

# State Flowers

**Overview:** Students will explore the flowers chosen to represent each state and discover how state flowers serve as a symbol of the state and its people.

**Grade Level/Range:** 3<sup>rd</sup>- 6<sup>th</sup> Grade

## Objectives:

- Students will learn about symbols and why they are important.
- Students will investigate the parts of a flower, identify the parts of a flower on live specimens and then create a model of their state flower.
- Students will investigate their state flower and how it fits into state history.



**Time:** 1 hour

## Materials:

- Paper
- Pencils
- Internet or a state almanac
- Chart or model illustrating the parts of a flower
- Flowers
- Paper towels
- Hand lenses
- Assorted craft supplies

## Background Information:

A bouquet of flowers is a treasured gift for people of all ages, creating 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 ... some flowers are even consumed by humans (like cauliflower and broccoli).

Each of the fifty states adopted an official flower to represent the state and its people. The flowers were chosen for many different reasons. Some of the flowers are:

- native flowers very common in the state (IL, KS, NC, SC).
- native flowers 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).

The state flowers are not always unique to one state, with some flowers designated as the official flower for multiple states. 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,

KidsGardening is a nonprofit educational organization. Support provided by sponsors and donors is critical to our ability to provide free garden-based resources for parents and educators. All gifts are tax-deductible.

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

There is even one state flower that is not a true flower. Maine's state flower is the white pine cone and tassel; however, scientifically, cone-bearing trees do not produce true flowers. In the botany world, the plant kingdom is divided into a number of different divisions. The two largest divisions are the gymnosperms (depending on the reference they may also be classified as Coniferophyta or conifers) and the angiosperms (depending on the reference they may also be referred to as Magnoliophyta or flowering plants). One of the main differences between these two divisions of plants is their flowering structures. Gymnosperms produce seeds inside of cones and angiosperms produce seeds inside of flowers. Since the white pine is a conifer, then Maine's state flower is really not a flower at all!

## The Botany of Flowers

Flowers differ greatly in appearance, but they do possess common parts. Flowers consist of petals, sepals, the pistil (female reproductive structure that contains the ovule or eggs) and the stamen (male reproductive structure that produces the pollen). The typical flower 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.

However, there are exceptions to the rule and not all flowers have all of the parts. Some plants through time developed specialized flowers as they adapted for survival. For instance, some plants produce two types of flowers – flowers with only the male structures and separate flowers with only the female structures, but both types of flowers grow on the same plant (example begonias, cucumbers). 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 either produce male flowers or female flowers but not both and only the female flowers produce the fruit. Therefore if you get flowers but no berries, then you planted a holly plant with male flowers. (Or you might have a plant with female flowers, but no plant with compatible male flowers nearby for pollination.)

Even though parts may vary, all flowers share the same purpose. Is their purpose to look pretty? Nope. The purpose of the flower is to produce seeds. Their characteristics evolved to attract pollinators or to encourage pollen dispersal (the pollen from the stamens must find a way to move to the pistil). The result may be a pleasant fragrance or attractive appearance to lure bees and birds to visit them, but there are other adaptations, too. The *Stepelia* flower gives off the smell of a rotting carcass to attract flies to help move its pollen. Other flowers may be adapted to spread pollen by wind or by water.

## The Meaning of State Flowers

State flowers are symbols representing the state and its people. You can often discover their symbolism by investigating why they were chosen as the official state flower. For example, according to state historian Leon Anderson, the purple lilac received the designation as the state flower of New Hampshire 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 at <https://www.nh.gov/almanac/flower.htm>). So in New Hampshire, the state flower is a symbol of the character of its residents. The flowers may relay state history, a feeling of state pride or even stimulate memories for residents. There is a website with additional details on state flowers available at: <http://www.50states.com/flower.htm> or check out your State's webpage to uncover why your state flower was chosen.

## Laying the Groundwork:

- What is a symbol? (something that represents something else)
- Brainstorm a list of symbols that we see each day. (traffic signs, product logos like the Nike checkmark or McDonald's Golden Arches, flags)

KidsGardening is a nonprofit educational organization. Support provided by sponsors and donors is critical to our ability to provide free garden-based resources for parents and educators. All gifts are tax-deductible.

- Why are symbols important to us? (they help with identification and explanations)

### Exploration:

1. Create a chart or build a model of a flower to show students the different parts that make up a flower. Explain that although most flowers share these common parts, the parts are different in number, size, shape and color for each flower.
2. Dissect a couple of flowers in front of the class as examples. Depending on the time of the year, you may be able to harvest these from outside or you may need to obtain flowers from a local florist. Demonstrate to the students how to carefully separate and identify the different parts.
3. Give the students a flower or flowers to dissect on their own. Bring in a number of different types of flowers to demonstrate the diversity. As they dissect the flowers, help them look for the different parts including the petals, sepals, pistil and stamens.

For younger students, you will want to bring in flowers that possess traditional structures with large pistils and stamens like lilies or alstroemeria.

For older students, in addition to some of the traditional flowers, bring in flowers with different adaptations. For instance on a begonia plant or a squash plant, there are separate male flowers and female flowers and so they can dissect both and determine which is the male flower and which is the female. You could also use hibiscus flowers where the male stamens are actually fused onto the female pistils so that it looks like the 2 are the same structure. You might want to bring in something unusual such as an oak tree flower (probably most students do not think of the oak tree as having flowers). If possible let the students use hand lenses to get a closer look.

4. Research your state flower and then have the students use their new knowledge of common flower parts to make models of their state flower with craft supplies.

### Making Connections:

Ask students to research the following questions either by using the Internet or a state almanac (two websites they may be useful are the State Symbols USA website at: <https://statesymbolsusa.org/categories/flower> and 50States.com website at: <http://www.50states.com/flower.htm>). Ask students to compile their findings in a report and through a class discussion.

What is the state flower in your state?

When did it become the state flower?

Why was it chosen?

Are there any special stories or myths about your state flower?

When does your state flower bloom?

What is the scientific name of your state flower (for older students)?

Where does your state flower grow? Does it need any special growing conditions?

KidsGardening is a nonprofit educational organization. Support provided by sponsors and donors is critical to our ability to provide free garden-based resources for parents and educators. All gifts are tax-deductible.

What are some other common symbols used to represent the state (flowers, trees, birds, etc.)?

### **Branching Out:**

**Social Studies:** In addition to your state flower, list other state symbols (state flag, state tree, state bird, etc.).

**Language Arts:** Using flowers as symbols is not something reserved just for the States. Flowers were used as symbols and given meanings throughout history. Often referred to as the “language of flowers,” there are many books and websites detailing the meaning that different flowers convey. For instance the daisy is a symbol of innocence and purity. The rose is a symbol of love. For more information on the language and history of flowers, visit the the ProFlowers website at:

<https://www.proflowers.com/blog/floriography-language-flowers-victorian-era>.

**Science:** Explore the process of pollination and the role of pollinators. Take your class outside to observe pollinators in action. Instruct them to keep notes on their observations and later write conclusions from their notes.

**Math:** Count the number of petals, sepals, pistils and stamen of each flower that is dissected. Create a chart to compile findings and display the results. Do all the flowers of the same variety have the same number of each of the parts?

KidsGardening is a nonprofit educational organization. Support provided by sponsors and donors is critical to our ability to provide free garden-based resources for parents and educators. All gifts are tax-deductible.