

COOPERATIVE EXTENSION



EXTENDING KNOWLEDGE
Changing Lives

When you support Extension, youth apply science principles to examine and evaluate our environment while discovering career opportunities.



Garrard County 4-H members connect with nature as they evaluate water quality on Elkhorn Creek.

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Extension Engages Youth to Nature While Investigating Ecosystems and Monitoring Water Quality

4-H members in the Natural Resources Program are involved in hands-on activities and experiences that foster an understanding and appreciation for Kentucky's natural resources.



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During 2017, more than 10,500 youth gained an understanding of the ecosystems in nature, 7,000 youth used their skills to conserve natural resources, and 1,000 youth engaged in a community service project related to natural resource conservation. - 2017 Kentucky Extension Reporting System

Kentucky has over 91,000 miles of streams and over 225,000 acres of ponds, lakes, and reservoirs. To foster appreciation and awareness of these natural resources, 4-H Youth Development and Agriculture and Natural Resources (ANR) agents conduct programs to introduce stream ecosystems, water quality, and environmental stewardship.

Garrard County County 4-H and Reaching Onward Academically and Recreationally (ROAR) conduct afterschool and summer programs that include one and two-day canoe expeditions on Elkhorn Creek for 7th and 8th grade students. Youth learn about stream formation and proper stream management by getting their hands dirty and wet using a stream table model. Using the model, youth move sand, gravel, and other media to learn about the natural workings and components of a stream, as well as human impacts on a stream.

Agents present hands-on aquatic biology lessons that enable youth to collect and classify aquatic macroinvertebrates and animals found in the stream. Photographs and specimens are taken to document the biological diversity and assess the health of the stream.

Boone, Carroll and Pendleton Counties 4-H programs explore the Ohio River and Kentucky River in canoes and kayaks. Waterways have historical significance and economic impact for river counties. Agents discuss navigation of the waterways, as well as best management practices used by



4-H members use nets to collect samples of macroinvertebrates and fresh water animals from under rocks.



Garrard County 4-H Agent differentiates between Copperhead and Northern Water Snakes as youth prepare to canoe on the Elkhorn Creek.

agricultural producers and landowners to protect and conserve our rivers, streams, soil, and other natural resources. While paddling, agents identify key features such as riparian zones that protect our streams and riverbanks from soil erosion.

Twenty-five percent of participants had never been in a canoe or kayak prior to the Extension programs. In addition to increasing knowledge of ecosystems, participants discovered the beauty and tranquility of Kentucky natural resources, learned about canoe safety, engaged in physical activity, and explored careers in natural resources and related sciences.