Soil and Land Evaluation

Revised 6/2023

Purpose and Standards

The land event seeks to effectively make students aware of the value of soils in production agriculture, environment and society.

Foundation Standards: Mathematics 10.0, 15.0. Science 1a. Problem Solving & Critical Thinking 5.1, 5.2, 5.3. Leadership & Teamwork 9.1, 9.6. Technical Knowledge & Skills 10.1, 10.2. Demonstration & Application 11.0.

Agricultural Standards: Agriscience Pathway: C10.1, 10.2, 10.3. Forestry and Natural Resources Pathway: E3.1, 3.2, 3.3. Plant and Soil Science Pathway: G6.1, 6.2, 7.3.

Contestants

Teams shall consist of three or four members. The scores of the three highest team members shall be used for the team score. All team members are eligible for individual awards.

Classes

|  |  |  |
| --- | --- | --- |
| **Class** | **Individual Points** | **Team Points** |
| Pit #1 | 111 | 333 |
| Pit #2 | 111 | 333 |
| Pit #3 | 111 | 333 |
| Pit #4 | 111 | 333 |
| Total | 444 | 1332 |

Tie Breaker

Team and individual ties will be broken by the following items:

* Pit #1, Pit #2, Pit #3, Pit #4

Sub-contest Awards

Sub-contest awards will be given for high teams and individuals in the following areas: Pit #1, Pit #2, Pit #3, and Pit #4.

Rules

1. There will be four (4) sites judged for official score.
2. Use of communication devices will not be permitted in a designated contest area/building. This would include, but not limited to cell phones, MP3 players, iPods, etc. Violation will result in immediate removal from the contest he/she competed in and will become ineligible for any awards. Any devices collected prior to the start of the contest will not be returned until all competitors have completed the contest.
3. All contestants shall be allowed forty (40) minutes at each site to complete the score card. Once at the site students will be split into two groups. The first group will have 10 minutes to evaluate the pit, afterward the second group will have 10 minutes to evaluate the pit. At the conclusion of those 10 minute intervals, all students within the two groups will have the remaining 20 minutes to evaluate the pit.
4. Students will be given an extra 5 minutes at the end of the 40 minutes at each pit to fill out the official Judging Card for tabulations. Once they have requested their card they may not return to the pit.
5. Contest sites will provide students with a practice sheet per pit (4) and one official Judging Card tabulation sheet. Practice sheets and their official Judging Card tabulation sheet will be collected at the conclusion of each pit.
6. All contestants must fill out the official score card and will be graded according to points shown on the score card. A total of one hundred and eleven (111) points will be the maximum score for each site.
7. Contestants in land judging will be divided into four groups. Only one group shall be allowed at any one site at the same time. Only one member of a team shall be allowed in a group.
8. All the following equipment for contestants will be available at the judging sites.
	1. Water
	2. Rulers
	3. Pick and/or shovel
	4. Paper towels
	5. Clipboards
9. The top five (5) teams of this contest shall be eligible to represent the state in the National Contest in Oklahoma City.
10. Contestants are not to bring clipboards, printed or written materials to the contest. Contestants may use non-programmable calculators, clinometers, abney levels, or slope indicators.
11. The following will be done at the State Finals Contest:
	1. No critique will be given until all sites have been judged.
	2. An answer key will be provided to coaches after contest judging is complete.
	3. The official California FFA Land Judging Manual (most current revised edition) will be used as the standard for evaluating all land judging scorecards.
	4. No alternates are allowed to compete.
12. Sites
	1. The boundary of each site to be judged will be plainly and visibly flagged with numerous flags. Slope will be indicated by two red flags 100 feet apart.
	2. The soil will be judged moist for color determination.
	3. Texture only will be used to determine air and water movement.
	4. Erosion control practices will be used only for classes 1-6.
	5. A 31 x 11 sign will be posted at each site or a mimeo sheet provided with the following information.
		1. Water available (yes or no)
		2. Original depth of surface soil (inches)
	6. The pits should be a maximum of 72 inches deep. If this is not possible, the bottom soil shall be considered to be of indefinite depth. Each site will be repaired, by an official, to its original depth and conditions after each group is finished.
	7. Stakes will be placed in the pits indicating the limits of the profiles to be judged. An area at least 12" wide, the depth of the pit, will be left untouched to show original condition.
13. The official California FFA Land Judging Manual (most current revised edition).
	1. The Cal Poly faculty member with the soil judging duties will publish the Soils Manual.
	2. Manuals will be made available to official judges prior to judging the sites.
	3. The Soil Judging Card will be maintained separately from the Land Judging Manual.
	4. Any updated manual will need to be made available to CATA by January 1st of the current judging year.
14. **Scoring**

During the start of the state finals contest, coaches representing the previous year’s qualifying state finals teams will assess/confirm the scoring of the four state finals pits. Final official key will be determined by a majority consensus of the coaches represented, the CATA approved contest consultant, and the host facility contest chair.

**Scoring of individual items will be as follows:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Category** | **Points** | **Notes** |
|  | 1. Surface Soil |  |  |
| 1 |  A. Color | 5 |  |
| 2 |  B. Texture | 5 |  |
| 3 |  C. Gravel and Rock | 3 |  |
| 4 |  D. Thickness | 3 |  |
|  | 2. Subsoil |  |  |
|  |  No Subsoil |  | Indicate NONE for E,F,G |
| 5 |  E. Color | 5 |  |
| 6 |  F. Texture | 5 |  |
| 7 |  G. Thickness | 3 |  |
|  | 3. Interpretation of Soil Features |  |  |
| 8 |  H. Type of Material That Limits Depth | 5 |  |
| 9 |  I. Parent or Underlying Material | 5 |  |
| 10 |  J. Depth of Soil Favorable For Roots & Water Penetration | 5 |  |
| 11 |  K. Air & Water Movement | 5 |  |
| 12 |  L. Available Water Holding Capacity to 60 Inches | 5 |  |
|  | 4. Accelerated Erosion |  |  |
| 13 |  M. Amount of Erosion or Evidence of Deposition | 3 |  |
| 14 |  N. Kind of Erosion | 3 |  |
|  | 5. Topography |  |  |
| 15 |  O. Landscape Position | 3 |  |
| 16 |  P. Steepness of Slope | 5 |  |
| 17 | 6. Land Capability Classification | 8 |  |
| 18 | 7. Land Use  | 6 | Mark “Yes” or “No” for each possible answer |
| 19 | 8. Major Problems in Use | 8  | Mark “Yes” or “No” for each possible answer |
|  | 9. Land Management Needs |  |  |
| 20 |  Q. Agricultural Management Practices  | 7  |  Mark “Yes” or “No” for each possible answer |
| 21 |  R. Erosion Control | 4  | Mark “Yes” or “No” for each possible answer |
| 22 |  S. Irrigation Methods | 5 | Mark “Yes” or “No” for each possible answer |
|  | 10. Urban Land Limitations |  |  |
| 23 |  T. Limitations For Septic Tank Filter Fields | 1 |  |
| 24 |  U. Limitations For Shrink-Swell | 1 |  |
| 25 |  V. Limitations For Foundations Without Basements | 1 |  |
| 26 |  W. Limitations For Local Roads and Streets | 1 |  |
| 27 |  X. Limitations For Top Soil | 1 |  |
|  | TOTAL | 111 |  |

\* Points are awarded only if contestant’s choice(s) match the choices of the judge.
Practice sheets can be found in the California FFA Soil and Land Evaluation Manual. Official Judging Cards for tabulation can be found and ordered via Judging Card.