

## Backyard Biologist

1. **DESCRIPTION:** Teams will be assessed on their knowledge of living organisms that they may encounter in their own backyard. **In 2021, the focus will be on trees, plants & birds.** Teams will be required to identify organisms from a provided list and know about the habitat and conditions required for growth of the organisms.
2. **ESSENTIAL STANDARDS ALIGNMENT:** 2.L.1, 3.L.2, 6.L.1, 6.L.2
3. **TEAM OF UP TO:** 2
4. **MAXIMUM TIME:** 60 min.
5. **TEAMS:** Must bring writing instruments. Teams may also bring up to 2 commercially produced field guides and/or 2 1-inch, 3-ring binders with pages in any form, from any source, contained in the rings. (This means 2 guides, or 2 binders, or a guide and a binder). Actual plant & leaf samples are allowed in the binders as long as they are in plastic sheet protectors. No animal parts are allowed in the binder. Teams may also bring up to two hand lenses.
6. **EVENT LEADERS:** Will provide an event with all necessary items, objects, materials, questions, and response sheets for participants to complete exams. Examples include but are not limited to: drawings, scenarios, questions, leaves, bark, seeds, photographs, and specimens.
7. **SAFETY REQUIREMENTS:** None
8. **IMPOUND:** No
9. **THE COMPETITION:** The competition will consist of an exam that covers any or all of the following topics.
  - a. Identification of specimens, by common name, from the Official Specimen List, including which are NC official state symbols. No more than 50% of the test will be identification of specimens.
  - b. Plants and trees
    - i. The structure and function of roots, stems, leaves, seeds, and flower parts.
    - ii. The life cycle of plants and how they make energy (e.g. basic photosynthesis, no chemical equations).
    - iii. The concepts of gravitropism, phototropism, thigmotropism, & hydrotropism.
  - c. Horticulture
    - i. What is needed to grow a successful garden and harvest food to eat, including how plants react in different conditions (no light, too much/too little water, addition of fertilizer, competition with other plants, etc).
  - d. Birds
    - i. Basic characteristics and description of habitat
    - ii. Eating habits, and life cycles.
    - iii. Importance to the ecosystem and impact on humans or human activities
10. **SCORING:** Points will be awarded for the accuracy of responses. Ties will be broken by the accuracy or quality of responses to pre-selected questions chosen by the event leader.
11. **EVENT RESOURCES:**  
See the Event Resources tab on our website for instructions, videos and more.

## Backyard Biologist – 2021 Official Specimen List

*For identification, students only need to know the common name and if it is an official NC State Symbol. Scientific names are given for reference purposes only.*

<b>Trees (Identify by leaves, bark, and seeds):</b>	<b>Birds (Identify by songs, calls, and coloring)</b>
American elm ( <i>Ulmus Americana</i> )	American robin ( <i>Turdus migratorius</i> )
Bitternut hickory ( <i>Carya cordiformis</i> )	American crow ( <i>Corvus brachyrhynchos</i> )
Black cherry ( <i>Prunus serotina</i> )	Blue jay ( <i>Cyanocitta cristata</i> )
Black oak ( <i>Quercus velutina</i> )	Brown-headed nuthatch ( <i>Sitta pusilla</i> )
Eastern white pine ( <i>Pinus strobus</i> )	Carolina wren ( <i>Thryothorus ludovicianus</i> )
Flowering dogwood ( <i>Cornus florida</i> )	Downy woodpecker ( <i>Picoides pubescens</i> )
*NC State Flower	Eastern bluebird ( <i>Sialia sialis</i> )
Southern live oak ( <i>Quercus virginiana</i> )	Eastern towhee ( <i>Pipilo erythrophthalmus</i> )
Loblolly pine ( <i>Pinus taeda</i> )**	House finch ( <i>Carpodacus mexicanus</i> )
Longleaf pine ( <i>Pinus palustris</i> )**	Mourning dove ( <i>Zenaida macroura</i> )
Red maple ( <i>Acer rubrum</i> )	Northern cardinal ( <i>Cardinalis cardinalis</i> )
Shortleaf pine ( <i>Pinus echinata</i> )**	*NC State Bird
Southern red oak ( <i>Quercus falcate</i> )	Red-bellied woodpecker ( <i>Melanerpes carolinus</i> )
Sweet gum ( <i>Liquidambar styraciflua</i> )	Tufted titmouse ( <i>Baeolophus bicolor</i> )
Tulip/yellow poplar ( <i>Liriodendron tulipifera</i> )	Turkey vulture ( <i>Cathartes aura</i> )
White oak ( <i>Quercus alba</i> )	White-breasted nuthatch ( <i>Sitta carolinensis</i> )
 <b>Bushes, Vines, and Flowers</b>	
English ivy ( <i>Hedera helix</i> )	
Carolina lily ( <i>Lilium michauxii</i> )	
*NC State Wildflower	
Eastern poison ivy ( <i>Toxicodendron radicans</i> )	
Carolina rose ( <i>Rosa carolina</i> )	
Kudzu ( <i>Pueraria lobata</i> )	
Pink lady's slipper ( <i>Cypripedium acaule</i> )	
Scuppernong grape ( <i>Vitis rotundifolia</i> )	
*NC State Fruit	
Sunflower ( <i>Helianthus annuus</i> )	
Venus flytrap ( <i>Dionaea muscipula</i> )	
*NC State Carnivorous Plant	
Butterfly weed ( <i>Asclepias tuberosa</i> )	
Trumpet creeper ( <i>Campsis radicans</i> )	
 * State Symbol	
** Pine trees (generic) are the NC state tree	