## **State Flowers**

Combining history, geography, and science.....

**Standard -** SS5H3 The student will describe how life changed in America at the turn of the century.



A bouquet of flowers is a treasured gift for people of all ages — it creates smiles and warm thoughts through the enjoyment of nature's beauty. Botanically, flowers are the plant's tool for survival, but in a garden they also add greatly to the aesthetics of the landscape. Their utility extends to providing food for many insect and bird species, and some flowers are even consumed by humans (like cauliflower and broccoli)!

Flowers provide opportunities for engaging classroom investigations. One way to combine science, government, and geography lessons in your classroom is to teach about state flowers. Each of the 50 states has an official flower to serve as a symbol of the state and its people. The flowers were chosen for many different reasons. State flowers may be:

- natives very common in the state (IL, KS, NC, SC)
- natives rare in the state (CO, MN)
- important to the economy (AR, DE, FL, MI)
- beautiful (CT, MS, NY)
- important to state history and/or found in folklore (MT, CA, GA, UT)

Some states share a flower. For example, the violet is the state flower of Illinois, New Jersey, Rhode Island, and Wisconsin (although different species of the violet are recognized).

Dogwoods, magnolias, rhododendrons, apple blossoms, and roses also make multiple appearances on the list.

## The Botany of Flowers

Maine's state flower — the white pine cone and tassel — isn't a flower at all, according to botanists. In the botany world, the plant kingdom is divided into a number of different divisions. Two of the largest divisions are the gymnosperms (also classified as Coniferophyta, or conifers, like the white pine) and the angiosperms (also referred to as Magnoliophyta, or flowering plants).

One of the main differences between these two plant divisions is their flowering structures. Gymnosperms produce seeds inside of cones and angiosperms produce seeds inside of flowers. Speaking botanically, since the white pine is a conifer, Maine's state flower really isn't a flower.



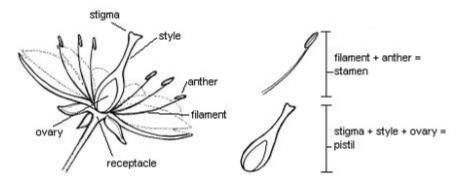
Male cones of a pine tree — a gymnosperm



Stamens and pistil of an asiatic lily — an angiosperm

Flowers vary greatly in appearance, but they do possess parts that define them as flowers: petals, sepals, one or more pistils (female reproductive structures that contains ovules, or eggs), and stamens (male reproductive structures that produce pollen). The typical flower — what botanists refer to as perfect flowers — contains both male and female parts within each flower.

The pistils and stamens vary in size, shape and number, but with a little bit of investigation, you can identify them in the field!





Is this a male or female squash flower? (Hint: Do you see a baby fruit?) What about flowers that don't have all the parts listed above? Some plants have adapted specialized flowers as they've evolved over millennia. For instance, some plants produce separate flowers that have only male or only female structures, but both types of flowers grow on the same plant (e.g., begonias, squash). Others produce separate male and female flowers on separate plants. Have you ever had a holly bush with flowers but never found any berries? Holly shrubs can produce either male or female flowers but not both, and only the female flowers produce the fruit. Therefore if you get flowers but no berries, you either have a male holly or a female that didn't have a compatible male plant to provide pollen (although in nature, there are always exceptions — some female holly plants produce berries without the help of pollen).

## Why Are There Flowers?

All flowers share the same purpose. Is it to look pretty? Nope. Flowers are here to produce seeds. Flower characteristics evolved to attract pollinators or to otherwise encourage pollen to reach pistils and fertilize the ovules, which will become seeds. The result may be a pleasant fragrance or an attractive appearance that lures bees and birds to visit, but there are other adaptations too: The Stapelia flower emits the smell of a rotting carcass to attract flies to help distribute its pollen! Other flowers may be adapted to spread pollen by wind (e.g., corn) or by water (e.g., Elodea, an aquatic plant).

## The Meaning of State Flowers



Common lilac is the state flower of New Hampshire. State flowers are symbols, and you can often discover their meaning by investigating why they were chosen. For example, according to New Hampshire state historian Leon Anderson, the purple lilac received designation because it "is symbolic of that hardy character of the men and women of the Granite State" (found in a book titled Flower—Tree—Bird and also online). So in New Hampshire, the state flower is a symbol of the character of its residents. The flowers may relate state history, a feeling of state pride, or even stimulate memories for residents. To discover the story behind your state's flower, check out these Web sites: <a href="E-referencedesk">E-referencedesk</a>, <a href="50">50 States</a>, and <a href="Netstate">Netstate</a> or visit your state's main website.

Using flowers as symbols isn't something reserved just for states. Flowers have been used as symbols and given meanings throughout history, and this is often referred to as the 'language of flowers.' Two examples are daisies as a symbol of innocence and purity, and roses as a symbol of love. There are many books and websites detailing this language, including the aboutflowers.com website

http://www.kidsgardening.org/node/12173