

# APPENDICES

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# GLOSSARY

**acid:** chemical compounds that taste sour, turn litmus (a pink dye derived from lichens) red, and have a pH of less than 7

**algae:** a diverse group of chlorophyll-containing, mainly aquatic organisms that range from microscopic single-celled forms to multicellular forms 100 feet (30 m) or more long

**alkaline:** containing, or having the properties of an alkali or alkali metal; also called BASIC, especially of a solution; having a pH of more than 7

**basic:** chemical compounds that taste bitter, turn litmus (a pink dye derived from lichens) blue, feel slippery, and have a pH of more than 7

**carcinogenic:** producing or inciting cancer

**combustible:** capable of catching fire and burning easily

**compost:** the bacterial break down of a mixture of garbage and degradable trash—including food wastes, paper, and yard wastes—into an organic, odorless fertilizer that is rich in nutrients

**condensation:** the conversion of a substance, such as water, from the vapor state to a denser liquid or solid state usually initiated by a reduction in temperature of the vapor

**conservation:** the preservation and protection of something, especially a natural resource

**corrosive:** a chemical agent that reacts with the surface of a material causing it to deteriorate or wear away

**cycle:** a series of events that happen again and again and lead back to the starting point, such as the water cycle, which is the continuous movement of water from the oceans and fresh water sources to the air and land and then back to the oceans

**decompose:** matter breaking down via natural processes, i.e. bacterial action, changing the chemical make-up and physical appearance of the material; to separate into parts or into simpler compounds

**direct water use:** water that is used personally by each person for such activities as flushing toilets, brushing teeth, bathing, washing clothes, watering yards

**disposable:** made to be used once and then thrown away

**dissolved:** passing into solution, such as sugar in water

**durable:** products that are not consumed or destroyed when used and can be used over a relatively long period of time.

**evaporation:** the process of converting a substance into vapor, such as converting water to steam

**flammable:** capable of being easily ignited and of burning quickly

**geotextile:** tough, durable fabric that looks like outdoor carpet; placed above and/or below the plastic liner in some landfills

**gray water:** domestic wastewater composed of wash water from kitchen, bathroom, and laundry sinks, tubs, and washers

**hazardous waste:** solid or liquid waste that is either dangerous or toxic to people or to the environment

**household hazardous waste:** hazardous waste from homes; includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react, or explode, or that are corrosive or toxic

**hydrologic:** pertaining to the study of water and its natural occurrences; for example the hydrologic cycle, which is the sequence of conditions through which water passes from vapor in the atmosphere through precipitation upon land or water surfaces and ultimately back into the atmosphere as a result of evaporation and transpiration

**impurities:** substances that are not clean or are unwanted in another substance

**indirect water use:** water that is used to make the products and grow the food consumed by people

**irritant:** something that irritates or causes displeasure

**landfill:** a disposal site with environmental controls where solid waste is compacted and buried under layers of dirt or other materials

**life cycle:** the series of changes in the life of an animal or plant from its beginning to its end

**microorganisms:** organisms of microscopic size, such as bacteria

**natural resources:** raw materials found in nature that are valuable to humans; for example, trees, oil, water

**nonpoint source pollution:** contaminated runoff that originates from an indefinite or unidentifiable place, often from a variety of places

**percolation:** the process of oozing or trickling through a permeable substance, such as water seeping into the ground

**petroleum:** an oily, flammable, yellow-to-black liquid that occurs naturally in deposits beneath the earth's surface; also called crude oil and used to make gasoline, kerosene, fuel oils, and other products

**point source pollution:** contaminants that come from a specific place, such as a manufacturing plant or a refinery

**poison:** a substance that through its chemical action usually kills, injures, or impairs an organism

**pollution:** contamination of the air, water, or soil with harmful substances

**precipitation:** hail, mist, rain, sleet, or snow that falls on the earth

**primary treatment:** the first stage of wastewater treatment, in which pollution is removed through physical processes such as settling tanks and screens

**purification:** the act of clearing a substance of any contamination

**reclamation:** the process of making a discarded or unwanted product or area available for human use, such as cleaning wastewater so that it can be reused

**recyclable:** a product that can be turned into usable material rather than buried in a landfill

**recycling:** reprocessing waste products into reusable materials

**secondary treatment:** the second stage of wastewater treatment, in which waste is removed through biological processes

**sewer:** a large, usually underground, pipe that transports wastewater and sometimes surface water (as from rainfall) to a wastewater treatment plant

**solid waste:** things that get thrown away; examples include household trash and garbage, yard waste, old machinery and equipment, and waste from agriculture and industry

**storm drains:** a system of pipes (separate from sewers) that carries water runoff from land surfaces

**surface runoff:** water that falls on the ground and flows into rivers, streams, lakes, and oceans – either naturally or through storm drains

**suspended:** floating on or in a fluid

**source reduction:** reducing waste by not creating it in the first place, such as making or buying products that are meant to be reused, that have less packaging, or that are made from recyclable materials

**tertiary treatment:** the third stage of wastewater treatment, which further purifies wastewater through processes such as filtration

**toxic:** having the properties or effects of poison

**transpiration:** the passage of watery vapor from a living body through a membrane or pores; the process by which water vapor is lost to the atmosphere from living plants

**wastewater:** water that has been used; sewage

**water reclamation:** cleaning wastewater to such a high level that it can be reused or recycled

**water recycling:** reusing reclaimed water for uses such as irrigation and groundwater recharge

**watershed:** a region or area bounded peripherally by a divide and draining ultimately to a particular watercourse or body of water

**SOLID WASTE LESSONS**

# Correlations With California State Content Standards

ACTIVITY	DISCIPLINE	5	6	7	8	9	10	11	12
Class Waste Audit	Language Arts	L&S 1.1							
	Science	I&E 6f	I&E 7c		I&E 9e	I&E 1d	I&E 1d	I&E 1d	I&E 1d
	Math	M&G 1.3 SDA&P 1.3 MR 2.2, 2.6, 3.3	NS 1.4 SDA&P 2.5 MR 2.2, 2.7, 3.3	NS 1.3 M&G 2.1 MR 2.2, 2.8, 3.3	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0
Fill a Landfill	History					Skills, HI 5			Econ. 12.1.1
	Language Arts	L&S 1.1							
	Science	I&E 7.a, f, g, h	I&E 7.a-c, e	IE 7.a					
Buyer Beware	Math	M&G 1.3 SDA&P 1.3 MR 2.6	NS 1.4	NS 1.3 M&G 2.1 MR 2.8	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0	AI 15.0 G 8.0, 9.0
	History								Econ 12.1.3
	Language Arts	L&S 1.1							
Cycles	Science	I&E 6.f	I&E 7b ES 6.c	I&E 7.a					
	Math	M&G 1.4		M&G 2.1		M&G 10.0	M&G 10.0	M&G 10.0	M&G 10.0
	Language Arts	L&S 1.1-1.3, 1.5, 1.6 SA 2.2.c	L&S 1.4, 1.5, 1.7 SA 2.3.b-d	L&S 1.1, 1.4-1.6 SA 2.3.b-d	L&S 1.3, 1.6 SA 2.3.d	L&S 1.7-1.9 SA 2.2.b, d, f			
Science		ES 6.b, c							

# W A S T E W A T E R L E S S O N S

## Correlations With California State Content Standards

ACTIVITY	DISCIPLINE	5	6	7	8	9	10	11	12
Water You Need	Language Arts	L&S 1.1							
	Science	3.a, b, c	6.b			Ecology 6.d	Ecology 6.d	Ecology 6.d	Ecology 6.d
	Math	NS 1.2 MR 2.6	NS 1.4	NS 1.3					
Trick or Treatment	Language Arts	L&S 1.1							
	Science	3.d, 3.e, 6.h, 6.i	6.b, 7.a, 7.d	7.e					
Water on the Road	Science	3.d, 6.h, 6.i	6.b, 7.d	7.e					
Use and Reuse	Science	3.d	6.b						
	Math	NS 1.1, 1.2 MR 2.2, 2.6, 3.1, 3.2, 3.3	NS 1.4 MR 2.2, 2.7, 3.1, 3.2, 3.3	MR 2.2, 2.8, 3.1, 3.2, 3.3	Algebra 10	Algebra 10	Algebra 10	Algebra 10	Algebra 10

# SUPPLEMENTAL MATERIALS