

# Fall COLORing Activity

There are four pigments responsible for leaf colors:

**Chlorophyll** (pronounced KLOOR-a-fill) - green

**Xanthophyll** (pronounced ZAN-tho-fill) - yellow

**Carotene** (pronounced CARE-a-teen) - gold, orange

**Anthocyanin** (pronounced an-tho-SIGH-a-nin) - red, violet, can also be bluish

Leaves are **brown** when there are no more photo-sensitive pigments; only the **tannins** are left.

*Color these leaves according to the pigments they produce:*

**Sugar maple**  
Leaves change slowly and over time may be any combination of the four pigments, ending in a brilliant flame of anthocyanin.

**Pin oak**  
This stately tree holds its anthocyanin-rich leaves through the fall, and holds pigment-less leaves through the winter.

**Tulip tree**  
A pale hint of chlorophyll mixes with xanthophyll and a touch of carotene as this tree shuts down for winter.

**Sumac**  
The anthocyanin in these leaves makes them the color and shape of flames, and appears as fire against the duller colors of the surrounding landscape.

**Buckeye**  
Light filtering through the xanthophyll and lighter carotene of these leaves creates an ethereal glow.

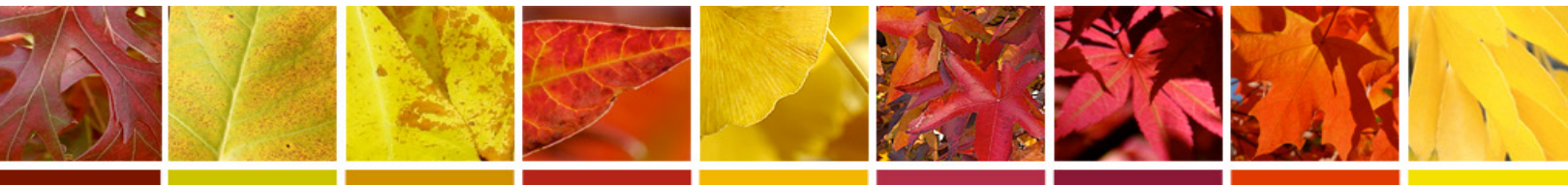
**Honey locust**  
Leaves turn color early in the season; the lighter carotenes glow warmly against the blue sky and green grass.

**Ginkgo**  
Carotenes recede quickly around the edges of the leaves as they prepare to parachute to the ground.

**Japanese maple**  
The darker anthocyanin hues turn these feathery leaves the color of shadows—fitting for the spooky month of Halloween.

**Sweetgum**  
Like the maple, this tree puts on an awe-inspiring display of xanthophyll, carotene, and anthocyanin all together.

*Answers:*



Pin oak Tulip tree Buckeye Sumac Ginkgo Sweetgum Japanese maple Sugar maple Honey locust