



Plant Families

Native Plant Trust's Plant Families course will teach you to recognize some of the common patterns among flowering plants throughout the world and major flowering plant families in New England. You will learn:

- The underlying evolutionary relationships that form the basis for classification.
- Botanical terms to describe plants and flowers
- To use both close looking and field investigation to decipher the clues to familial relationships
- Identifying characteristics for several major plant families common in New England

While the native plant examples are specific to New England, the concepts, approaches, processes, and tools for learning botanical science can be applied no matter where your specific location.

Structure

This course is offered in 6 modules. The modules are self-paced and include learning material with accompanying activities. Each module also offers online journal spaces to post assignments, forums for discussion and questions, and quizzes. An instructor will facilitate the forums and review the submitted assignments.

Concepts

Module 1: Plant Evolution and Classification

Module 2: Flower Form Review, Dissection, Diagrams and Formulae. Buttercup Family (Ranunculaceae), Lily Family (Liliaceae), Spiderwort Family (Commelinaceae)

Module 3: Mint Family (Lamiaceae), Mustard Family (Brassicaceae), Poppy Family (Papavaraceae)

Module 4: Carrot Family (Apiaceae), Pea Family (Fabaceae), Rose Family (Rosaceae)

Module 5: Aster Family (Asteraceae), Grass Family (Poaceae), Orchid Family (Ochidaceae)

Module 6: Fruit Form and Classification, Seed Dispersal

Requirement

Plant Families is a Basic Core requirement for Native Plant Trust's Native Plant Studies Certificate. Students must complete all lessons (including assignments, journal entries, and quizzes) to count this course toward their certificate.

Tools

For the close looking and dissection exercises in this course, you will need to procure a high magnification hand lens (10x or 20x triplex), a sharp razor blade or fine scalpel, fine forceps, and blank paper and pencils.

You can also use a dissecting scope, if you have access to one. There are also numerous simple and inexpensive ones, such as Foldsopes.

Resources

While there are no required books for this course, we recommend that students procure the most recent edition of *Botany in a Day*, by Thomas Elpel. The individual plant family information shared in this course is partially inspired by his research, and his illustrations are used with permission.

An extensive list of further resources is provided in Module 1.

Contacts

If you have further plant science interest that you wish to pursue in-person, we recommend:

- Attending an in-person program with Native Plant Trust
- Contact your state natural heritage program
- Contact the science departments at your local college