

SOIL AND PLANT SCIENCE DIVISION

Technical Soil Services

North Central Region



Springfield, Missouri, Major Land Resource Area (MLRA) Soil Survey Office (SSO)

SPSD Manages the Soils Eco-Station at the 2023 Southwest Missouri Regional Envirothon

Purpose

On April 20, 2023, Gene Campbell, Springfield MLRA SSO Leader, JR Perkins, MLRA SSO Soil Scientist, and Lindsey Anderson, Missouri NRCS Area Resource Soil Scientist, participated in the 2023 Southwest Missouri Regional Envirothon Contest at the Springfield Nature Center in Springfield, Missouri.

Key Outcomes

After being cancelled for several years due to COVID, the Southwest Missouri Regional Envirothon committee was able to hold this year's contest with four teams from two different schools. Campbell served as the official test writer for the soils eco-station, and Perkins assisted with pulling the soil profile core and as an eco-station monitor. Anderson served as assistant test grader and will eventually take over as test writer in the future.

Campbell prepared 40 points worth of soil questions for the soils eco-station test and 15 points worth of soil related questions for the other eco-stations tests (aquatics, current issue, forestry, and wildlife). For the soils eco-station test, students had to list the five soil forming factors, match parent materials that occur in Missouri to their definition, list particle sizes that make up soil texture, and list three master soil horizons. The students also had to use the soil core Perkins pulled and displayed at the eco-station to determine if the soil profile had a water table present or not and give the reason for their answer. Students then determined the texture class from two different tubs of soil material and measured slope using a clinometer.

At the other eco-stations, students had to use different sections of a county soil survey to come up with their answers. At the current issue eco-station, students used this year's topic, climate change, to list conservation practices that would be effective in increasing soil carbon and how those practices were related to soil carbon sequestration.



Students working at the soils eco-station with station monitors looking on.