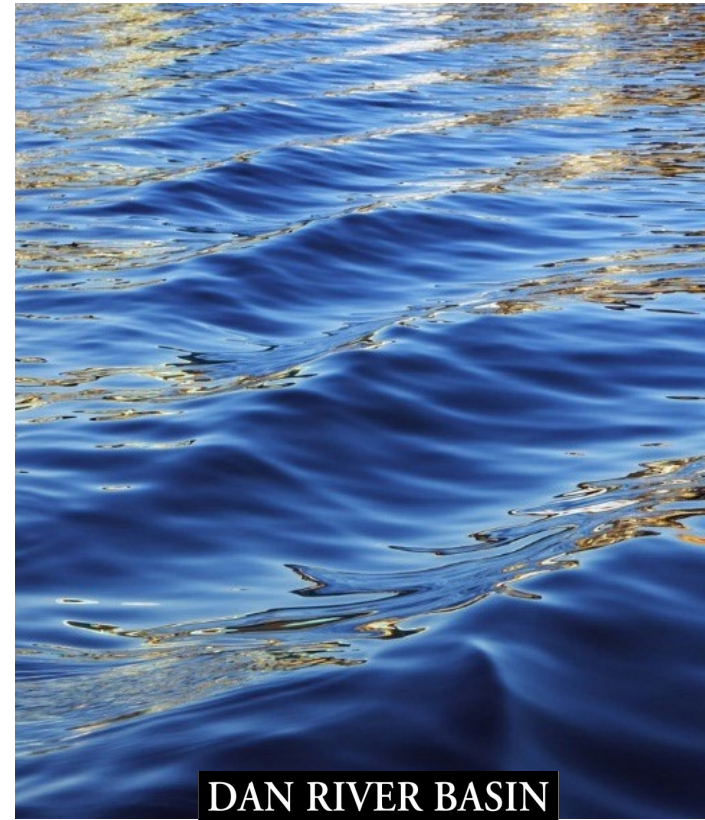


# Environmental Education Impacts Students' Future Careers

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**Albert Harris  
Elementary School**  
Empowering Success One Learner At A Time

DAN RIVER BASIN



# Environmental Education Impacts Students' Future Careers

- Today's students enter the classroom with the mindset that they can change their world. Science and STEM teachers have the opportunity to equip students to be environmental stewards while teaching Science Standards of Learning.
- Teachers learn how to create a Green Schoolyard that provides real-world applications for students, as well as meaningful hands-on learning opportunities.
- Students will enjoy trying on the roles of agricultural scientists, environmentalists, engineers, botanists, and meteorologists.





# What exactly is a green schoolyard?

A **green schoolyard** is a hands-on outdoor learning environment where students participate in real world learning experiences that make STEM and Science Standards of Learning meaningful and engaging. Students learn core content in an integrated fashion that mirrors the world they live in.





# How do I create a Green Schoolyard at my school?

- A **green schoolyard** should be considered a multi-year project.
- Start with a simple assessment of what issues the schoolyard might have going on (storm drain issues, standing water in places, no vegetation, etc.).
- Make a list of what you would like to see happen in your schoolyard. Remember to include prices so you can know what is feasible to start with.
- Teachers can successfully build upon what is being done each year. The green schoolyard can be adapted to meet your changing needs.



# Importance of a Community Partnership

- Obtain grants from Community Foundation
  - Grant writing and final reports
- Assist with planning and implementation
- Volunteer support
- Schoolyard Assessment Tool
- Education Outreach with Students and additional exposure to STEM careers





DRBA Mission - Preserve and promote the natural and cultural resources of the Dan River basin through stewardship, recreation, and education.



# Partnership Evolution Broadens the Impact on Students

- Partnership started with Trout in the Classroom
- Followed by Streamside Trees in the Classroom
- Green Schoolyard Phases 1 and 2
- Urban Garden & Kitchen Cart
- Provides students with a variety of hands-on learning opportunities



## How do I use my schoolyard assessment?

- The location of our courtyard allows all grade levels to access and use it.
- Our assessment revealed that we had rain barrels which needed only minor repairs to be functional and a butterfly garden that needed serious attention.
- Our projected timeline is from two to five years.
- Our easiest project was repairing our rain barrels which was inexpensive and quick to do.
- We shared our wish list with our community.

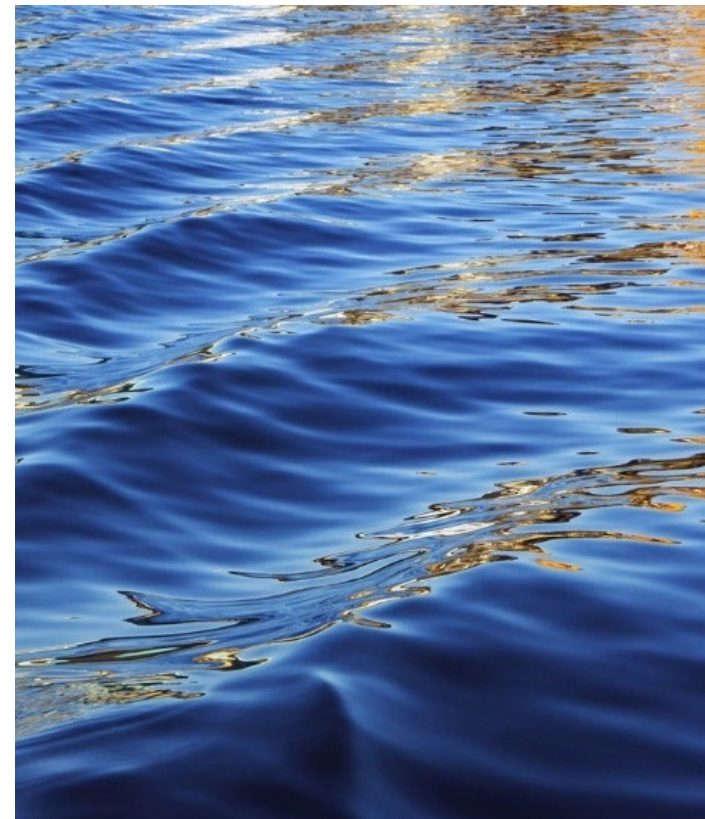






# Where are we now?

What was on our wish list?



# AHES Green Schoolyard Wish list

## What we wanted then ...

- Rain barrel installation- Done
- Plant fall flowers- Done
- Monarch Waystation certification- Done
- Interpretive signs- waystation- Done, rain barrel & water conservation and composting still need to be done
- Composting- Sort of done
- Grow lights in greenhouse- Done
- Weather Station with thermometers, rain gauge- Done
- Rain Garden-
- Rain barrels painted-
- Storm drain marking- Done
- Tasting garden- Done

## What we want now ...

- Install gravel around rain barrels to prevent muddy feet- completed this week
- Plant additional milkweed in Monarch Waystation with harvested seeds
- Interpretive signs for rain barrels & water conservation and composting
- Composting with more fidelity and at more grade levels
- Seed starting for spring tasting garden
- Rain garden
- Rain barrels painted
- Tasting kitchen on a cart



# Phase One of our Green Schoolyard



Rain barrels are installed and being used!



Initial planting started in our Monarch Butterfly Waystation! Watering with collected rain water!



Composting started ...



Grow lights installed ...





Phase Two of our Green Schoolyard Initiative- focused planting with specific plants significant to different stages in a Monarch's life cycle. Signage to help students and visitors!





Storm drains are marked!



Fall blooming flowers help students see that plants have different growing seasons.



Our weather station is ready for students to use!







Our tasting garden has been planted. The salad greens are doing double duty as they are also helping to prevent erosion!





## We are working on ...

- Putting rock around the rain barrels
- Planting milkweed seeds in weak spots in the Monarch Waystation
- Painting our rain barrels in art
- Painting a weather themed mural on the back of our weather station as part of an art project
- Starting seeds for our tasting garden this winter

A word cloud on a black background featuring various career paths. The words are arranged in a cluster, with 'engineers' being the largest and most prominent at the top. Other large words include 'meteorologists' in green, 'botanists' in light blue, and 'environmental-engineers' in white. Smaller words like 'farmers', 'horticulturalists', 'environmentalists', 'botanists', and 'agricultural-scientists' are also visible. The word 'botanists' appears twice, once vertically on the left and once horizontally at the bottom.

engineers  
environmentalists  
meteorologists  
farmers  
horticulturalists  
environmental-engineers  
botanists  
botanists  
agricultural-scientists

Impact on Future Careers





## Budding Botanists

- Butterfly garden – plant identification, plant parts, plant needs
- Plant journaling
- Propagation
- Greenhouse





## Weather Watching Meteorologists

- Study weather patterns and record observations in real time
- Journal to make accurate weather forecasts based on patterns observed
- Input weather observations using technology
- Use rain gauge, thermometers, wind sock, weather vane, digital anemometer to collect data





## Crop Growing Agricultural Scientists

- Growing seasonal vegetables
- Starting vegetables as seeds
- Harvesting and consuming their own vegetables
- Monitoring and improving soil conditions





## Earth Protecting Environmentalists

- Harvesting rain water with rain barrel system
- Marking storm drains and conserving water
- Composting
- Planting a rain garden
- Developing a school recycling initiative