

**ENVIRONMENT / NATURAL RESOURCES MANAGEMENT**

**FORMAT:**

The State FFA Environment/Natural Resources Management Event will be conducted for teams of up to four contestants.

**EVENT COMPONENTS:**

General Knowledge Exam – 1 Hour – 100 Points

Exam will cover areas related to Soils, Water, Ecosystems and Waste Management. Students will answer questions on an individual basis with no outside assistance from other individuals, resources or technology.

Artifact Identification – ½ hour – 50 Points

Students will be presented with one or two tables of wildlife related specimens, some of which will be labeled “Do Not Touch,” while others may be handled. On an individual basis, students will attempt to identify each in the allotted time. Please refer to the National FFA list for examples.

Individual Practicum- ½ hour- 50 points

The event Superintendent and judges will be selecting the individual practicum from the list provided. Students should be prepared for any of these events.

* Soil Analysis –Each student will be given a scorecard and interpretation guide, will view soil samples and information taken from a soil pit, and will be asked to identify soil horizons, textures, percentage course fragments, pH, horizon colors, slope, geologic origin, soil permeability, irrigation suitability and soil structure types of the soil present in the given example. Using the information from the scorecard and interpretation guide, the student will then identify the most appropriate use for the given area and the erosion control practice that best fits the designated use for the land.
* Data Interpretation — Students will be provided a survey analysis (waste, soil, air or water) and they will be expected to answer questions related to this report.
* Water Analysis —Using measuring devices, each participant will measure a sample of water for quality analysis. Four of the following categories will be tested each year: dissolved oxygen, nitrates, nitrites, pH, temperature, phosphates, water hardness, chlorine and ammonia. Analyze the results of measurements and determine if it is suitable for a specific use. Answer questions using the data collected about water quality and limiting factors.
* Waste Management — Participants will be presented with a scenario (agricultural producer, neighborhood, office building, manufacturing plant, etc.,) that generates waste material creating environmental threats. Participants will evaluate the nature of waste output to identify plausible options for reducing the rate of waste generation, recycling or providing potential alternative uses for the waste, treating the waste or disposing of the waste. Participants should be able to identify at least one benefit and one deterrent for each possible option that is offered.

Team Activity – (specifics TBD) 1 ½ hour – 200 Points

Students will work as a group to discuss project/challenge and identify potential benefits and disadvantages which they will orally present to judges.

Students will be provided poster board and markers to use in preparing their presentation.

**SCORING:**

Total Possible Individual Points: **200**

Total Possible Team Points: 200 + (200 x 4) = **1,000**

**Resources:**

* <https://www.ffa.org/participate/cdes/environmental-and-natural-resources/>