

15-minute Family STEAM: Why Do Leaves Change Color?

Supplies Provided:

Rubbing Alcohol
Small container with lid

Supplies From Home:

Leaves
Boiling water

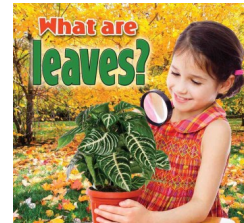
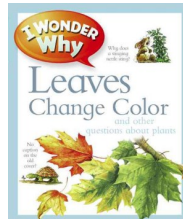
Directions:

1. Place your leaf in a boiling pot of water for 5 minutes. While it is boiling, fill up small containers with rubbing alcohol.
2. When the five minutes are up, use the tongs to remove the leaf and place it in the rubbing alcohol
3. Observe what color the alcohol is. Come back throughout the day and check to see if the alcohol has changed color.
4. Discussion questions--
 - How do the results change if you leave the leaves in the rubbing alcohol for overnight?
 - Try it with both green & different colored leaves. How are the results different between the green leaves & the colored leaves?
 - How do the results change if you use needles from an evergreen tree?

The Science:

In this science activity we used the rubbing alcohol and energy (hot water) to separate out the chlorophyll. You likely saw green, and depending on your leaf type, maybe red, yellow, or orange. Chlorophyll gives leaves their green color and is so dominant it hides the other colors in the leaves. But in the fall, chlorophyll in the leaves breaks down allowing the other colors to finally shine through and show their beautiful reds, yellows, and oranges.

Want to learn more about leaves? Look for these books the next time that you are in the Library!



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