

Elementary School Lesson Plan – Lesson 2
Theme: LA River Rover: Past, Present, and Future of the LA River

Subject: Physical, Life, and Social Sciences

Objective	<p>Students can explain what a watershed is and how it connects all parts of a city. Students understand how humans can affect the watershed and the ocean, which the River is connected to.</p>
Standards	<p>SS 3.1.2. Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).</p> <p>LS 3.3.c. Students know living things cause changes in the environment in which they live: some of these changes are detrimental to the organism...and some are beneficial (human impact).</p> <p>LS 3.3.d. Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.</p> <p>SS 4.2.1 Discuss the major nations of California Indians, including... describe how they depended on, adapted to...the physical environment...</p> <p>SS 4.2.3 Describe the Spanish exploration and colonization of California, including the relationships among soldiers, missionaries, and Indians (e.g., Juan Crespi...).</p> <p>LS 4.3.a Students know ecosystems can be characterized by their living and nonliving components.</p> <p>LS 4.3.b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.</p> <p>ES 5.3.d Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.</p> <p>ES 5.3.e Students know the origin of the water used by their local communities</p> <p>NGSS STANDARDS</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p> <p>3-LS2.C. (DCI) Habitat Dynamics, Functioning, and Resilience</p>

	<p>When the environment changes in ways that affect a place’s physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)</p> <p>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p> <p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</p> <p>ESS2.E: Biogeology (DCI) Living things affect the physical characteristics of their regions.</p> <p>ESS3.B: Natural Hazards (DCI) A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts</p> <p>ESS2.C: The Roles of Water in Earth’s Surface Processes (DCI) Nearly all of Earth’s available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere.</p>
Vocabulary	<p>Tributary A branch of a river or lake that flows to a larger river or lake.</p> <p>Watershed A watershed is an area of land where water from rivers, streams, and lakes gathers, and drains into a single place such as an ocean or lake. Hills and mountains separate watersheds.</p> <p>Storm Drain A drain that carries rain water away from the street and into rivers and oceans</p> <p>Infiltration The process of surface water being absorbed into the ground</p> <p>Groundwater Water found underground in the cracks and spaces in soil, sand and rock.</p> <p>Endangered Species A species at risk of becoming extinct.</p> <p>Threatened Species</p>

	A species at risk of becoming endangered.
Materials	<ul style="list-style-type: none"> • If virtual: projector • If in-person: field trip waivers for all students
Key Points	<ul style="list-style-type: none"> • Review of LA River history • Overview of threatened and endangered species • Pollution travels through the watershed to the ocean. • There is a path of trash between the streets, rivers, and oceans • A watershed is an area of land that drains its water to a river, stream, or lake. Hills and mountains separate watersheds. • Smaller tributaries feed into the larger river • There is little/no filtration within storm drains before polluted water gets to the LA River. There is some filtration in the soft-bottom sections of the LA River by soil, rocks, and plants. • The LA River ends in Long Beach. All of the trash and pollution are concentrated at the end of the LA River. • Humans have a major impact on the cleanliness of the river and oceans because of how the watershed moves pollution • Discussion about the future of the LA River
Possible Extensions	<ul style="list-style-type: none"> • Explore Watersheds interactive game: https://www.discoverwater.org/explore-watersheds/ • Visit our website folar.org for more information resources and links to interactive games to extend learning, like our Watershed Wonders lesson.