

Forestry

Rule years 2027–2030 · Revision 1 · Published October 9, 2026

0. General Rules & Eligibility

Career Development Events are governed by the NAEA CDE Committee. All events follow [CDE General Rules and Eligibility](#).

Qualification for this event

District qualification	Top 2 teams per district
Students per team	4
Grades	9–12
National qualifying event?	Yes
Timeframe	FFA Convention
Host	School of Natural Resources & Nebraska Forest Service
Event Superintendents	Pam Bergstrom, Ann Powers

1. Overview

The Nebraska Forestry Career Development Event gives students the opportunity to demonstrate their knowledge of forest ecology, tree identification, forest health, and sustainable forest management. Through individual exams and a team general knowledge practicum in timber measurement and management planning, students explore skills and careers in the forestry and forest products industries.

Objectives

- Comprehend and use forestry terms.
- Promote an understanding of the economic impact of the forest environment and the forest industry on the American economy.
- Recognize sustainability (multiple-use) opportunities in forests.
- Recognize environmental and social factors that affect forest management.
- 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.

2. Eligibility & Team

Open to students in Grades 9–12. Teams are 4 students. Top 2 teams per district advance. This event is national-qualifying.

Teams may participate with fewer than 4 members but will not be eligible for all available points.

3. What to Bring

Attire

- It's recommended that FFA members wear Official FFA Dress. Non-FFA members should wear professional dress.

Supplies

- Two sharpened #2 pencils (**no pens**)
- Non-programmable calculator

4. Event Format

Timing

Check the CDE event schedule for specific arrival, start, and end times, as well as the event locations.

Students must arrive 30 minutes before the section start time; check-in takes place 15 minutes before the event start time. Once the event begins, the approximate schedule includes 2 rotations of 6 teams per section. See the example below. Each rotation will last 25-50 minutes, with 5-10 minutes set aside for transition and instruction. The individual exams and ID practicum will be split into two 25-minute sections within a rotation. The team general knowledge practicum will be 50 minutes. The entire event (including 2 rotations covering three components) will last about 2 hours. Students should pay close attention and follow instructions for moving from one rotation to another.

Forestry CDE Schedule (Example)

Team	Rotation 1 (50 min)	Rotation 2 (50 min)
Half of the teams in the Section	Individual ID Practicum (25 min) + Individual Exam (25 min)	Team General Knowledge Practicum
The other half of the teams in the Section	Team General Knowledge Practicum	Individual ID Practicum (25 min) + Individual Exam (25 min)

Format

A. Individual General Knowledge Exam (60 points), 25 minutes

- I. **Purpose:** Tests understanding of forestry principles, tree physiology, safety, ecology, and forest management terminology.
- II. **Format:** Multiple-choice questions: 30 questions, 2 points each (60 points).
- III. **Outline:**
 1. Section A – **Tree Biology & Physiology**
 - a. Basic tree anatomy: roots, stem, leaves, cambium, xylem/phloem
 - b. Photosynthesis and nutrient transport
 - c. Differences between hardwoods and softwoods
 - d. Growth patterns and age determination

2. Section B – **Forestry Terminology & Principles**

- a. DBH, merchantable height, basal area, canopy, stand
- b. Silvicultural practices: thinning, pruning, planting
- c. Forest types and uses

3. Section C – **Safety Practices & Equipment**

- a. Chainsaw safety and PPE
- b. Field safety (trips, ticks, heat/cold, terrain)
- c. Pesticide and herbicide safety basics

4. Section D – **Forest Ecology & Sustainability**

- a. Healthy forest ecosystems
- b. Wildlife habitat considerations
- c. Multiple-use forest management
- d. Invasive vs. native species

B. Individual Tree/Equipment/Disorder Identification Practicum (100 points), 25 minutes

I. **Purpose:** Tests ability to identify trees, forestry equipment, common tree disorders, and forest products.

II. **Format:** Students will have approximately 50 seconds to respond to each sample.

III. **Outline:**

1. **Tree Identification** (Appendix A) - 10 specimens x 3 points each

- a. Use live specimens, pressed leaves, photos, or standing trees
- b. Nebraska FFA Forestry Approved Tree List only
- c. Common and scientific names may be used for identification

2. **Equipment Identification** (Appendix B) - 10 specimens x 2 points each

- a. Forestry tools and equipment
- b. Actual tools, photos, or written descriptions
- c. Identify by **technical or common name**

3. **Tree Disorders Identification** (Appendix C) - 6 specimens x 5 points each

- a. Identify common tree disorders using samples, photos, or case history
- b. Recognize symptoms and provide **common name**

4. **Forest Products** (Appendix D) - 4 specimens x 5 points each

- a. Identify common species of wood using raw samples
- b. Identify engineered and processed materials from product samples

C. Team General Knowledge Practicum (100 points), 50 minutes

I. **Purpose:** This practicum is designed to help participants apply forestry measurement and management skills in a realistic forest scenario. Students will be provided with basic measurements of trees, calculate timber volumes, use basic map skills to interpret PLSS maps, and make management recommendations based on given forest objectives. This team-based activity tests practical understanding of forest inventory and sustainable management principles.

II. **Equipment Needed:**

- 1. Volume table (Doyle, Scribner, or International ¼-inch — provided at the event)
- 2. Non-programmable calculator

III. Instructions:

1. Volume Estimation:

- Use the provided volume table to calculate the board-foot volume for each tree. Ensure you are using the correct table provided.
- Perform calculations carefully to maximize accuracy; points are awarded for correct application of the tables and methodology.

2. General Knowledge:

- Use the provided map, answer multiple-choice questions about the map.
- A case study will also be provided, and multiple-choice questions will be asked regarding that case study.
- Other general knowledge questions regarding forestry will also be included.

5. Scoring & Tiebreakers

Individual Scoring

Component	Detail	Points
General Knowledge Exam	30 Questions × 2 Points	60
Identification Practicum	Tree, equipment, disorder, and forest product identification (Appendices A–D)	100
Grand total		160

Individual Tiebreakers

To determine the award order for individuals involved in a tie, the following will be used in rank order:

- General Knowledge Exam
- Identification Practicum

In the case of a further tie, three general knowledge questions will be selected as tie-breaking questions.

Team Scoring

Component	Detail	Points
Sum of Individual Scores	4 Students × 160 Points	640
Team General Knowledge Practicum	Group general knowledge exam: volume estimation, map, case study, and forestry questions	100
Grand total		740

Team Tiebreakers

To determine the award order for teams involved in a tie, the following will be utilized in rank order:

- A. Calculation score accuracy
- B. Average of individual General Knowledge Exam scores
- C. Average of individual Identification Practicum scores

6. Study Resources

Approved study resources

- [UNL CDE Study Materials Folder \(OneDrive\)](#) — Practice materials and examples for this CDE.

Past Exams

- [Forestry page on the Nebraska CDEs website](#) — Past exams.

7. After the Event

There is no post-event debriefing available.

List of Appendices

- [Appendix A: Tree Species List](#)
- [Appendix B: Equipment List](#)
- [Appendix C: Disorders List](#)
- [Appendix D: Forest Products List](#)

Appendix A: Tree Species List

ID #	Common Name	Scientific Name
101	red alder	<i>Alnus rubra</i>
102	ash	<i>Fraxinus sp.</i>
103	bigtooth aspen	<i>Populus grandidentata</i>
104	quaking aspen	<i>Populus tremuloides</i>
105	baldcypress	<i>Taxodium distichum</i>
106	basswood	<i>Tilia americana</i>
107	American beech	<i>Fagus grandifolia</i>
108	black birch	<i>Betula lenta</i>
109	white birch	<i>Betula papyrifera</i>
110	yellow birch	<i>Betula alleghaniensis</i>
111	black cherry	<i>Prunus serotina</i>
112	eastern cottonwood	<i>Populus deltoides</i>
113	elm	<i>Ulmus sp.</i>
114	balsam fir	<i>Abies balsamea</i>
115	Douglas-fir	<i>Pseudotsuga menziesii</i>
116	grand fir	<i>Abies grandis</i>
117	subalpine fir	<i>Abies lasiocarpa</i>
118	hackberry	<i>Celtis occidentalis</i>
119	eastern hemlock	<i>Tsuga canadensis</i>
120	western hemlock	<i>Tsuga heterophylla</i>
121	hickory	<i>Carya sp.</i>
122	black locust	<i>Robinia pseudoacacia</i>
123	larch	<i>Larix sp.</i>
124	red maple	<i>Acer rubrum</i>
125	sugar maple	<i>Acer saccharum</i>
126	black oak	<i>Quercus velutina</i>
127	chestnut oak	<i>Quercus montana</i>

ID #	Common Name	Scientific Name
128	northern red oak	<i>Quercus rubra</i>
129	scarlet oak	<i>Quercus coccinea</i>
130	southern red oak	<i>Quercus falcata</i>
131	white oak	<i>Quercus alba</i>
132	pecan	<i>Carya illinoensis</i>
133	eastern white pine	<i>Pinus strobus</i>
134	loblolly pine	<i>Pinus taeda</i>
135	lodgepole pine	<i>Pinus contorta</i>
136	longleaf pine	<i>Pinus palustris</i>
137	ponderosa pine	<i>Pinus ponderosa</i>
138	red pine	<i>Pinus resinosa</i>
139	shortleaf pine	<i>Pinus echinata</i>
140	sugar pine	<i>Pinus lambertiana</i>
141	western white pine	<i>Pinus monticola</i>
142	yellow poplar	<i>Liriodendron tulipifera</i>
143	eastern redcedar	<i>Juniperus virginiana</i>
144	western redcedar	<i>Thuja plicata</i>
145	sassafras	<i>Sassafras albidum</i>
146	Engelmann spruce	<i>Picea engelmannii</i>
147	red spruce	<i>Picea rubens</i>
148	Sitka spruce	<i>Picea sitchensis</i>
149	white spruce	<i>Picea glauca</i>
150	sweetgum	<i>Liquidambar styraciflua</i>
151	sycamore	<i>Platanus sp.</i>
152	black walnut	<i>Juglans nigra</i>
153	black willow	<i>Salix nigra</i>

Appendix B: Equipment List

ID #	Equipment
201	abney level
202	altimeter
203	angle gauge
204	axe
205	backpack fire pump
206	bark gauge
207	bulldozer
208	canthook
209	chainsaw
210	chainsaw chaps
211	climbing harness
212	clinometer
213	cruising vest
214	data recorder
215	densiometer
216	delimber
217	diameter tape
218	dibble bar
219	digital measuring equipment
220	dot grid
221	drip torch
222	ear protection
223	endloader
224	feller buncher
225	felling wedge
226	fiberglass measuring tape
227	fire rake
228	fire shelter
229	fire weather kit
230	fire-swatter
231	first aid kit
232	gps receiver
233	hand compass
234	hand lens

ID #	Equipment
235	harvester
236	hip chain
237	hoedad
238	hypo-hatchet
239	increment borer
240	jacob staff
241	laser hypsometer
242	log rule
243	logger's tape
244	maul
245	peavy
246	planimeter
247	plant press
248	plastic flagging
249	pole saw
250	pruning saw
251	relaskop
252	safety glasses
253	safety hard hat
254	scale stick
255	skidder
256	staff compass
257	stereoscope
258	tally book
259	tally meter
260	timber tongs
261	tree caliper
262	tree chipper
263	tree climbing spikes
264	tree marking gun
265	tree scribe
266	unmanned aerial vehicle
267	wedge prism
268	yarder

Appendix C: Disorders List

ID #	Pest & Damage Identification
301	aphid
302	Asian longhorn beetle
303	black knot
304	butt or heart rot
305	canker
306	chemical damage
307	cicada
308	climatic injury (snow, wind, frost, drought, hail)
309	damping off
310	Douglas-fir beetle
311	Dutch elm disease
312	eastern larch beetle
313	emerald ash borer
314	fir engraver beetle
315	fir tussock moth
316	fire damage
317	hemlock woolly adelgid
318	ips engraver beetle

ID #	Pest & Damage Identification
319	lightning damage
320	mechanical damage
321	mistletoe
322	mountain pine beetle
323	needle cast
324	nematode
325	rust
326	sawfly
327	scale
328	spongy moth
329	spruce beetle
330	spruce budworm
331	sudden oak death
332	sunscald
333	tent caterpillar
334	western pine beetle
335	wetwood or slime flux
336	wildlife/livestock damage

Appendix D: Forest Products List

Species		
ID #	Common Name	Scientific Name
401	alder	<i>Alnus sp.</i>
402	ash	<i>Fraxinus sp.</i>
403	aspen/cottonwood	<i>Populus sp.</i>
404	baldcypress	<i>Taxodium distichum</i>
405	basswood	<i>Tilia americana</i>
406	American beech	<i>Fagus grandifolia</i>
407	birch	<i>Betula sp.</i>
408	black cherry	<i>Prunus serotina</i>
409	elm	<i>Ulmus sp.</i>
410	fir	<i>Abies sp.</i>
411	Douglas-fir	<i>Pseudotsuga menziesii</i>
412	hackberry	<i>Celtis occidentalis</i>
413	hemlock	<i>Tsuga sp.</i>
414	hickory/pecan	<i>Carya sp.</i>
415	larch	<i>Larix sp.</i>
416	black locust	<i>Robinia pseudoacacia</i>
417	maple	<i>Acer sp.</i>
418	red oak	<i>Quercus rubra</i>
419	white oak	<i>Quercus alba</i>
420	white pine	<i>Pinus strobus</i>
421	red pine	<i>Pinus resinosa</i>
422	southern yellow pine	<i>Pinus sp.</i>
423	western yellow pine	<i>Pinus sp.</i>
424	yellow-poplar	<i>Liriodendron tulipifera</i>
425	eastern redcedar	<i>Juniperus virginiana</i>
426	western redcedar	<i>Thuja plicata</i>
427	sassafras	<i>Sassafras albidum</i>
428	spruce	<i>Picea sp.</i>
429	sweetgum	<i>Liquidambar styraciflua</i>
430	sycamore	<i>Platanus sp.</i>
431	black walnut	<i>Juglans nigra</i>
432	black willow	<i>Salix nigra</i>

Engineered and Processed Materials	
ID #	Product
501	chips, shavings, or mulch
502	corrugated paper packaging
503	crosstie
504	finger joint material
505	glued laminated timber
506	laminated veneer lumber
507	medium density fiberboard
508	molding and millwork
509	oriented strand board
510	paperboard packaging
511	particle board
512	pellets
513	pole or piling
514	primed boards
515	plywood
516	tongue and groove
517	treated dimensional lumber
518	untreated dimensional lumber
519	veneer

Subcommittee

Standing subcommittee for this event

Name	School / Organization	Role
David Gibbens	West Holt	Chair
Pam Bergstrom	UNL — Nebraska Forest Service	Superintendent
Ann Powers	UNL — School of Natural Resources	Superintendent
Boyd Bowder	St. Paul	Exec liaison
Monty Larsen	UNL	Exec liaison
Jessica Evans	Osmond	Member
David Ference	Ord	Member
Macie Oertle	Minden	Member
Jim Wissenburg	Milford	Member

What changed — 2027–2030 rev 1 EDITORIAL

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