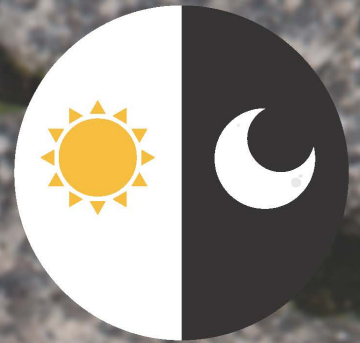


# FALL COLOR

## What triggers the change of color in leaves?

Color change is actually triggered by day/night length. Studies and observations have shown that trees in a given area will begin the process of leaf abscission (drop) at approximately the same time every year, regardless of temperature.



- Different critical threshold of night length is reached for a given tree/species
- Abscission cells begin to form a boundary at the joint between the leaf and the stem to which it's connected
- This boundary layer of cork-like cells restricts the flow of carbohydrates out of the leaf

- Inhibits the renewal and production of chlorophyll and reveals other leaf pigments
- Xanthophylls (yellow) and carotenoids (orange), are always present in the leaf but masked by chlorophyll, which has a greater photosynthetic capacity
- Anthocyanins (red and purple) are not ever-present in the leaves, but are produced from the sugars (carbohydrates) trapped in the leaves by the layer of abscission cells
- Over time, these pigments will all break down, leaving only brown tannins



**Chlorophyll**  
**Xanthophylls**  
**Anthocyanins**  
**Carotenoids**  
**Tannins**