FORESTRY
3 or 4 Member
Team

I. PURPOSE

This event familiarizes students with the efforts of soil and water conservation districts and Natural Resource and Conservation Services (NRCS) in stressing proper use of woodlands. It is also intended to create an awareness and understanding of the value of properly managed woodlands and to promote a greater appreciation of woodlands as renewable natural resources. This contest is designed around the curriculum for the Forestry and Wood Technology. Forestry can be an introduction to a degree in forestry. Students will learn various methods of forestland management.

II. EVENT FORMAT

A. Team Make-up

1. Teams shall consist of three or four members. Team ranking is determined by combining the scores of the top three students from each team.
2. A student who has participated in a National FFA or 4-H Forestry event shall not be disqualified from participation in the Texas Woodland Clinic.
3. Teams are qualified by advancing from each of the NRCS local SWC Districts. The top five teams from the Area FFA Contest that have NRCS Forestry Districts within their area may also qualify for state competition.

B. Equipment

1. Team members must provide their own compliant clipboard and~~/or~~ clean folder with the following items: scan sheet, ~~and/or~~ copy of the scan sheet, ~~optional~~ Texas FFA CDE drop sheet, ~~and/or~~ 2 sheets of lined or unlined blank paper, and a number 2 pencil. Contestants may use their own-battery operated, non-programmable calculator, tree scale stick, and compass. Diameter tapes, clinometers, or other measurement tools will not be allowed.

C. Event Components

Question 1: Hardwood Identification (10 points)

1. 10 species of trees will be tagged A-J
2. Participants will identify each tree by matching it with the correct corresponding number from the question sheet.
3. One point per tree

Question 2: Pine Identification (10 points)

1. Five trees and/or branches and cones will be tagged A-E
2. Participants will identify the trees by matching them with the correct corresponding number from the question sheet.
3. Two points per item.

Question 3: Wood Identification (5 points)

1. Five blocks of wood will be tagged A-E
2. Participants will determine the species of tree from which they were

cut.

3. The blocks will be selected from the species listed on the question sheet,
4. Participants will ~~place the appropriate code from the question sheet for each sample on the answer sheet.~~ indicate the correct species for each sample.
5. One point per block

Question 4: Wood Products (10 points)

1. Five trees will be tagged A-E
2. Participants will determine the market best suited for each tree from the following possibilities:
    i. Poles and Piling
    ii. Veneer Logs and Saw logs
    iii. Pulpwood and Fence Posts
3. Two points per tree

Question 5: Timber-Forage-Wildlife Relationships (10 points)

1. Five browse plants will be tagged A-E
2. Participants will identify the plants by matching them with the correct corresponding number from the question sheet.
3. Students will also assign the proper utilization or preference rating for each plant
    i. 1 = First Choice
    ii. 2 = Second Choice
    iii. 3 = Low Value
4. One point for correct identification and one point for a proper determination of the plant's preference.
5. If the plant is not correctly identified, no credit will be given for the utilization rating.

Question 6: Tree Measurements and Volume (10 points)

1. Students will determine the diameters of five tagged pines at DBH in full logs or half logs to a six inch top.
2. A timber volume table/tally sheet will be provided.
3. Participants will determine the volume for each tree and place the total volume for all five trees on the answer sheet.
4. 10 points for determinations within five percent of the correct total; five points for determinations over five percent but within 10 percent; and zero points for determination over 10 percent from the correct volume total.

Question 7: Site Index and Productivity (7 points)

1. Participants will be given a site index table and either an increment core or cross-section for determining age.
2. Participants will round the age to the nearest five years and measure the total height of a marked tree.
3. Using the table, participants will then determine the site index and record it on the answer sheet.
    i. Site Index:
    ii. Correct site index = Seven points

iii. Five indices either way = Five points
iv. Ten indices either way = Two points
v. More than Ten indices away = Zero points

Question 8: Rate of Growth (3 points)

1. Three blocks of lumber, increment cores or cross sections will be tagged A-C
2. Each sample will have a one-inch line marked.
3. Participants will determine if each ~~piece~~ sample is growing too fast, too slow, or about right and indicate the answer on the scansheet. (A code for each growth rate is given on the question sheet).
4. 1 point per item.

Question 9: Selective Thinning (10 points)

1. 10 trees will be tagged A-J
2. Participants will determine which trees should be cut by considering crown friction and tree quality, dominance and spacing.
3. Participants will ~~place an X in the box corresponding to the letters on the answer sheet of the trees that should be CUT.~~ indicate "leave" or "cut" on the answer sheet for each tagged tree.
4. One point per tree

Question 10: Cull Tree Removal/TSI (5 points)

1. Five trees will be tagged and labeled A-E.
2. Participants will determine which method, if any, should be used to control the tagged trees.
3. Participants will choose form one of the following possibilities:
   i. Leave
   ii. Cut
   iii. Deaden with Chemicals
   iv. Deaden with chemicals and/or fire (prescribed burning).
4. One (1) point per tree
5. Only hardwoods (no pines) are to be considered for this question.

Question 11: Pine Regeneration (5 points)

1. Student will examine site and will determine the best method for site preparation and securing pine establishment based upon landowner's objectives and site concerns.
2. Area will be flagged and contestants will choose the best regeneration management system.
3. There will be four possible answers for site preparation and one correct answer for establishment method.
4. Three points will be awarded for the correct site preparation selection. If multiple site preparation techniques are required all the correct methods must be checked in order to receive points. Two points will be awarded for the correct pine establishment method selected.
5. If the site is a hardwood/pine mix and there are no landowner concerns, harvest all trees and control hardwood trees should be marked for site preparation and plant pines should be marked for establishment method.

Question 12: Site Management Concerns (5 points)

1. A hole will be dug at the site and information on drainage, site location, etc. will be provided.
2. Participants will investigate four site factors:
   i. Soil Texture

ii. Restricted Rooting Depth
iii. Wetness
iv. Excessively Steep Slopes

3. Participants will determine which management concerns (Erosion Hazard, Seedling Mortality, Equipment Limitations or none) will be affected by the site factor(s).
4. Participants will then ~~circle~~ indicate all the factors that apply.
5. Five points will be awarded for a correct answer. If there are multiple concerns for the site, **all** correct concerns must be indicated in order to receive credit.

Question 13: Compass and Pacing (10 points)

1. A course will be set up with three stakes of unknown distance (between 50 and 200 feet total distance) and two different azimuths.
2. Participants will determine the distance and azimuth between the first and second stakes, make the turn and determine the distance and azimuth between the second and third stakes.
3. The participants must give the correct distance and correct azimuth. The scoring will be:
   i. Distance
      a. Full credit for the correct distance with 5% either way - 6 points (3 points per leg)
      b. Half credit for distance more than 5% and within 10% - 4 points (2 points per leg)
   ii. Azimuth
      a. Full credit for the correct azimuth within 3° - 4 points (2 points per leg)
      b. Half credit for the azimuth 4° - 5° away – 2 points (1 point per leg)

III. SCORING

Total Points

Individual	**100**
Team	**300**

IV. TIEBREAKERS

A. Team Tiebreakers

Ties for team awards shall be broken as follows.

1. Team ties will be broken by using ~~the team's scores on the tree volume question.~~ Question 6: Tree Volume.-The team with the most accumulated points on question 6 will break the tie. The alternate team member's score will not be considered.
2. If ~~the team is~~ still tied ~~the tie will be broken by the high team's score n volume calculation. The volume closest to the correct volume will determine the team winner.~~ The team with the best average of total tree volume on Question 6 will break the tie. The alternate team member's score will not be considered.

3. ~~If there is still a team tie, the tie will be broken by the team score on the hardwood identification question.~~ If still tied, the team with the best score on Question 1: Hardwood Identification will break the tie. The alternate team member's score will not be considered.
4. ~~If there is still a team tie, the tie will be broken by the teams score on the selective thinning question.~~ If still tied, the team with the best score on Question 9: Selective Thinning will break the tie. The alternate team member's score will not be considered.
5. ~~If there is still a team tie, the team with the highest alternate score will win.~~ If still tied, the team with the highest alternate member score will break the tie.
6. If still tied, the teams, accompanied by their advisors, will mee

B. Individual Tiebreakers

Ties for individual awards shall be broken as follows.

1. ~~An individual tie will be first broken by the closest to the correct tree volume.~~ Individual ties will be broken by using Question 6: Tree Volume. The individual closest to the correct tree volume will break the tie.
2. If still tied, the individual with the highest score on Question 1: Hardwood identification ~~question will be used~~, will break the tie.
3. If still tied, the individual with the highest score ion Question 9: Selective Thinning question ~~will be used~~. will break the tie.
4. If still tied, the individual with the best score on Question 7: Site Index and Productivity will break the tie.
5. If still tied, ~~they will be~~ the individuals, accompanied by their advisors, ~~and~~ will meet with contest officials who will conduct a coin toss to determine the ~~higher placing individual.~~ the winner.

V. REFERENCES

The Texas State Woodland Clinic Manual shall be the official guide for rules of conducting the State Woodland Contest.