

Evolving Autumn

While fall is usually always a chilly month for us here in Michigan, this year it seemed almost as if we had an early winter. For the month of October, my school and I participated in helping GLOBE Observer and NASA examine the changes and patterns in climate change here in Michigan. We researched the cloud patterns, the changes in leaf colors, and the weather that occurred. On October 4th, I collected leaves from Callery Pear and Crimson King Maple trees. The leaves on the Callery Pear were green, which shows they were full of chlorophyll. The leaves on the Crimson King Maple were dark red, which shows they were full of anthocyanin. The two trees were located in front of the Melvindale High School building. Within the next two weeks, from October 12th to October 27th, the Callery Pear leaves changed from chlorophyll, to carotenoids, and then finally to anthocyanin. The Crimson King Maple leaves changed from anthocyanin to tannins. The decrease in sunlight, the colder temperatures, and the humidity caused the leaf colors this year to be more vibrant. The clouds went through many changes as well. The clouds we saw were cumulus, cirrus, and stratocumulus clouds. In the beginning of October, we had warm, sunny days with temperatures in the 80's and 70's. We then had a decrease, with gloomier days and temperatures in the 50's and 60's. In the last week of October, we had an increase in temperature before suddenly dropping to 40's and 30's. Our weather this year in Michigan underwent many changes too. The amount of sunlight decreased, with the sun now going down by 5:30 PM. We experienced freezing cold days that we'd usually see in December, with early snow happening on Halloween. I believe we had a very cold October due to climate change affecting Michigan. Climate change causes weather to be more extreme, which explains the drastic changes we witnessed. The purpose behind our research is to help GLOBE and NASA in making a positive impact towards stopping climate change. Our leaves lost their chlorophyll and changed to vibrant reds and yellows. Our clouds and weather changed frequently, with cold days and thinner clouds. All of this shows how our world is being shifted by climate change, because these extreme weather patterns aren't just happening in Michigan. While NASA with their satellites can observe these changes in the sky, they have a harder time observing these changes on ground. This is where me, my school, and other schools around the world can step in and help.