state.ak.us/adfg)> *Alaska Wildlife Notebook Series*.

Alaska Department of Fish and Game;

[St. Lawrence River Revegetation and Protection: a Guide for Alaska.](#)



ALASKA'S ECOLOGY 2018

*Alaska Science Forum* <[www.gi.alaska.edu/ScienceForum](http://www.gi.alaska.edu/ScienceForum)> Treasure of new and archive articles written for general audiences answering science questions and highlighting Alaska's natural science phenomena and research.

*Alaska Statewide Databases*, accessed through your local library website or <[sled.alaska.edu](http://sled.alaska.edu)> Magazine and journals, 100 newspapers plus other information.

Anchorage *Daily News* <[www.adn.com](http://www.adn.com)> Staff-written newspaper articles, current and past. Article citations can be located at no charge. For full text, a fee must be paid.

*Animal Diversity Web* <<https://animaldiversity.org/teach/>>

Audubon On Line Field Guides <http://ak.audubon.org/birds/birding-alaska-0>

*Biomes of the World* <http://www.ucmp.berkeley.edu/exhibits/biomes/>

*Birdhouses for Alaska* < [http://www.adfg.alaska.gov/index.cfm?adfg=livingwithbirds.birdhouses&\\_ga=2.48801446.1243795418.1530832407-280540891.1530832407](http://www.adfg.alaska.gov/index.cfm?adfg=livingwithbirds.birdhouses&_ga=2.48801446.1243795418.1530832407-280540891.1530832407)>

EPA Global Warming Site <https://www.epa.gov/climate-indicators/weather-climate>

Fairbanks *Daily News-Miner* <[www.newsminer.com](http://www.newsminer.com)> Staff-written newspaper articles, current and past,

Natural Perspective (on-line periodical) <[www.perspective.com/nature](http://www.perspective.com/nature)> A celebration of the diversity of life on this planet. Search by subject.

*Plastics in Our Oceans* <<https://plasticoceans.org/>>

*School Resources for Waste Prevention and Recycling* <[www.deq.state.ak.us/waste/education/resources2.html](http://www.deq.state.ak.us/waste/education/resources2.html)> Has

# FULL CITATIONS – ACTIVITY CURRICULUM CONNECTIONS

CONTINUED

a list of resources for students and teachers.

U.S. Department of Agriculture. *Plants Database* <<https://plants.usda.gov/java/>>

U.S. Fish and Wildlife Service Alaska region <<https://www.fws.gov/alaska/>>

U.S. Fish and Wildlife Service <[refuges.fws.gov](https://refuges.fws.gov)> From the home page select *Wildlife* and then *Species Account*, then *Birds*. From there you can find information on the arctic peregrine falcon.

U.S. Fish and Wildlife Service <[endangered.fws.gov/peregrin.html](https://endangered.fws.gov/peregrin.html)> Information on the peregrine falcon.

USGS Alaska Biological Science Center <https://alaska.usgs.gov/> > Has wildlife photos and reports of current research on Alaska's fish, mammals, birds, and ecosystems.

The U.S. Global Change Research Information Office <[www.gcrio.org/](http://www.gcrio.org/)>

University of Alaska Fairbanks. Reindeer Research Program <[reindeer.salrm.alaska.edu/index.htm](http://reindeer.salrm.alaska.edu/index.htm)>

University of California Museum of Paleontology. *Introduction to the Fungi* <[www.ucmp.berkeley.edu/fungi/fungi.html](http://www.ucmp.berkeley.edu/fungi/fungi.html)>

University of Montreal. *Protist Image Data* <[megasun.bch.umontreal.ca/protists/protists.html](http://megasun.bch.umontreal.ca/protists/protists.html)>

Various atlas websites <[www.maps.com](http://www.maps.com)> or <[www.3datlas.com](http://www.3datlas.com)>

Yahoo Geocities <[yahoo.geocities.com](http://yahoo.geocities.com)> Type in the subject box *Greenhouse Effect* and/or *Global Warming* for numerous websites.



# The Alaska Wildlife Curriculum Cross-Reference

**Grade Index:** lists activities by grade(s).

**Topic Index:** lists activities by topic. One activity may cover several topic areas.

**Alaska State Standards Index:** correlates the lessons by state content standards in 2 different ways: (1) by activity and, (2) by standard. The index grades each activity in its ability to meet the standard. The markings measure whether the activity references, teaches, or assesses the standard.

The 4 books Alaska Wildlife Curriculum series are coded as follows:

<i>Alaska's Ecology</i>	<b>E</b>
<i>Alaska's Forests and Wildlife</i>	<b>F</b>
<i>Alaska's Tundra and Wildlife</i>	<b>T</b>
<i>Alaska's Wildlife Conservation</i>	<b>W</b>



<b>Grade Index</b>															
	<b>Book</b>	<b>Page</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Create a Classroom Compost Box	E	114				•	•	•	•	•	•	•	•	•	•
Decomposition and Cold	T	97	•	•	•	•									
Create and Destroy	E	156					•	•	•	•	•	•	•	•	•
Ecosystem Partners	E	98					•	•	•	•	•	•	•	•	•
Ecosystem Scavenger Hunt	E	150						•	•	•	•	•			
Five Kingdoms But No King	E	58		•	•	•	•	•	•						
Follow a Food Chain	E	88	•	•	•	•	•	•	•	•	•	•	•	•	•
Investigating Air	E	71					•	•	•	•	•	•	•	•	•
Investigating Animals in Soil	E	127					•	•	•	•	•	•	•	•	•
Investigating Animals in Water	E	132					•	•	•	•	•	•	•	•	•
Investigating Birds	E	140					•	•	•	•	•	•	•	•	•
Investigating Fungi	E	119					•	•	•	•	•	•	•	•	•
Investigating Heat Energy	E	60					•	•	•	•	•	•	•	•	•
Investigating Insects	E	137					•	•	•	•	•	•	•	•	•
Investigating Mammals	E	143					•	•	•	•	•	•	•	•	•
Investigating Monerans and Protists	E	117					•	•	•	•	•	•	•	•	•
Investigating Plants	E	121					•	•	•	•	•	•	•	•	•
Investigating Soil	E	64					•	•	•	•	•	•	•	•	•
Investigating Water	E	67					•	•	•	•	•	•	•	•	•
It's Alive, or Is It?	E	55						•	•	•	•	•	•	•	•
Mineral Cycling Through the Ecosystem	E	108							•	•	•	•	•	•	•
Oh Moose!	E	95					•	•	•	•	•	•	•	•	•
Snow Blanket	E	78	•	•	•	•	•	•	•	•	•	•			
Spinning a Yarn About Ecosystems	E	162	•	•	•	•	•	•	•	•	•	•	•	•	•
Take a Deep Breath	E	74	•	•	•	•	•	•	•						
Watching Your Waste	E	159			•	•	•	•	•	•	•	•			
What Makes An Ecosystem?	E	147				•	•	•	•						
What's for Dinner?	E	93				•	•	•	•	•	•				
Who Eats Whom?	E	81	•	•	•	•	•	•	•	•	•	•			
Wildlife Ecology Puzzlers	E	165								•	•	•	•	•	•
World Tour	E	153					•	•	•	•	•	•	•		

<b>Topic Index</b>			
<b>Alaska's Ecology</b>			
<b>Topic</b>	<b>Activity</b>	<b>Book</b>	<b>Page</b>
<b>Animal and Plant Kingdoms</b>			
	Five Kingdoms But No King	E	58
	Follow a Food Chain	E	88
	Investigating Animals in Soil	E	127
	Investigating Animals in Water	E	132
	Investigating Birds	E	140
	Investigating Fungi	E	119
	Investigating Heat Energy	E	60
	Investigating Insects	E	137
	Investigating Mammals	E	147
	Investigating Monerans and Protists	E	117
	Investigating Plants	E	121
	It's Alive, or Is It?	E	55
	What Makes An Ecosystem?	E	147
	What Makes An Ecosystem?	E	147
	What's for Dinner?	E	93
	Who Eats Whom?	E	81
<b>Carrying Capacity and Limiting Factors</b>			
	Oh Moose!	E	95
<b>Conservation</b>			
	Create a Classroom Compost Box	E	114
	Create and Destroy	E	156
	Watching your Waste	E	159
<b>Ecosystems</b>			
	All activities	E	
<b>Energy</b>			
	Mineral Cycling Through the Ecosystem	E	108
	Snow Blanket	E	78
<b>Environmental Quality (includes problems and issues)</b>			
	Wildlife Ecology Puzzlers	E	165
<b>Habitat</b>			
	Create and Destroy	E	156
	Ecosystem Partners	E	98
	Ecosystem Scavenger Hunt	E	150
	Investigating Air	E	71
	Investigating Animals in Soil	E	127
	Investigating Animals in Water	E	132
	Investigating Birds	E	140
	Investigating Fungi	E	119
	Investigating Heat Energy	E	60
	Investigating Insects	E	137
	Investigating Mammals	E	147
	Investigating Monerans and Protists	E	117



<b>Topic</b>	<b>Activity</b>	<b>Book</b>	<b>Page</b>
<b>Habitat (cont)</b>			
	Investigating Soil	E	64
	Investigating Water	E	67
	Mineral Cycling Through the Ecosystem	E	108
	Oh Moose!	E	95
	Snow Blanket	E	78
	Spinning a Yarn About Ecosystems	E	162
	Take a Deep Breath	E	74
	What Makes An Ecosystem?	E	147
	What's for Dinner?	E	93
	Who Eats Whom?	E	81
	World Tour	E	153
<b>Interdependence</b>			
	Create and Destroy	E	156
	Ecosystem Partners	E	98
	Ecosystem Scavenger Hunt	E	150
	Follow a Food Chain	E	88
	Investigating Air	E	71
	Investigating Animals in Soil	E	127
	Investigating Animals in Water	E	132
	Investigating Birds	E	140
	Investigating Fungi	E	119
	Investigating Heat Energy	E	60
	Investigating Insects	E	137
	Investigating Mammals	E	147
	Investigating Monerans and Protists	E	117
	Investigating Plants	E	121
	Investigating Soil	E	64
	Investigating Water	E	67
	Mineral Cycling Through the Ecosystem	E	108
	Oh Moose!	E	95
	Spinning a Yarn About Ecosystems	E	162
	Take a Deep Breath	E	74
	What Makes An Ecosystem?	E	147
	What's for Dinner?	E	93
	Who Eats Whom?	E	81
	Wildlife Ecology Puzzlers	E	165
	World Tour	E	153
<b>Population Dynamics</b>			
	Oh, Moose!	E	95
<b>Predator/Prey and Symbiotic Relationships</b>			
	Ecosystem Partners	E	98
	Follow a Food Chain	E	88
	Oh, Moose	E	95
	Spinning a Yarn About Ecosystems	E	162
	Who Eats Whom?	E	81
	Wildlife Ecology Puzzlers	E	165



<b>Topic</b>	<b>Activity</b>	<b>Book</b>	<b>Page</b>
<b>Renewable and Non-renewable Resources</b>			
	Create and Destroy	E	156
	Creating a Classroom Compost Box	E	114
	Watching Your Waste	E	159
<b>Responsible Human Action</b>			
	Create and Destroy	E	156
	Creating a Classroom Compost Box	E	114
	Oh, Moose	E	95
	Watching Your Waste	E	159
	Wildlife Ecology Puzzlers	E	165

