

Daffodil Flower Dissection

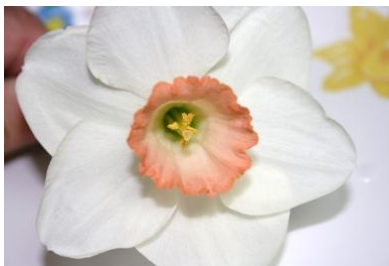
Kids of all ages like to take things apart to see how they work, flowers included! Dissect a daffodil flower and discover the inner workings of our favorite flower. You don't even have to sacrifice any great blooms. Daffodils a little past their prime work fine and those from a fading bouquet or left over from a daffodil show are perfect. Everyone from children to senior citizens can enjoy discovering something new about daffodils.

Small flowers and doubles aren't as easy to dissect, so choose a large Division 1 trumpet or a large-cupped Division 2. Place your flower on a paper plate or paper towel and grab a pair of scissors. Blunt tip scissors work fine and are safest for young children to use. First look at the outside of your flower's stem with its waxy protective layer called the **cuticle**. Cut across the



stem at a diagonal and at other angles to discover the wet, sticky insides. Bundles of **vascular** tissues (from the latin *vasculum* for "little vessel") include **xylem** plant tissues that move water and minerals from the roots up the stem, and **phloem** tissues that move food from the leaves where it is made by **photosynthesis** to all the other parts of the plant. The stem also supports the flower. Without stems, we'd all have to crawl on the ground to admire our daffodils!

Take a look at that unattractive brown **spathe** attached to the top of the stem underneath the flower. If you've entered daffodils in a show, you were probably told not to cut or tear off the spathe. It may not look very attractive, but it is a part of the flower! In fact, it encloses and helps to protect the flower bud as it opens. Look closely and you will see the spathe is striped and almost always splits length-wise along the stripes as the flower opens. The next time you have a daffodil in bud, notice how the homely spathe helps protect your beautiful flower. Since this is a daffodil dissection and not a daffodil show, you may now cut or tear off the spathe.



Look closely at the flower and count the number of petals. A daffodil (except for double daffodils in Division 4) normally has six petals. These six petals are also called the **perianth**. Notice there are three inner petals and three outer ones. Notice how the bottom of the petals joins together with the bottom of the cup or **corona**. Cut or tear off each petal. Now use



your scissors to slice the cup of the flower down in several places and cut the cup away, trying not to damage the remaining parts of the flower.



What you have left, attached to the stem, are the parts of the daffodil that can produce daffodil seed. Look carefully and you will see that the stalk-like structures revealed by cutting away the cup are of two varieties, one usually taller center female part surrounded by several stalks with yellow fuzzy stuff or **pollen** on top. The center female part is called the **pistil** and the surrounding parts are the male **stamen**. An easy way to remember the names is to think of “She’s a pistil” and “Stay, men!” Count the number of male parts or stamen surrounding the female pistil. A daffodil usually has six stamens. Each stamen consists of

a stalk or **filament** with a pollen sac or **anther** on top. Use your scissors or fingers to pull off each stamen, trying to leave the pistil attached. Touch the top of the stamen to see if any tiny yellow pollen grains stick to your fingers. A newly opened flower’s anthers are shiny and smooth with no visible pollen. As the flower matures, the anthers open up to release pollen. As the flower ages, the pollen grains dry out and turn brown.



You may discover that the top, flattened part of the pistil, called the **stigma**, is sticky. The three



parts of the pistil are the stigma on top, the stalk or **style** supporting the stigma, and the ovary or oval-shaped enlargement at the bottom of the pistil. Locate the ovary and cut it in half to reveal the **ovules** or immature egg cells inside. A flower is pollinated when pollen lands on the stigma. After the pollen germinates, a pollen tube grows down the style to the ovary. Each sperm that moves through a pollen tube to the ovary and fertilizes an immature egg cell can develop a seed.

A Pronunciation Guide is provided on the next page for the botany terms highlighted in yellow. Visit the [ADS References page](#) and look for “Parts of a Daffodil—Daffodil Botany Drawing” for a diagram to use with your daffodil dissection. Have some fun as you discover the inside scoop on daffodils!

Daffodil Terms Pronunciation Guide

The pronunciations below are from www.merriam-webster.com.
Visit that website for audio pronunciations of each word.

anther \ˈan(t)-thər\
corona \kə-ˈrō-nə\
cuticle \ˈkyū-ti-kəl\
filament \ˈfi-lə-mənt\
ovules \ˈäv-(,)yül\
perianth \ˈper-ē-,an(t)th\
phloem \ˈflō-,em\
photosynthesis \ˈfō-(,)tō -ˈsɪn(t)-thə-səs\
pistil \ˈpɪs-tɪl\
pollen \ˈpɔ̄-lən\
sepal \ˈsē-pəl\
spathe \ˈspāth̩\
stigma \ˈstɪg-mə\
style \ˈstī(-ə)l\
tepal \ˈtē-pəl\
vascular \ˈvas-kyə-lər\
xylem \ˈzī-ləm\