



2026

Forestry

2026 Updates

Below is a summary of updates to the Forestry CDE Handbook for the 2026 convention cycle. We plan to release handbook changes that may impact instruction in June of the year prior but may finalize smaller updates through February of the competition year. All updates and changes aim to provide a positive, relevant experience for all competitors.

HANDBOOK UPDATE:

JULY 2025

- Identification of Disorders, Equipment and Products - A maximum of 40 items from the identification lists will be displayed for participants to identify. This will consist of approximately 20 items related to equipment, about 10 items related to tree/forest disorders or symptoms (including pathogens), and about 10 items concerning forest products. Each item will be designated by a three-digit number.

Rationale: Clarify the number and category of items that will be in the practicum.

JANUARY 2026

Policies and Guidelines

I. Eligibility of Students

- Added — Eligibility is based on the National FFA membership year (August 1–July 31)—not a school's academic calendar or "rising grade" designation.

Rationale: Clarifying that a student must be a 7th-grade member on the date of the qualifying event to compete or qualify at a state qualifying event. A student who is still a 6th-grade member on that date is not eligible to qualify and may compete for 7th-grade consideration only in qualifying events held on or after August 1.

- Deleted "Equipment is provided by technical name, tree/forest disorders are provided by common name and the forest products are noted by species or type of manufactured product" statement in the Disorders, Equipment and Products Identification Section.

Rationale: Lists are used as provided and are self-explanatory.

- Removed Forests and Forestry. Rolfe et al., Interstate Publishers. 0-8134-3240-5 from the General Knowledge Exam reference list.

Rationale: Forests and Forestry. Rolfe et al., Interstate Publishers. 0-8134-3240-5 is no longer available.

- Removed Forests and Forestry. Rolfe et al., Interstate Publishers. 0-8134-3240-5 from the Forest Management reference list.

Rationale: Forests and Forestry. Rolfe et al., Interstate Publishers. 0-8134-3240-5 is no longer available.

- Refer to the National FFA Career and Leadership Events webpage on [FFA.org](https://ffa.org) for the most up-to-date career and leadership development handbook edition.

Contact

Career Development Events
Program Specialist
National FFA Center
6060 FFA Drive
Indianapolis, IN 46278
cde@FFA.org

FFA Vision

Growing the next generation of leaders who will change the world.

FFA Mission

FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

FFA Code of Conduct

FFA members participating in National FFA programs understand and agree to abide by the National FFA Code of Conduct at:
<https://ffa.app.box.com/s/x6l2lkovv4x9tgiegy73mei30zvli5i>

Guiding Principles

National awards and competitive events should:

1. Inspire members to explore, learn, and be prepared for future careers related to the AFNR career pathways and FFA AFNR Value Chain.
2. Recognize achievements in skill development and knowledge, including:
 - a. leveraging relevant technologies
 - b. utilizing creative problem-solving
 - c. meeting developmentally appropriate learning objectives (Bloom's Taxonomy)
 - d. utilizing employability skills (teamwork, communication, collaboration)
3. Be accessible and engaging for all students and FFA members.
4. Provide awards and recognition opportunities for students at all levels.
5. Work with other groups to utilize or partner with existing experiences.
6. Provide feedback that promotes personal and professional growth.

Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards

The National Council for Agricultural Education has provided permission to the National FFA Organization to use the National AFNR Career Cluster Content Standards in the development of their educational resource materials. The National Council for Agricultural Education is the owner and developer of the National AFNR Career Cluster Content Standards ©2016 and reserves all rights to the original material used here with permission. In addition, The National Association of State Directors of Career and Technical Education/National Career Technical Education Foundation (NASDCTE/NCTEF) has provided permission to use the Common Career and Technical Core (CCTC) Standards in support of this project. NASDCTE/NCTEF are the owners and developers of the Common Career and Technical Core (CCTC) Standards © 2012 and reserve all rights to the original material used here with permission.

The National FFA Organization has adopted the AFNR Career Cluster Content Standards and integrated them into the national award and recognition programs for the benefit of members, school administration, and agriculture as a whole. For a complete set of the standards, please visit the [2016 AFNR Career Cluster Content Standards](https://ffa.org). You may access the standards alignments for this event at <https://ffa.box.com/s/hrxlqvw7g6zo54xfi5x5kyltlyusqjihy0>.

Professional Integrity

FFA members participating in national FFA programs and events understand and agree that all work must result from their own effort and ability, created, and completed alone (except for partner or chapter applications). When outside sources (direct quotes or phrases, specific dates, figures, or other materials) are used for a project, document, or application, the required reference citation must be completed according to the rules specified by the applicable handbook.

While participating in National FFA programs, FFA members are prohibited from:

- Plagiarizing
- Violating copyright
- Cheating
- Falsifying information
- Using another person's results or thoughts as their own, even with this person's permission. This includes work done by a family member or a mentor.
- Using information or data obtained from the internet without proper citation.

Any attempt to gain an unfair advantage will not be tolerated. Non-compliance represents plagiarism and will automatically disqualify a member.

Use of Artificial Intelligence (AI) for National Programs and Events

Artificial intelligence (AI) refers to computer systems capable of performing complex tasks that historically only a human could do, such as reasoning, making decisions, or solving problems. As AI continues to evolve, it can be a tremendous tool to help companies, organizations and individuals enhance their productivity and work. Therefore, the National FFA Organization allows the use of AI tools. FFA members may use AI tools, such as ChatGPT, Gemini, and CoPilot, to assist them in their learning.

Appropriate uses of AI may include:

- generating ideas for any FFA-related assignments, projects, contests and award applications
- checking facts of a phenomenon
- checking for and correcting grammatical errors in a paper written by a member

For more information, please see the [Standard Operating Procedures on the Use of Artificial Intelligence \(AI\) for National Programs and Events document](#).

Member Safety

At National FFA, we're committed to creating a safe, inclusive, and supportive environment for all members— students, educators, and families alike. We believe in fostering premier leadership, personal growth, and career success, and that starts with a community built on respect and professionalism. These guidelines outline the expectations for behavior and conduct across all FFA activities and spaces. By upholding these principles, members help ensure FFA remains a place where everyone can thrive.

Please take a moment to review these policies, [here](#) (Member Safety at FFA.org), which includes an agreement to abide by the [National FFA Code of Conduct](#). Adherence is essential—violations may result in disciplinary action, including restricted access to events.

2026 CAREER AND LEADERSHIP DEVELOPMENT EVENTS GUIDELINES

POLICIES AND GUIDELINES

I. Eligibility of Students

- a. Eligibility is based on the National FFA membership year (August 1–July 31)—not a school’s academic calendar or “rising grade” designation.
- b. Each student must be a student FFA member on the current roster in good standing with the local chapter, state FFA association, and the National FFA Organization during the school year in which the student qualified to participate at the national level.
- c. If a student’s name is not on the chapter’s official roster, please work with the National FFA membership team to update the membership before the national event.
- d. The student, at the national event, must be:
 - i. A secondary education (grades 7–12) FFA member during the school year in which the participant qualified to participate at the national level as determined by the roster at the time of qualifying.
 - ii. A graduating senior is eligible to compete in state and national career and leadership development events up to and including their first national convention following graduation.)
 - iii. Participants in the Creed Speaking and Conduct of Chapter Meetings LDEs must qualify as a 7th, 8th, or 9th grade member.
- e. If a student moves to a different chapter or a different state once the student has qualified as a state representative in an event, that student may be allowed to compete in the national event with the school they qualified with during the qualifying year.
- f. A student may only participate in the same official CDE/LDE once. No student may participate in more than one National FFA event each year.
- g. Each student participating in a national event must complete an online Waiver and release of Liability through the convention registration system.

II. Selection/Certification of State Teams

- a. Each state will submit a team declaration form by July 1, before the national FFA convention. Participation in each declared event will incur an entry processing fee. [State Staff Declaration Instructions](#)
- b. Each team will be composed of the number of members determined by the specific event rules and formats. The members of a state team must be from the same chapter.
- c. All students must be certified online by the designated deadline of Sept. 1 or within 10 days of the qualifying date if after the deadline. Advisors or state staff must certify members in each event by the certification deadline [How to certify a team or member Instructions](#)
- d. Once the original certification has been completed, no member may be added without first deleting a member. (See III. Drop/Add Process).
- e. State staff shall approve students are eligible (See I. Eligibility of Students). [State Staff Certification Approval Instructions](#) If an ineligible student participates in any career or leadership development event, the member will be disqualified, which may also impact the team’s ranking.
- f. States may approve teams comprised of fewer members than the required members.
- g. Substitutions of any student or team are subject to the determination and approval of the state association.

- III. If reputable international competitions invite teams to competition the national organization will certify National FFA Career and Leadership Development Event winners for international competition when states request. This is with the understanding that the state team will provide their travel expenses.

Drop/Add Process

- a. If a student needs to be substituted or dropped, the online drop/add process must be used to substitute or drop the team member. A team member must be dropped before another team member may be substituted. [How to Drop/Add a team member Instructions](#)
- b. The Drop/Add must be submitted one hour before the first event component or official activity of an event as listed in the schedule of events. Changes will not be permitted after this time.
- c. Members added to any team must meet all the eligibility and membership requirements described in this Guide's other sections.
- d. Substitutions may be allowed after the online document submission date (See individual Event Handbooks for details).
- d. Any assistance given to a student from any source other than the career development event officials or assistants will be sufficient to disqualify that student from the career and leadership development event.
- e. Event superintendents may stop any student if they deem their manner hazardous to themselves or others. Such action may result in a zero or lower score for that student for that section of the career or leadership development event.
- f. Students who start an event and do not complete it without notifying event officials at the time of departure may be disqualified. This can affect the overall team rank and position; in some events, it could also disqualify the entire team.
- g. Students will not be allowed to utilize personal electronic communication devices other than those approved by the event officials during the entire event. Students who access personal electronic communication devices without prior approval from the event officials may be disqualified from the national event.

IV. Disqualification

- a. FFA members participating in national FFA programs and events understand and agree that all work must result from their effort and ability, created and completed alone (except for partner or chapter applications). Details about Professional Integrity, the Use of Artificial Intelligence (AI) for National Programs and Events, and the National FFA Code of Conduct are included in event handbooks.
- b. Any verbal or non-verbal communication between students during an event that is not part of the event will be sufficient cause to eliminate the team member involved from the career development event.
- c. Teams or students arriving after the career development event has begun may be disqualified or penalized. This includes a zero or lower score for that team or student for the missed section of the career or leadership development event.
- h. Any CDE/LDE student, team, advisor, or coach who is proven to have gained access to event materials intended for or utilized by the event committee during the competition will be disqualified from the national event.

Purpose

The National FFA Forestry Career Development Event is designed to stimulate student interest and to promote the forestry industry as a career choice. It also provides recognition for those who have demonstrated skills and competencies resulting from forestry instruction in the agricultural education classroom.

Objectives

Students will be able to

- Understand and use forestry terms.
- Promote an understanding of the economic impact of the forest environment and the forest industry to the American economy.
- Recognize sustainability (multiple use) opportunities in the forests.
- Recognize environmental and social factors affecting the management of forests.
- Identify major species of trees of economic importance to the United States and internationally.
- Identify and properly use hand tools and equipment in forestry management.
- Recognize and understand approved silvicultural practices in the United States.
- Identify forest disorders.
- Take a forest inventory.
- Utilize marketing management strategies.
- Recognize safety practices in forest management.

Event Rules

Review the Career and Leadership Development Event Policy and Guidelines for information on eligibility, selection, certification, team member changes, disqualification and more.

[General Information for National Competition](#) provides general guidance on preparing for the national competition.

- The team will consist of four members, with all four whose scores are the team score.
- Participants must come to the event prepared to work in adverse weather conditions. The event will be conducted regardless of the weather. Participants should have rain gear, warm clothes, and closed-toed shoes.
- Each participant must provide the following safety equipment, and it must be worn while in the woods, or the participant will be disqualified:
 - Hard hat (unless otherwise noted in the National FFA Forestry CDE orientation packet)
 - Safety glasses
 - Participants may bring a clinometer for the Tree Measurement practicum only. Clinometers cannot be shared.
- All other equipment, including clipboards and calculators, will be furnished for the event. Participants must use the tools and equipment provided.
- Participants must follow instructions from event staff for handling materials during the

event. Any infraction of this rule will be sufficient to eliminate the team from the event.

- Observers will not be permitted in the event area while the event is in progress.
- No team, team member or team coach shall visit the event facilities to observe plant materials and facilities after Sept 1. Any team, team member or coach reported and proven to do so will cause the elimination of the team from the National FFA Forestry CDE.

Event Format

INDIVIDUAL ACTIVITIES

Written Exam (100 points)

- A maximum of 50 multiple-choice questions will be selected from areas of the forestry industry reflected in the event objectives. This phase of the event will test the participant's knowledge and understanding of basic principles of forestry.
- Each participant will be allowed 30 minutes to complete this phase of the event.

Tree Identification Practicum (100 points)

- A maximum of 25 live specimens, pressed samples, photos, fresh leaf samples and/or standing trees, from the tree identification list will be displayed for participants to identify by common names. A number will designate each specimen.
- Each participant will be allowed 30 minutes to complete this phase.

Tree Measurement — Timber Cruising for Board Volume Practicum (100 points)

- Each participant will measure ten pre-numbered trees for board foot volume.
- The participant must record the DBH (Diameter Breast Height) to the nearest one-inch class. Diameter should be rounded to the nearest inch.
- The following minimum diameters and log length will be:

Minimum Saw Timber	
DBH	10 inches
Top diameter	10 inches DIB
Height	16 feet

- Tree heights should be measured from a 6-inch stump height to an estimated 10-inch top diameter for merchantable height. The merchantable height should be rounded down to the nearest $\frac{1}{2}$ log.
- Merchantable height stops are estimated to the upper point on a tree where it becomes 10 inches in diameter or where a major fork in a tree stem occurs, or where a limb has a diameter equal to $\frac{1}{2}$ of the diameter of the tree at that point.
- Volume tables will be provided at the event.
- Participants will use a 31 $\frac{1}{2}$ " Tree and Log Scale Stick (Doyle Scale).
- Each participant will be allowed 30 minutes to complete this phase.
- Thirty points will be given for the correct DBH and thirty points for the correct height. Forty points will be given for the correct volume per acre. Five points will be deducted for each five percent deviation (plus or minus) from the correct measured volume.

Disorders, Equipment and Products Identification (200 points)

- A maximum of 40 items from the identification lists will be displayed for participants to identify. This will consist of approximately 20 items related to equipment, about 10 items related to tree/forest disorders or symptoms (including pathogens), and about 10 items concerning forest products. Each item will be designated by a three-digit number.
- The items will be presented in one or more of the following forms:
 - Actual samples
 - Pictures or slides
 - Written description
- Each participant will be allowed 30 minutes to complete this phase.

ROTATIONAL INDIVIDUAL PRACTICUMS (100 POINTS EACH)

The event committee will select one practicum to be completed by the participants from the following list. Each participant will have 30 minutes to complete each practicum.

- Chainsaw Operation and Maintenance.
- Forest Management Evaluation (TSI).
- Compass.
- Map Interpretation.
- Forest Business Management.

Chainsaw Operation and Maintenance Practicum

This practicum will consist of one or more of the parts listed below. Parts may utilize photos, video, demonstration, actual parts, written situations and/or problems. Multiple choice format. This is not an all-inclusive list.

- **Parts Identification:** Each participant will identify parts of a chainsaw.
- **Problem Solving:** The participant will troubleshoot operation and maintenance issues.
- **Safety:** The participant will identify safety hazards, unsafe practices and/or proper safety equipment.

Compass Practicum

The participant will use a hand compass and pace to the nearest full foot to simulate the determination of the property lines on a tract of timber. The participant will start at any point and record the compass reading and distance to the next point.

Azimuth readings shall be recorded. Participants will record data for 10 points.

Partial credit will be given with a deduction of one point for each two degrees or two feet the participant is off the correct answer.

Forest Business Management Practicum

This section is designed to determine the participant's ability to apply economic principles and concepts of management to the decision-making process by actual problem analysis and to defend the decisions made. This *will* involve a model forest operation with possible calculations on profit/loss, cost of operation, taxes, depreciation, marketing product, stumpage cost, record keeping, etc. A maximum of twenty problems or questions will be used. Multiple choice format.

Forest Management — Timber Stand Improvements (TSI) Practicum

- The trees selected and designated for use in this part of the event may be a mixture of species.

- An area will be selected and identified by ribbons, paint, rope, etc. It will contain 20 marked trees within a timber stand.
- All trees in the selected area will be considered as a forest management site, and the participants will score each marked tree using one of the following options in a multiple-choice format:
 - (A) Harvest — utilize the tree.
 - (B) Leave — the tree should remain in stand for a good reason.
 - (C) Deaden — Undesirable trees, not merchantable or beneficial to wildlife, should be deadened or cut down and left in the woods.
- The participants will be given a situation concerning the forest management objectives of the stand selected. This information will be given to participants at the site before they start. Information that will be needed to help participants in their decisions will include the following:
 - Markets available.
 - Wildlife considerations.
 - Present condition of stand.
 - Management plan.

Map Interpretation Practicum

Participants will answer a maximum of 20 questions using a furnished United States Geological Survey topographic map. The participant should know legal description, recognize topographic map symbols, and understand the meaning of map symbols, size and location of 40 acres or more in a parcel. Multiple choice format.

Examples:

What is the legal description of the boxed area?

What is the item located at this point?

What is the acreage of the area enclosed?

In what section is the city of Marshall located?

What is the elevation at this point?

Legal descriptions will be written or described according to the public land survey system.

- Example: SE $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 3, T3N, R1E

TEAM ACTIVITY

Forest Team Activity (400 points)

Each team will be provided with a forest industry scenario. The scenario will utilize components from the individual Forestry CDE practicums. Teams must work together using forestry skills and tools to complete the team activity. Ninety minutes will be allowed to plan and complete the activity. All supplies and materials needed to complete the task will be provided.

Scoring

Activities	Individual Points	Team Points
General Knowledge Exam	100	400
Annual Practicums • Tree Identification Practicum • Tree Measurement Practicum • Identification – Combined Disorders, Equipment, & Products	100 100 200	400 400 800
Rotational Practicums – 1 selected • Forest Management (TSI) • Map Interpretation • Compass • Chainsaw Operation & Maintenance • Forest Business Mgmt.	100	400
Forest Team Activity		400
TOTAL	600	2,800

Tiebreakers

Team

1. Team Activity Score
2. Total Team Knowledge Exam Score
3. Total Team Tree Identification Score
4. Total Team Tree Measurement Score

Individuals

1. Knowledge Exam Score
2. Tree Identification Score
3. Tree Measurement Score
4. Total Rotational Practicum Score

Awards

Awards will be presented to individuals and teams at the awards ceremony based on their rankings. Advisors of cash award recipients will receive information about claiming their award following the convention. Guidelines for amounts and recipients of cash awards can be found [here](#). Corporate partners help grow the next generation of leaders through supporting AFNR pathways awards.

The high individual in each of the following areas will be given special recognition certificates:

- General Knowledge Exam
- Practicums (Tree Identification, Tree Measurement, Disorders, Equipment and Products, and Rotational Practicum)
- Team Activity

References

This list of references is not intended to be all-inclusive. Other sources may be utilized, and teachers are encouraged to make use of the very best instructional materials available. Use discretion when selecting website references by only using reputable, proven sites. The following list contains references that may prove helpful during event preparation. The most current edition of resources will be used. Past CDE materials and other resources are available on FFA.org.

GENERAL KNOWLEDGE EXAM

- Introduction to Forestry Science. Burton, Cengage Learning. 1133711626
- Science of Forestry Management. Irwin. AAVIM. 0-8960-6383-6

TREE IDENTIFICATION

- Dendrology at Virginia Tech, <https://dendro.cnre.vt.edu/dendrology/factsheets.cfm>
- W. H. Harlow, E. S. Harrar, and F. M. White. Textbook of Dendrology, current edition. New York, NY: McGraw-Hill Book Company.
- Silvics of North America, Handbook #654, volume one and two, U.S. Forest Service, https://www.srs.fs.usda.gov/pubs/misc/ag_654/table_of_contents.htm

TREE MEASUREMENT

- https://www.americanforests.org/wp-content/uploads/2014/12/AF-Tree-Measuring-Guidelines_LR.pdf
- [Measuring Woodland Timber](#)
- <https://www.extension.purdue.edu/extmedia/FNR/FNR-4.pdf>

FOREST MANAGEMENT

- Introduction to Forestry Science. Burton, Delmar Publications. 0-8273-8010-0
- Science of Forestry Management. Irwin. AAVIM. 0-8960-6383-6
- One Less Thing—Lessons, <https://www.onelessthing.net/collections/lesson-plans>

EQUIPMENT IDENTIFICATION

- <https://www.forestry-suppliers.com/>
- <https://www.forestryequipmentguide.com/>

MAP INTERPRETATION

- The U.S. Department of Interior Geological Survey Topographic Map Information and Symbols Key, Map Distribution, U. S. Geological Survey. <https://pubs.usgs.gov/gip/TopographicMapSymbols/topomapsymbols.pdf>
- <https://www.rei.com/learn/expert-advice/topo-maps-how-to-use.html>
- <https://paleoind.siteshost.iu.edu/Resources/Guide%20to%20Topographic%20Maps.pdf>
- <https://www.geomore.com/locating-9wells/>

COMPASS

- https://courses.washington.edu/esrm304a/lectures/LAB%201/RangerCompass_UserGuide.2000_2-up.pdf
- https://www.maptools.com/bundles/maptoolsstaticpages/slides/compass/SightingABearing.pdf?srsIltid=AfmBOorzI8_BOx5CgsjMirzq7X_dpiZqr762tXkZs0fYq4qnZltHRsM

CHAINSAW PARTS AND IDENTIFICATION

- https://www.aces.edu/wp-content/uploads/2020/11/FOR-2084-ChainsawSafetyIMaintenance_111120aL-G.pdf
- <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/res-092.pdf>
- https://www.stihlusa.com/WebContent/CMSFileLibrary/InstructionManuals/Chainsaw-Safety-Manual_1.pdf
- <https://www.husqvarna.com/uk/learn-and-discover/working-with-chainsaws/>
- [https://fingerlakestrail.org/FLTC/BOM/REF/TrailManagementTeam/Maintenance/CHAINSAW%20MAINTENANCE%20--HOWDENSaw%20maintenance%20file\(1\).pdf](https://fingerlakestrail.org/FLTC/BOM/REF/TrailManagementTeam/Maintenance/CHAINSAW%20MAINTENANCE%20--HOWDENSaw%20maintenance%20file(1).pdf)

FOREST PRODUCTS

- The Wood Database <https://www.wood-database.com/wood-filter/>
- <https://www.weyerhaeuser.com/woodproducts/>
- <https://www.octaneseating.com/types-of-wood-for-furniture>
- <https://www.columbiaforestproducts.com/resources/forestry/common-timber-resources/>
- <https://www.americanhardwood.org/en/american-hardwood>
- <https://woodidentification.net/softwood-species-descriptions/>

FOREST BUSINESS MANAGEMENT

- Forests and Forestry. Rolfe et al., Interstate Publishers. 0-8134-3240-5
- Introduction to Forestry Science. Burton, Delmar Publications. 0-8273-8010-0
- Science of Forestry Management. Irwin. AAVIM. 0-8960-6383-6

Tree Identification List

1. Alder, Red (*Alnus rubra*)
2. Ash (*Fraxinus* sp.)
3. Aspen, Bigtooth (*Populus grandidentata*)
4. Aspen, Quaking (*Populus tremuloides*)
5. Baldcypress (*Taxodium distichum*)
6. Basswood (*Tilia americana*)
7. Beech, American (*Fagus grandifolia*)
8. Birch, Black (*Betula lenta*)
9. Birch, White (*Betula papyrifera*)
10. Birch, Yellow (*Betula alleghaniensis*)
11. Cherry, Black (*Prunus serotina*)
12. Cottonwood, Eastern (*Populus deltoides*)
13. Elm (*Ulmus* sp.)
14. Fir, Balsam (*Abies balsamea*)
15. Fir, Douglas (*Pseudotsuga menziesii*)
16. Hackberry (*Celtis occidentalis*)
17. Hemlock, Eastern (*Tsuga canadensis*)
18. Hemlock, Western (*Tsuga heterophylla*)
19. Hickory (*Carya* sp.)
20. Larch (*Larix* sp.)
21. Maple, Red (*Acer rubrum*)
22. Maple, Sugar (*Acer saccharum*)
23. Oak, Black (*Quercus velutina*)
24. Oak, Chestnut (*Quercus montana*)
25. Oak, Northern Red (*Quercus rubra*)
26. Oak, Scarlet (*Quercus coccinea*)
27. Oak, Southern Red (*Quercus falcata*)
28. Oak, White (*Quercus alba*)
29. Pecan (*Carya illinoensis*)
30. Pine, Eastern White (*Pinus strobus*)
31. Pine, Loblolly (*Pinus taeda*)
32. Pine, Lodgepole (*Pinus contorta*)
33. Pine, Longleaf (*Pinus palustris*)
34. Pine, Ponderosa (*Pinus ponderosa*)
35. Pine, Red (*Pinus resinosa*)
36. Pine, Shortleaf (*Pinus echinata*)
37. Poplar, Yellow (*Liriodendron tulipifera*)
38. Red Cedar, Eastern (*Juniperus virginiana*)
39. Red Cedar, Western (*Thuja plicata*)
40. Sassafras (*Sassafras albidum*)
41. Spruce, Red (*Picea rubens*)
42. Spruce, Sitka (*Picea sitchensis*)
43. Spruce, White (*Picea glauca*)
44. Sweetgum (*Liquidambar styraciflua*)
45. Sycamore (*Platanus* sp.)
46. Walnut, Black (*Juglans nigra*)
47. Willow, Black (*Salix nigra*)

Equipment, Disorders and Products Identification List

EQUIPMENT

- | | |
|-------------------------------|------------------------------|
| 1. Abney Level | 37. Hand Compass |
| 2. Altimeter | 38. Hand Lens |
| 3. Angle Gauge | 39. Harvester |
| 4. Ascender | 40. Hip Chain |
| 5. Axe | 41. Hypo-Hatchet |
| 6. Backpack Fire Pump | 42. Increment Borer |
| 7. Bark Gauge | 43. Jacob Staff |
| 8. Bulldozer | 44. Log Rule |
| 9. Canthook | 45. Logger's Tape |
| 10. Carabiner | 46. Lopper |
| 11. Chainsaw | 47. Maul |
| 12. Chainsaw Chaps | 48. Peavy |
| 13. Chipper | 49. pH Meter |
| 14. Climbing Harness | 50. Planimeter |
| 15. Clinometer | 51. Plant Press |
| 16. Cruising Vest | 52. Plastic Flagging |
| 17. Data Recorder | 53. Pole Saw |
| 18. Densiometer | 54. Pruning Saw |
| 19. Delimber | 55. Pulley |
| 20. Diameter Tape | 56. Relaskop |
| 21. Dot Grid | 57. Safety Glasses |
| 22. Drip Torch | 58. Safety Hard Hat |
| 23. Ear Protection | 59. Scale Stick |
| 24. Endloader | 60. Skidder |
| 25. Feller Buncher | 61. Staff Compass |
| 26. Felling Wedge | 62. Stereoscope |
| 27. Fiberglass Measuring Tape | 63. Stump Grinder |
| 28. Fire Rake | 64. Tally Book |
| 29. Fire Shelter | 65. Tally Meter |
| 30. Fire Weather Kit | 66. Timber Tongs |
| 31. Fire-Swatter | 67. Tree Caliper |
| 32. First Aid Kit | 68. Tree Climbers |
| 33. Flow/current Meter | 69. Tree Marking Gun |
| 34. Foot Ascender | 70. Tree Planting Hoe or Bar |
| 35. Gas Tank | 71. Wedge Prism |
| 36. GPS Receiver | 72. Yarder |

TREE DISORDERS

- | | |
|---|-------------------------------|
| 1. Aphid | 19. Lightning Damage |
| 2. Asian Longhorn Beetle | 20. Mechanical Damage |
| 3. Black Knot | 21. Mistletoe |
| 4. Butt or Heart Rot | 22. Mountain Pine Beetle |
| 5. Canker | 23. Needle Cast |
| 6. Chemical Damage | 24. Nematode |
| 7. Cicada | 25. Rust |
| 8. Climatic Injury (snow, wind, frost, drought, hail) | 26. Sawfly |
| 9. Damping Off | 27. Scale |
| 10. Douglas Fir Beetle | 28. Spongy Moth |
| 11. Dutch Elm Disease | 29. Spruce Beetle |
| 12. Eastern Larch Beetle | 30. Spruce Budworm |
| 13. Emerald Ash Borer | 31. Sudden Oak Death |
| 14. Fir Engraver Beetle | 32. Sunscald |
| 15. Fir Tussock Moth | 33. Tent Caterpillar |
| 16. Fire Damage | 34. Western Pine Beetle |
| 17. Hemlock Woolly Adelgid | 35. Wetwood or Slime Flux |
| 18. Ips Engraver Beetle | 36. Wildlife/Livestock Damage |

FOREST PRODUCTS

Species

1. Alder (*Alnus sp.*)
2. Ash (*Fraxinus sp.*)
3. Aspen/Cottonwood (*Populus spp.*)
4. Baldcypress (*Taxodium distichum*)
5. Basswood (*Tilia americana*)
6. Beech, American (*Fagus grandifolia*)
7. Birch (*Betula sp.*)
8. Cherry, Black (*Prunus serotina*)
9. Elm (*Ulmus sp.*)
10. Fir, Balsam (*Abies balsamea*)
11. Fir, Douglas (*Pseudotsuga menziesii*)
12. Hackberry (*Celtis occidentalis*)
13. Hemlock (*Tsuga sp.*)
14. Hickory/Pecan (*Carya spp.*)
15. Larch (*Larix sp.*)
16. Maple (*Acer sp.*)
17. Oak, Red
18. Oak, White
19. Pine, White
20. Pine, Red
21. Pine, Southern Yellow
22. Pine, Western Yellow - Ponderosa or Lodgepole
23. Poplar, Yellow (*Liriodendron tulipifera*)
24. Red Cedar, Eastern (*Juniperus virginiana*)
25. Red Cedar, Western (*Thuja plicata*)
26. Sassafras (*Sassafras albidum*)
27. Spruce (*Picea sp.*)
28. Sweetgum (*Liquidambar styraciflua*)
29. Sycamore (*Platanus sp.*)
30. Walnut, Black (*Juglans nigra*)
31. Willow, Black (*Salix nigra*)

Engineered and Processed Materials

32. Chips, Shavings, or Mulch – [*New 2026](#)
33. Corrugated Paper Packaging – [*New 2026](#)
34. Crosstie – [*New 2026](#)
35. Finger Joint Material – [*New 2026](#)
36. Glued Laminated Timber – [*New 2026](#)
37. Laminated Veneer Lumber
38. Medium Density Fiberboard – [*New 2026](#)
39. Molding and Millwork – [*New 2026](#)
40. Oriented Strand Board – [*New 2026](#)
41. Paperboard Packaging – [*New 2026](#)
42. Particle Board
43. Pellets – [*New 2026](#)
44. Pole or Piling
45. Primed Boards
46. Plywood
47. Tongue and Groove
48. Treated Dimensional Lumber – [*New 2026](#)
49. Untreated Dimensional Lumber – [*New 2026](#)
50. Veneer

Doyle Log Rule

FORM CLASS 80

Volume (Board Feet) by Number of 16 Foot Logs									
DBH Inches	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
10	16	20	23	24	26				
11	24	30	35	38	42				
12	31	39	47	52	57	60	62		
13	42	53	64	72	80	84	88		
14	52	67	82	93	104	109	114		
15	64	84	104	118	132	141	150		
16	77	101	125	143	161	174	186		
17	92	122	152	175	198	214	230		
18	108	144	179	206	234	254	273		
19	126	168	210	244	278	301	324		
20	144	193	242	282	321	348	374	396	417
21	164	221	278	324	370	403	436	462	489
22	185	250	315	368	420	458	497	529	561
23	208	282	356	417	478	521	564	604	643
24	231	314	397	466	536	583	630	678	725
25	256	350	443	522	600	655	710	764	818
26	282	386	489	576	663	727	791	852	912
27	310	425	540	638	735	806	877	946	1015
28	339	466	592	700	807	885	963	1040	1118
29	370	509	648	766	884	970	1056	1144	1232
30	400	552	703	832	961	1055	1149	1248	1346

Board Foot Volume Estimation Worksheet

Tree Number	DBH	Number of Logs	Volume
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10			
TOTAL VOLUME			

Remember to record the DBH, Number of Logs and Total Volume on your Scan sheet.

Equipment, Disorders and Products Identification List

For use with the Forestry Scan sheet 503-3

EQUIPMENT

- | | |
|-------------------------------|------------------------------|
| 1. Abney Level | 37. Hand Compass |
| 2. Altimeter | 38. Hand Lens |
| 3. Angle Gauge | 39. Harvester |
| 4. Ascender | 40. Hip Chain |
| 5. Axe | 41. Hypo-Hatchet |
| 6. Backpack Fire Pump | 42. Increment Borer |
| 7. Bark Gauge | 43. Jacob Staff |
| 8. Bulldozer | 44. Log Rule |
| 9. Canthook | 45. Logger's Tape |
| 10. Carabiner | 46. Lopper |
| 11. Chainsaw | 47. Maul |
| 12. Chainsaw Chaps | 48. Peavy |
| 13. Chipper | 49. pH Meter |
| 14. Climbing Harness | 50. Planimeter |
| 15. Clinometer | 51. Plant Press |
| 16. Cruising Vest | 52. Plastic Flagging |
| 17. Data Recorder | 53. Pole Saw |
| 18. Densiometer | 54. Pruning Saw |
| 19. Delimber | 55. Pulley |
| 20. Diameter Tape | 56. Relaskop |
| 21. Dot Grid | 57. Safety Glasses |
| 22. Drip Torch | 58. Safety Hard Hat |
| 23. Ear Protection | 59. Scale Stick |
| 24. Endloader | 60. Skidder |
| 25. Feller Buncher | 61. Staff Compass |
| 26. Felling Wedge | 62. Stereoscope |
| 27. Fiberglass Measuring Tape | 63. Stump Grinder |
| 28. Fire Rake | 64. Tally Book |
| 29. Fire Shelter | 65. Tally Meter |
| 30. Fire Weather Kit | 66. Timber Tongs |
| 31. Fire-Swatter | 67. Tree Caliper |
| 32. First Aid Kit | 68. Tree Climbers |
| 33. Flow/current Meter | 69. Tree Marking Gun |
| 34. Foot Ascender | 70. Tree Planting Hoe or Bar |
| 35. Gas Tank | 71. Wedge Prism |
| 36. GPS Receiver | 72. Yarder |

For use with the Forestry Scan sheet 503-3

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