

## Why Leaves Change Color

HUNTERDON, N.J. -- Many people believe that a mischievous Jack Frost as responsible for plant leaf color change, but the weather has nothing to do with it at all. As the days grow shorter and the nights longer, a chemical clock inside the trees starts up, releasing a hormone which retricts the flow of sap to each leaf. As autumn progresses, the sap flow slows and chlorophyll, the chemical that gives the leaves their green color in the spring and summer, disappears. The residual sap becomes more concentrated as it dries, creating the colors of fall. Along with the green pigment chlorophyll, leaves contain carotenoids, yellow or orange pigments which, for example, give carrots their color. During most of the year, greater amounts of green coloring mask these yellowish colors. When food-making stops in the fall, the green color disappears. The yellowish colors become visible and give leaves part of their fall splendor. Trees that normally produce good yellow color include poplar, ginkgo, Norway maple, hickory, yellowwood, birch and redbud.

At the same time, additional chemical changes may occur and cause other pigments to form varying from yellow to red to blue. Some of them give rise to the reddish and purplish fall colors of dogwoods, sumacs, and euonymus.

For the best red, plants must be in a sunny spot where they can manufacture a great deal of sugar. When nights become cool and temperatures drop to 45 F or lower, sugars become trapped in the leaves. At this point, the red pigment produces the intense colors seen in the mid-October landscape. Normally, bright, sunny days accompanied by cool nights and moist soil result in vibrant colors. Trees under stress tend to produce the most intense fall colors. The best reds are produced in red maple, sugar maple, sourwood, Bradford pear, red oak, scarlet oak and black gum. As the leaves die and fall to earth, the forest begins a winterlong slumber. The leaves, which through the warmer months convert carbon dioxide to oxygen, now take up another task, enriching the soil and providing the nutrients for future generations of trees. And by the time this year's leaves fall, next spring's leaves are tightly wrapped in buds ready to unravel in the soft colors of spring.

## Whopper Of A Pumpkin



among others. She weighs 50 pounds herself.

The pumpkins attained that weight in much less time than it took Shannnon.

Last spring, kindergarten teacher Janet Frace of Kissel Hill Elementary School gave one seed to each of her students.

Each student planted a seed in a styrofoam cup. When it sprouted, Shannon took her pumpkin plant home and put it on the window sill. She watered it daily and

watched it grow. In late June, she

transplanted it outside. She continued to water it every day, which was essential if it was going to survive the hot and dry summer.

Eventually, there were vines growing all over the back yard. Hundreds of feet of pumpkin vines took over her mother's flower bed and even killed the carnations and baby's breath.

Soon, green squash appeared on various points of the vine. Shannon continued to faithfully water and turn the small pumpkins every day

The pumpkins quickly grew so big that Shannon could no longer turn the pumpkins. Then Shannon began reminding her parents to turn the pumpkins.

As or last work the pumpkins were the usual opened orange.



When 10-year-old Jason Flowers, Manheim, entered Maude, a French Angora rabbit, in the fair, he got a lot of attention from others who were intriqued by the longhaired rabbit. On right, Kelly Kurse, 10; and Marcy Geib, 11.