

River Relationships

Objective: Students will understand and be able to describe the different habitats supported by the Kings River ecosystem and the relationships between living and nonliving things within the ecosystem.

Pre-trip Videos:

- [Streams and Rivers Video](#) (3:26)
- [The World of Fresh Water Video](#) (8:08)
- [Underwater Video of Salmon and Trout](#) (18:53)

Pre-trip Articles:

- [NewsELA - Bodies of Water: Rivers](#)
- [NewsELA - Ecosystems: Streams and Rivers](#)
- [NewsELA - Trout and Extinction](#)

Vocabulary:

- Habitat
- Ecosystem
- River
- Riparian
- Aquatic

1st Grade NGSS Correlations:

- LS1.A: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. ([1-LS1-1](#))
- LS1.D: Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. ([1-LS1-1](#))

2nd Grade NGSS Correlations:

- LS4.D: There are many different kinds of living things in any area, and they exist in different places on land and in water. ([2-LS4-1](#))
- ESS2.C: Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)

3rd Grade NGSS Correlations:

- LS3.A: Many characteristics of organisms result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. ([3-LS3-2](#))
- LS3.B: The environment also affects the traits that an organism develops. ([3-LS3-2](#))

- LS2.C: 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](#))
- LS4.B: Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. ([3-LS4-2](#))
- LS4.C: For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. ([3-LS4-3](#))
- LS4.D: Populations live in a variety of habitats, and change in those habitats affects the organisms living there. ([3-LS4-4](#))

4th Grade NGSS Correlations:

- LS1.A: Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. ([4-LS1-1](#))
- LS1.D: Different sense receptors are specialized for particular kinds of information, which may be then processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. ([4-LS1-2](#))
- ESS3.A: Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not. (4-ESS3-1)

5th Grade NGSS Correlations:

- LS1.C: Plants acquire their material for growth chiefly from air and water. ([5-LS1-1](#))
- LS2.A: The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. ([5-LS2-1](#))
- ESS3.C: Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)
- PS3.D: The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)