Agricultural Mechanics

A Special Project of the South Dakota FFA Foundation

Important Note: Please thoroughly read the General Rules at the beginning of this handbook for complete rules and procedures that are relevant to all South Dakota FFA Career Development Events.

Purpose

The purpose of the FFA Agricultural Mechanics Career Development Event is to prepare students with a strong knowledge base and the ability to comprehend the interaction of complex systems.

Objectives

- To instill leadership and motivate learning in the classroom through development of student skills in cooperative learning, observation, analysis and communication.
- To develop and exercise competitive spirit in a team atmosphere.
- To create a foundation for career choices by building an awareness of opportunities related to agriculture mechanics.

Event Rules

The Agricultural Mechanics CDE will be developed from a subject matter theme each year. The State FFA CDE theme and competencies will be posted on the state website (http://aged.sdstate.edu) by February 1. A committee of secondary agricultural educators will select 30 competencies from the National CDE Related Competencies. These 30 competencies will reflect the theme for the year.

The same four students who compete in the Agricultural Mechanics CDE on Sunday evening of State FFA Convention will compete on Monday.

The Agricultural Mechanics CDE requires official dress Sunday evening only when the team activity and individual test will take place.

Each participant shall furnish and wear coveralls, a shop coat, or appropriate clothing for this event.

Clothing must be in good repair and fit properly.
Long-sleeved clothing must be worn when welding or cutting.

Each participant will be responsible for all personal safety equipment that meets the following specifications:

Industrial Quality Eye Protection – Participants will be required to wear eye protection devices (spectacles or goggles) that meet the standards of the American National Standard Practice for Occupational and Educational Eye and Face Protection, Z87.1979 (Z87.1968) and any subsequent revisions, therefore, approved by ANSI.

Dress Eyewear DOES NOT qualify as Industrial Quality Eye Protection.

Participants not wearing OSHA approved safety glasses/goggles in the shop/lab during will be removed from the CDE.

The descriptions of style A, B, and C Industrial Quality Eye Protection are as follows:

Style A: Safety spectacles without side shields. They are for limited hazard use requiring only frontal protection. The addition of accessory side shields that are not firmly secured does not upgrade Style A to Style B or C. This style is NOT recommended for use in this CDE.

Style B: Safety spectacles with wire mesh, perforated plastic, or non-perforated side shields. The side shields shall be tapered with an anatomical periphery extending at least halfway around the circumference of the lens frame. INDUSTRIAL QUALITY EYE PROTECTION FOR THOSE NOT WEARING PRESCRIPTION GLASSES SHALL BE STYLE B.

Style C: Safety spectacles with semi- or flat-fold shield that must be firmly secured to the frame. Style C glasses do not provide maximum protection from the top and bottom angles, and are not recommended. (Those wearing prescription eyewear which is not industrial quality must also wear goggles while performing in the CDE area.)

Participants will receive a score of zero for a safety violation on a particular skill activity. Multiple safety violations will merit removal from the CDE.

A student may voluntarily take a score of zero if they are not comfortable with or prepared to operate a piece of equipment during the CDE.

Event Format

The Agricultural Mechanics CDE consists of three parts.

Hands-on Operations

Each participant will complete 5 specific hands-on performance operations in a time period of 15 minutes.

Problem-solving/skill development activities will be based on 5 of the 30 theme competencies.

Twelve participants will be in each group.

Written Exam

The written exam will consist of 25 questions.

Team Problem

A problem-solving activity is a mental activity involving the gathering of information and the use of logical solutions based on commonly accepted standards.

Scientific principles and concepts learned in the secondary school system will be used for solving problems.

The exact problem may or may not be in a listed reference.

The team problem does not count toward individual scores.

The individual skills, problems, and team activities will be drawn from the following event areas and could include hands-on activities:

1. Machinery and Equipment Systems
2. Electrical Systems
3. Compact Equipment Systems
4. Structural Systems
5. Environmental/Natural Resources Systems

Event Scoring

Activity	Points Possible
Individual Activity – Five Skills (20 points/activity)	100
Individual Activity – Five Problems (20 points/problem)	100
Individual Test	50
Total Possible Individual Score	**250**
Team Activity	100
Total Possible Team Score *(top 3 participants' scores)*	**850**

Tiebreakers

Team Activity Score

1. Team Score
2. All Skills
3. All Problems

Individual

1. All Skills
2. All Problems
3. Test Score