## Citizen Science School Garden and Community Arboretum

"Putting Data in the Hands of Our Students" - Becky Walters



In 1970's two biology teachers and numerous students built an arboretum on the campus of LaFollette High School in Madison, Wisconsin. The purpose of this space was multifold:

- Provide a natural environment to teach classes (no field trip costs)
- Improve water quality, anchor soil, provide wildlife & pollinator habitats, and sequester carbon

Unfortunately, this amazing resource is not well utilized. With the FUNding Friday min-grant we will make the arboretum an interactive space for students & our community! Students will visit a Wisconsin hardwood forest, prairie and pond ecosystem; collect & share data; and conduct research using real time, scientifically sound Earth science data. We will place PurpleAir sensors, rain gauges and QR codes throughout the arboretum. This will allow students to:

- Collect air quality data for environmental awareness via PurpleAir ( <a href="https://www2.purpleair.com/">https://www2.purpleair.com/</a>)
- Connect the community to geomagnetism via NOAA's CrowdMag app (walking through the arboretum)
- Engage in rain gage collection and reporting via CoCoRahs (https://www.cocorahs.org/Content.aspx?page=store)
- Complete individual research projects
- Use this and other data to participate in the JPSS Virtual Science Fair this fall. (studying satellite data and imagery (Wildfires and Air Quality) by comparing Aerosol Optical Depth to ground truth observation)

Finally, students will work with the community to build raised bed vegetable gardens

- Provide healthy vegetables while promoting a lighter carbon footprint lifestyle
- Explore EnROADS model to educate themselves on this one easy way everyone can slow climate change

The \$3000 FUNding Friday award

- -\$80 for a rain gauges
- -\$270 for the Purple Air sensor
- -\$500 for signage/sign posts
- -\$500 for website creation
- -\$800 for arboretum beautification & plants
- -\$800- making the space handicap accessible (ramp & limestone path)