Every autumn, cottonwood, quaking aspen and willow are transformed into a colorful line of gold, orange and rust. Before long, their leaves will fall and again become part of another cycle that feeds the soil. What causes this yearly cycle, and what determines which color the leaves turn?

During spring and summer, leaves actively produce food necessary for plant growth. This food-making process takes place in the numerous cells within the leaf. Within these cells are Chloroplasts, which contain the chlorophyll pigments that are responsible for the green color of plants. The leaves also contain lesser amounts of other pigments, primarily xanthophylls (yellows) and carotenoids (yellows, oranges and reds).

Most of the year, these other pigments are masked by the greater amounts of chlorophyll present in the leaves. But in fall, when changes in temperature and the period of daylight occur, the leaves strip their food-producing activity from the chlorophyll begins to break down, the green color disappears, and the yellows, oranges and reds slowly begin to emerge, giving the leaves their fall splendor. The intensity of color is determined by the plant’s response to simple gradients of temperature and moisture. Fall weather conditions favoring formation of brilliant autumn color are warm, sunny days followed by cool nights with temperatures below 45˚F (7˚C). Sugar production increases during the daytime, but cool nights prevent movement of sugar from the leaves. From the sugars trapped in leaves, the red pigment called anthocyanin is formed. When fall weather is consistently cloudy or rainy, and the nights warm, the leaves will only have a lesser amount of red pigment. The intensity of sugar made during periods of less sunlight moves out of the leaves during the warm nights, reducing the conversion of excess sugars into pigments.

Before the leaves gracefully spin from their leaf stalk, a special layer of cells develops and gradually separates the leaves that support the leaf. A small scar is cut into the only evidence that leaves once adorned these deciduous plants.

— Anne Halford, Botanist
Bureau of Land Management, Bishop Resource Office

Why do leaves turn color?

The Eastern Sierra region is laced with rugged canyons carved by rushing streams, and home to some of the finest fall color viewing anywhere. Autumn displays of golden aspen mingle with pine forest and contrast with stark granite walls. Cottonwood and willow line stream banks and border alpine meadows. Above it all looms the towering Sierra Nevada mountain range jutting into the azure sky.

The trees generally begin their annual color show in mid-September and, depending on Mother Nature and elevation, can extend into late October. Warm days and cool evenings mark this time of year in the region, making it not only perfect for viewing and photographing the fall splendor, but also taking part in the many recreational activities and events the entire Eastern Sierra region is famous for.

A wide choice of accommodations and dining opportunities completes the picture. The Eastern Sierra in the fall—a special time in a special place.
11 June Lake Loop
20 miles north of Bishop. Take Hwy. 395. This scenic drive is a treat any time of year, but fall colors make this route especially pretty. Follow Hwy. 395 north to the south portion of Hwy. 190. The road winds past the community of June Lake, which sits on the shores of its namesake. June Lake is nestled, followed by Silver Lake and Grant Lake. Continuing along the Loop, Hwy. 190 brings you back to Hwy. 395 just past Grant Lake (Winter road closed beyond Silver Lake).