

Course Syllabus

Fundamentals of Leaf Identification

Instructor: Levi O'Brien

Email: levitreeschool@gmail.com

Location: Tree School Virtual

Mondays

6:00-8:00pm EST

Aug 24th–Sep 14th

Course Description: This course will develop a solid foundational understanding of all the necessary characteristics that relate to leaf identification. As a class, we will spend four weeks discussing morphology and practical application, and students will be provided with numerous interactive aids to their learning.

Each week, students will:

- Attend a live online class (60–90 minutes), followed by a 30-minute discussion and Q&A. All lectures are recorded and available to rewatch during the duration of the course.
- Complete suggested readings before class to prepare for the week's topic.
- Take a short, self-assessment quiz after each lecture to reinforce key concepts and identify areas for review.
- Complete a field-based assignment that applies the week's material through direct observation of trees.
- Study optional flashcards and review materials to strengthen familiarity with important terms, concepts, and characteristics.
- Participate in the online discussion board to ask questions, discuss observations, and work through challenging concepts with classmates and the instructor.

While no prior experience is required, this is an active course that rewards curiosity, consistent participation, and regular practice. The more time you spend applying and reviewing the material, the more you will get out of this class.

Course outline

Lecture 1: Leaf Anatomy and Diversity of Characteristics

- Parts of a leaf
- Arrangement
- Shapes, bases, and apexes
- Lobes and margins
- Venation
- Smell and color
- Compound leaf anatomy

Lecture 2: Conifers and Miscellaneous Things

- Surfaces: pubescence and wax, and more
- Leaf morphology & environmental impact
- Leaf seasonal changes
- Stipules, spines, and other odd things
- Conifer leaves

Lectures 3 & 4: Important Groups of Trees

(subject to minor changes)

This will be a cursory survey of key features of and within each taxon.

- Ashes (*Fraxinus* spp.)
- Maples (*Acer* spp.)
- Oaks (*Quercus* spp.)
- Walnuts (*Juglans* spp.)
- Hickories (*Carya* spp.)
- Lindens (*Tilia* spp.)
- Mulberries (*Morus* spp.)
- Poplars (*Populus* spp.)
- Willows (*Salix* spp.)
- Birches (*Betula* spp.)
- Black tupelo (*Nyssa sylvatica*)
- Magnolias (*Magnolia* spp.)
- Elms (*Ulmus* spp.)
- Hackberries (*Celtis* spp.)
- Catalpas (*Catalpa* spp.)
- Cherries (*Prunus* spp.)
- Tulip tree (*Liriodendron tulipifera*)
- Sumacs (*Rhus* spp.)
- Buckeyes/horse chestnuts (*Aesculus* spp.)
- Honeylocust (*Gleditsia triacanthos*)
- Black locust (*Robinia pseudoacacia*)
- Redbud (*Cercis canadensis*)
- Pines (*Pinus* spp.)
- Spruces (*Picea* spp.)
- Larches (*Larix* spp.)
- Firs (*Abies* spp.)
- Eastern red-cedar (*Juniperus virginiana*)
- Arborvitae (*Thuja* spp.)
- False cypress (*Chamaecyparis* spp.)

Calendar

Day	Date	
Mon	8/24	Lecture 1: Leaf Anatomy and Diversity of Characteristics
Mon	8/31	Lecture 2: Conifers and Miscellaneous Things
Mon	9/7	Lecture 3: Important Groups of Trees, Part 1
Mon	9/14	Lecture 4: Important Groups of Trees, Part 2