

ADVENTURES IN AGRICULTURE

Division C

DESCRIPTION: Students in this event will be challenged on their knowledge in areas of agricultural engineering/mechanization, animal sciences, horticulture, entomology, agronomy (crop/soil science), and natural resources/wildlife management. No portion of this event will allow or require outside resources such as guidebooks, maps, charts, or graphs.

TEAM SIZE: 2 Maximum

APPROXIMATE TIME: 45 Minutes

THE COMPETITION:

Students will cycle through each of the nine stations in 4-minute intervals.

Stations 1 & 2: Agricultural Engineering – Application and utilization of a digital multimeter (DMM) in order to troubleshoot problems and analyze electrical circuits. Primary concepts of concern are AC and DC Voltage, DC Amperage, Continuity (Ohms) and Ohm's Law.

Station 3: Natural Resources/Wildlife Management – A 10-question multiple-choice quizzes focusing on avian wildlife species. Test questions will be derived from the Texas Parks & Wildlife Department's webpage focusing on wildlife facts (<http://www.tpwd.state.tx.us/huntwild/wild/species/>). The quiz will be derived from the section labeled "Birds" only.

Station 4: Horticulture – The horticulture section will focus on components and functions of woody stems. Students will be challenged to label, dissect, identify and/or describe the function of all internal and external parts of woody stems.

Station 5: Turfgrass Science – Given 10 specimens or photos, students will identify turf grasses as well as diseases common to the ten. Resources for turfgrass species may be found at; <http://aggieturf.tamu.edu/aggieturf2/diesase/disindex.html> Resources for turfgrass diseases may be found at; <http://aggieturf.tamu.edu/aggieturf2/grasswee/turf.html>

Station 6 & 7: Agriscience – Students will be challenged with a laboratory procedure exercise. Students should prepare for this station by becoming familiar with the most basic chemistry/biology laboratory skills and by practicing following protocol and directions issued on a task sheet. All directions for the exercise will be provided.

Station 8: Animal Science (Digestive Anatomy) – A 10-question multiple-choice quiz based on basic facts and identification of digestive anatomy of ruminant and non-ruminant animals.

Station 9: Agronomy – Given a soil sample, students will determine the sample's specific texture. Students should be familiar with the hand texturing technique known as "ribboning" as well as with the soil texture triangle. The following websites may be used to reference the specific soil textures; http://www.ndhealth.gov/WQ/SW/Z1_NPS/PDF_Files/Soil_Texture_Feel_Test.pdf and <http://courses.soil.ncsu.edu/resources/physics/texture/soiltexture.swf>

Once students have moved from a station, they may not go back to a previous station, or communicate with students at other stations.

SCORING: Each station will have a pre-determined number of points and a one-minute tiebreaker question will be administered once the time has run out for the last station and used later only if a tie exists. The judges hold the final authority in conflicts about questions or credit.