

Trial/Pilot Event

Contact the organizers of your tournament to find out what trial/pilot events will be held.

DISASTER DOWNSTREAM

DESCRIPTION: Students will move from station to station-answering questions involving content knowledge and process skills in the area of environmental science with emphasis on environmental disasters in ecosystems.

A TEAM OF UP TO: 2

APPROXIMATE TIME: 45-50 minutes

EVENT PARAMETERS:

No reference materials or calculators are allowed during the competition. No resources will be provided by the event supervisor.

THE COMPETITION:

Using raw data, including but not limited to charts, graphs, written descriptions, and experimental results, students will identify and suggest solutions for an environmental disaster concerning pollution (both point and non-point source), form hypotheses, make inferences and draw conclusions based on information given. Examples include but are not limited to agricultural pollution of a freshwater lake, industrial water pollution, residential pollution of groundwater and plastic pollution in the marine environment.

Half the credit will be awarded for correctly identifying the problem from analysis of the data, with the remaining credit awarded for proposing a solution that is consistent with whatever problem the students cited (regardless of whether the problem is correctly identified).

The solutions must demonstrate understanding of current environmental laws and policies. The solutions will consist of either an essay or free-response questions with stated point values.

EXAMPLES:

1. Make inferences and conclusions based on a newspaper article relating to beachgoers observing a large number of dead sea turtles washed up on shore. The scientists conducted tests and determined low weights and various plastics in the stomachs.
2. Interpret data graphs of changes in pH of a stream
3. Make inferences and draw conclusions based upon data and observations of an algal bloom in a river.
4. Make observation and form hypothesis when a homeowner's backyard has a bad smell and water is bubbling up from the ground.
5. Make observations when given measured parameters of a lake that has turned green.
6. Propose health precautions relating to sewage spills following flood, high levels of heavy metals in a lake.
7. Propose solutions to a sudden rise in exotic plants and animals and the decline of native species in a river.

SCORING:

Points will be awarded for correct answers and/or appropriate solutions. Contestants will be ranked from the highest to lowest total score. All ties will be broken using a designated task or a series of questions that are part of the lab test or a separate station designated as a tiebreaker.