



OSU EXTENSION  
4-H YOUTH DEVELOPMENT

# Forestry Self-Determined Project

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

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Extension Forester

The purpose of this type of 4-H activity is to stimulate individual initiative in conceiving and developing an exhibit. Your exhibit will reflect your maturity and abilities as a 4-H member.

There are no specific requirements or rules to follow. However, the exhibit should be of a nature, which relates to forestry. It may encompass other natural resource areas so long as it ties into the general field of forestry. Many young people are already involved in the preparation of displays and exhibits in the natural sciences. Such things as science fair projects and other science oriented school projects may provide the stimulus you need to start an activity of this type.

This exhibit may be a model, chart, illustrated story, or any number of other devices that show your efforts and the learning, experience you gained in the development of the activity. You will need to do research in your selected subject matter area to complete the project. It must tell a story and preferable a story of scientific nature relating to forestry.

The suggestions offered are intended only to stimulate you to use your imagination and resourcefulness in selecting an area of interest. Certainly there are many more possibilities for educational exhibits and more reference materials available than are listed here.

## Suggestions for 4-H Forestry Self-Determined Exhibits

1. How a tree grows (cell division)
2. How trees affect water quality
3. How to measure the height of a tree
4. How to measure logs
5. How to plant tree seedlings
6. How to properly prune a tree
7. How to make a leaf press
8. How to germinate seeds in a jar
9. Tree flowers
10. Types of tree leaves
11. How trees prevent erosion
12. Tree seed collection
13. Tree leaf collection
14. How to measure lumber
15. How to stack lumber for drying
16. How to dress a tree wound
17. How to preserve and mount leaves
18. Seed stratification
19. Bark collection
20. Why leaves change their color
21. How trees shed leaves
22. Seed germination
23. Pollination
24. Forest types of the United States
25. Photosynthetic process
26. Part trees play in the water cycle
27. Dormant twig collection
28. Enemies of the forest (man-fire-insects-disease-destructive grazing-misuse) (any one or combination)
29. How seeds are scattered
30. Trees to paper (how paper is made)
31. Products of trees
32. Transpiration
33. Unusual wood products
34. Part trees play in the mineral cycle
35. Determine moisture content of wood
36. Life stages of a tree (seed-seedling-tree)
37. Identification characteristics of trees
38. History of a tree (cross section of stem)
39. Parts of tree and function of each
40. Demonstrate swelling and shrinking of wood with variations in moisture content
41. Make exhibit of samples of wood damaged by termites, carpenter ants, borers, rot, fungi, etc.
42. Influence that windbreaks and shelterbelts have on wind velocity, soil movement, and snowdrift.
43. Collection and exhibit of cross-sections of wood construction and finish materials (sidings, moldings, etc.)
44. Exhibit of tree insect and disease damages (damaged parts and causative agent)
45. Evolution of lumber production from ax to modern methods
46. Demonstrate structural strength improvement of wood by laminating
47. Demonstrate improved strength of wood by using engineered fastenings (distorted shank nails and staples, framing brackets, connecting rings, etc.)

## References

Your local County Cooperative Extension Educators and Area Forestry Specialists.  
U.S. Fish & Wildlife Service Forestry Division, 122 Capitol Building Oklahoma City, Oklahoma.  
Local Libraries

## **The Oklahoma Cooperative Extension Service**

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Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

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- Extension programs are nonpolitical, objective, and research-based information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
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- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
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