

# Connecting with your Community, Naturally:

## Outdoor Education Resources and Tips

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# POLL

How much experience do you have conducting environmental activities with adults/children?

Answer 1: A lot of experience

Answer 2: Some experience

Answer 3: Very little experience

Answer 4: None



# The Water Network









# How are you connected to water?

**menti.com**

Code: **8348 0656**



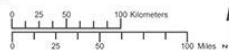
# Chesapeake Bay Watershed



- Chesapeake Bay Watershed
- State Boundary
- Chesapeake Bay



Data Sources: Chesapeake Bay Program  
For more information, visit [www.chesapeakebay.net](http://www.chesapeakebay.net)  
Disclaimer: [www.chesapeakebay.net/terms\\_of\\_use.htm](http://www.chesapeakebay.net/terms_of_use.htm)



Created by EA, 1/24/08

UTM Zone 18N, NAD 83

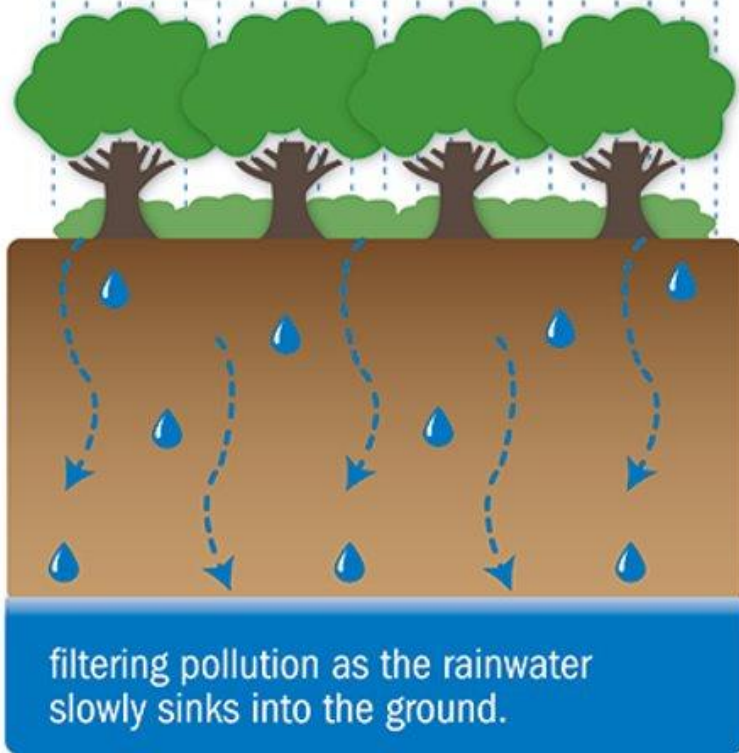
We all live in a watershed.



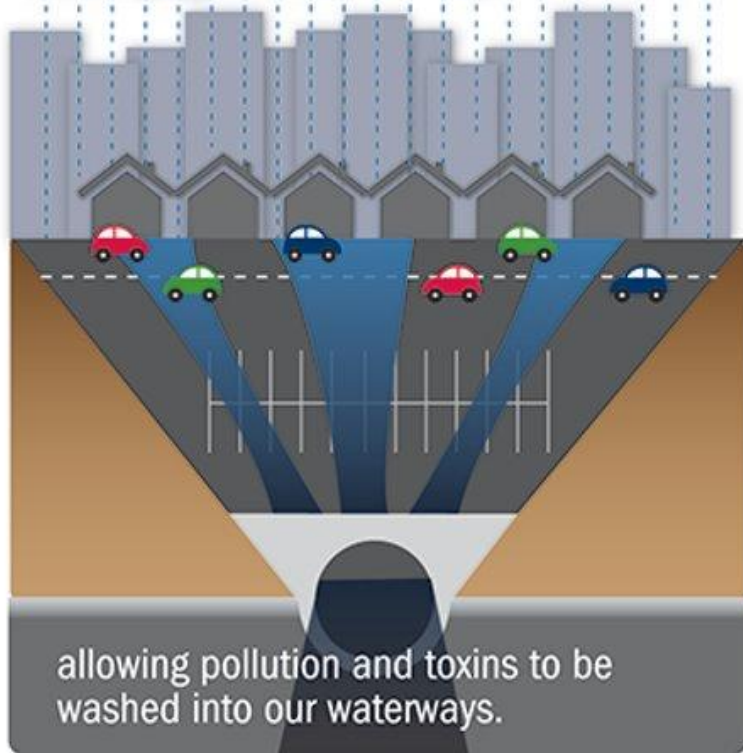
# Where does rainwater flow on the property where you live?

Take 3 minutes to observe and/or think about how rain travels along the property you live on.

The landscape can be a  
**GREEN FILTER**



or a  
**GRAY FUNNEL**





# Gray Funnel or Green Filter?

# Riparian Buffers



Marcy Damon CBF Staff



# Shopping Mall



© John Pavoncello/York Dispatch

# Wetlands



© Bill Portlock photo courtesy of the Chesapeake Bay Foundation [cbf.org](http://cbf.org)



# What will I do next?

How would you apply this knowledge as a steward of the watershed?

How could you adapt this lesson to best fit an outdoor activity?





**Connecting with your  
Community, Naturally:**

**Outdoor Education  
Resources and Tips  
Continued!**



# Poll

What kind of setting do you see yourself working in?

- A. Answer 1: Large group (classes; community meetings)
- B. Answer 2: Small group (after school programs/families)
- C. Answer 3: Table top (events)
- D. Answer 4: Other

# Environmental/Outdoor Activities

## Planning

Determine the type of setting: community table top event, small group, restoration project, one time activity.

What is your goal for the activity? Is there a beginning, middle and end or is it 'drive by'

Visit your outdoor location in advance, how you will use the space? Is it safe? Noise, poison ivy, water, etc.

Give instructions and set expectations before activity: Signals to regroup, timing, where they can go etc.

Gather all materials in advance, consider stations:- supplies, props, location indicators.

Weather! Can you still do this activity in the rain? Under cover? Is there shade?



# Environmental/Outdoor Activities

## Tips for a Good Experience

Make sure the sun is not shining in the eyes of the participants.

Sunglasses prevent eye contact with participants.

Avoid- walk and talk - Gather participants in a group; don't talk to them while they are stretched out in a line.

Promote an active, hands-on approach.

Be open to unexpected opportunities, such as a butterfly flying about or a caterpillar crawling past.

**Relax and have fun! Enthusiasm is contagious!**



# Resources



# Purposes of Environmental Literacy

- To connect people to the environment and natural world and develop an appreciation for it  
*(Some lessons are just fun and get people outside!)*
- To empower people to make and act responsibly toward the environment  
*(Other lessons direct us to take action or make better decisions)*



# WSA Environmental Literacy Resources

- Website- One stop shopping!
- In Person Boxes/Resources to check out (Stewards Only)
- Some In Person Boxes can be accessed from the Website and printed out at home.
- Online Lessons

# Watershed Model and Erosion Model

Stewards may check these out of the Watershed Stewards Academy

They are great models for demonstrating erosion, a watershed, and point and nonpoint pollution.

(It's a plus if you like to tell stories!)





# In Person Boxes

Everything you need to teach:

- Posters
- Read Aloud Books
- Signs for Stations
- Directions
- Sample Lesson Plan
- Dice

(Stewards Only)





# Sample Topics for Our Boxes + Online Resources

- **The Water Cycle** - pretend you're a drop of water traveling through the water cycle
- **How Seeds Travel**-the characteristics seeds have and their relationship to environment
- **Watersheds 101** - make your own mini watershed model
- **Bluebirds** - Martha Sykora's 2020 Capstone Project at Crofton Library
- **Who Polluted the Chesapeake** - how did the pollution in our creeks and rivers get there?



# Our New Hub for Environmental Literacy: <http://aawsa.org/environmental-literacy-resources>

HOME ABOUT WATERSHED STEWARDS EVENTS PROGRAMS TOOLS FOR STEWARDS OUR IMPACT TAKE ACTION

## Take Action

AT HOME

FIND A STEWARD IN  
YOUR WATERSHED

HABITS THAT HELP

RAINSCAPING  
SOLUTIONS

ENVIRONMENTAL  
LITERACY

FIND YOUR LOCAL  
WATERSHED GROUP

A PRIMER ON WATER  
QUALITY

EXPLORE ANNE  
ARUNDEL COUNTY  
WATERSHEDS

COVID-19 SITE VISIT  
PROTOCOLS

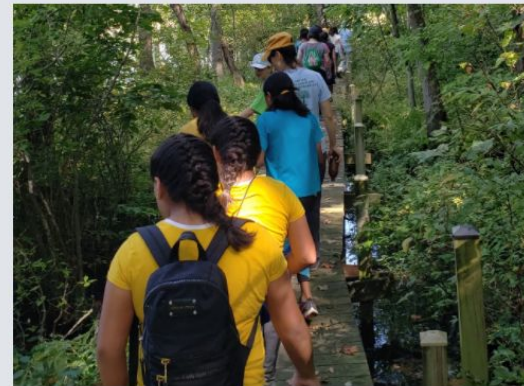
PROJECT SAFETY  
PROTOCOLS

## ENVIRONMENTAL LITERACY

Ready to inspire the next generation of environmental leaders?



# WSA Educational Resources



**Our new hub will make it easy for Stewards and the general public to find ideas for hosting fun, impactful educational programs and activities that inspire individuals to take action.**



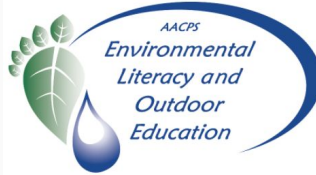
# Great Resources from Across the Web



project **WET**  
WATER EDUCATION TODAY



**Environmental Literacy in  
AACPS**

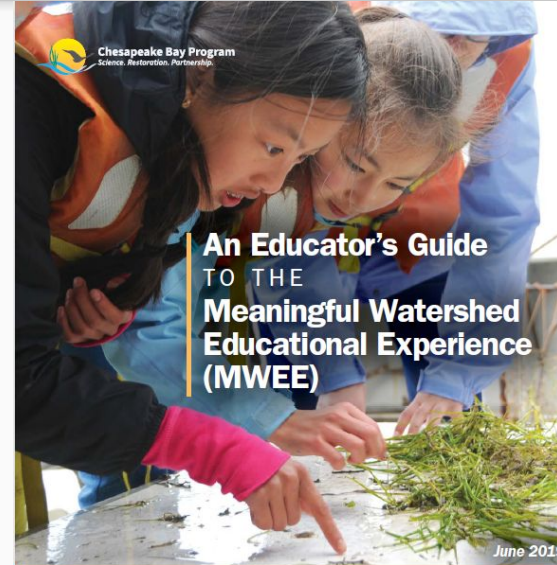


**Environmental Literacy  
Blackboard Resource Site**

Various resources are found here!



**MAEOE**



**MWEE**



## Just for Fun: Resources to Promote Nature Appreciation

### Fun Activities

Not every lesson or activity needs to have as its purpose a call to action to be a good steward of the Chesapeake Bay. Getting out and enjoying the outdoors can be fun. An appreciation of nature can lead to a desire to better stewardship.

The activities listed here can be adapted to a wide variety of audiences and ages.



### Photographic Memory Hunt

After taking a mental picture of natural objects on a tray, go on a scavenger trying to find similar objects.



### Storytelling Sticks

Create a record of your adventures outdoors using found objects. Find out how one Watershed Steward approached this fun activity.



### Mud Pies

Get your hands dirty (or wear gloves) and use natural objects to decorate. Appreciate how mud can be useful and pretty!



### Sensing Your Tree

Can you relocate your tree you previously explored with a blindfold on? A tree can have distinct feels and even smells! (You probably shouldn't taste it!)



### Squirrel Stowing Skills

Hide some acorns, go for a walk, return and try to find them. Good memory skills, plus an explanation of how some oak trees get started!

### Lentil Sprouts

How do seeds grow? Have an opportunity to get an up close look at various plant parts.

Linked to that page,  
Just for Fun:  
Resources to  
Promote Nature  
Appreciation  
(created last spring  
with social distancing  
in mind)

In the Activities section, we're dividing our resources into three categories:

# Activities



We have three categories of resources for you to explore:

**[Watersheds and Our Local Waterways](#)**

**[Our Local Ecosystem](#)**

**[Fighting Pollution with Habits that Help](#)**

For many of these resources, Stewards have the option of checking out materials at Arlington Echo to support their outreach and education programs.

# How Seeds Travel



This activity highlights the special characteristics that seeds have developed to move away from their parent plants. It includes a lesson about how seeds depend on clever adaptations for their success, and shows how seeds use wind, water, animals, and humans to help them find good places to grow.

*How Seeds Travel* can be paired with activities emphasizing the close relationships between plants and animals. It also corresponds to lessons about invasive plants and how they reproduce themselves so effectively.

Learning about seeds promotes healthy watershed awareness when individuals gain an appreciation for the weird and wonderful ways plants reproduce by seeds. This knowledge can become action when people care for native plants and help remove invasives before their seeds can spread.



# From How Seeds Travel

Each lesson will have similar format.

Everything on one page with a clickable Table of Contents.

[How Seeds Travel](#) - all the information on this website in a single document!

Click on the Table of Contents below to jump to any section on this page . . .

## [The Activity](#)

[How Seeds Travel Cheat Sheet](#)

[Materials You Will Need \\*](#)

[Directions](#)

[Sample Lesson Plan](#)

## [Adaptations](#)

## [Resources](#)

[More About Seeds!](#)

[Further Reading](#)

[Additional Resources](#)

[From WSA](#)

## [Take Action](#)

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## On the “How Seeds Travel” page, you’ll find . . .

- A “Cheat Sheet”
- Materials you’ll need
- Directions
- Sample lesson plan
- Adaptations
- More fun resources!
- Suggestions for taking action
- Links to all the print materials
- A printable PDF of all the information on the website!

## How Seeds Travel Cheat Sheet

[How Seeds Travel Cheat Sheet](#) - a PDF version you can print

**Concepts to Explore:** Seeds are the means by which many plants reproduce. Seeds don't usually flourish when they try to grow right next to the parent plant, because the parent will outcompete the seedling for light and other resources necessary for life. As a result, seeds have developed a variety of adaptations so they can move!

- Some seed pods “explode” and scatter their seeds.
- Seeds also travel by air. Fuzzy dandelions or maple “helicopters” are familiar examples.
- Water helps some seeds travel, so they can find viable spots on a bank downstream.
- Seeds travel with the help of animals. Some seeds have tiny hooks that cling to fur (or clothing!) and drop off far from the parent plant. Squirrels bury acorns (oak seeds) and forget where they are, leaving them to grow into a tree. Some seeds are eaten and then pass through the digestive tract of animals and are later pooped out ready to grow!
- Invasive plants can be very effective in their means of dispersal.

**Suggested Books to Share:** [Seeds Move by Robin Page](#) or [A Seed is Sleepy by Dianna Hutts Aston](#).

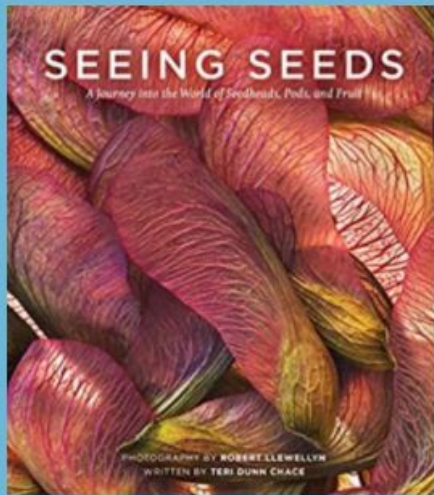
Hands-On Activity: using seed samples in petri dishes, allow participants to explore examples of seeds first-hand.

**Optional Outdoor Activity:** Go on a seed hike and look for examples of seeds. (A copy of the [Seed Search Observation Chart](#) should be provided for each student or small group.)

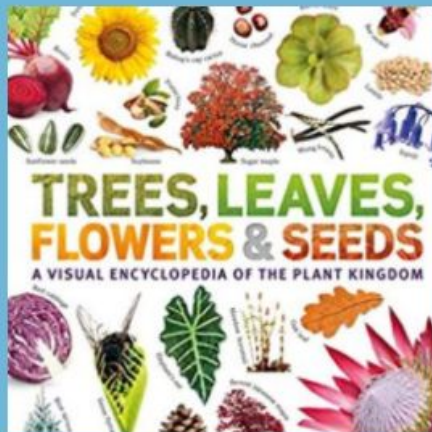
**Reflection:** Don't forget to ask your participants what they learned and how they can connect this to action for a healthy watershed!



[Seeing Seeds](#)



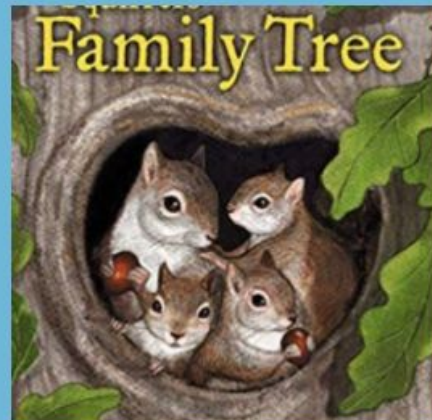
[Trees, Leaves, Flowers, and Seeds](#)



[It Starts With a Seed](#)

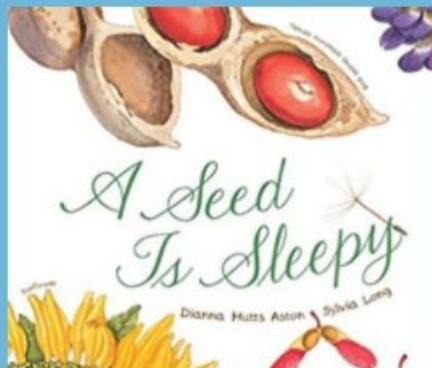


[Squirrel's Family Tree](#)



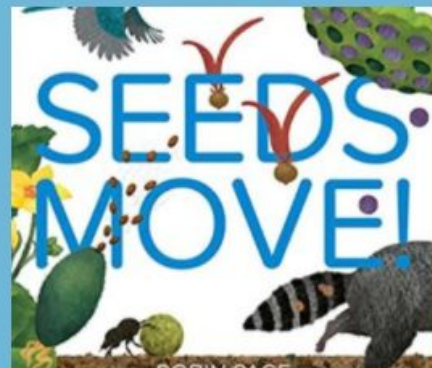
[A Seed is Sleepy](#)

[Read-Aloud Version](#)



[Seeds Move!](#)

[Read-Aloud Version](#)



Lessons often have designated **ages or grades** but include adaptations to work with a variety of groups.

K-2  
3-5  
Middle School  
High School  
Adults



Lessons are written with a particular **setting** in mind, but again can be adapted.

Large or small group  
Table at community event  
Classroom  
Indoors/Outdoors



### Materials You Will Need

- 9 dice – one for each station
- [9 signs – one for each station](#)
- Copy of *Did a Dinosaur Drink This Water?* or *Down Comes the Rain*.
- Water Cycle Poster available in [English](#) or [Spanish](#)
- Optional – “passports,” [stickers for “passports”](#) or a [chart](#) to record individuals’ movements through the water cycle



Water Cycle Signs  
for Stations



Water Cycle  
Poster English



Water Cycle  
Poster Spanish



Stickers for Water  
Cycle Passports



Water Cycle  
Recording Chart

### Directions

**Preparation:** \*\* Before you begin, set up your stations. Decide how long you will play, and whether individuals will take a certain number of turns or move through the cycle for a specific length of time.

**Exploration:** Begin by reading aloud the book *Did a Dinosaur Drink This Water?* (Available through Interlibrary Loan from [Marina](#).) [Read aloud here](#). Or *Down Comes the Rain*. [Read aloud here](#). As you listen to the story pay attention to the places water goes. Can you imagine where

From the online  
hub.  
This is from the  
Water Cycle Game.  
You would just  
need to provide  
your own dice.



# Another Adaptation: Virtual Lessons!

- Can be presented at a virtual program
- Google Slideshow includes
  - Notes for the Instructor
  - YouTube Videos for read-aloud books
  - a Nearpod Interactive Game
- You can use it as-is, or customize it and make it your own!



Different types of plants have different types of seeds.



**Common Milkweed** form pods that open to release the seeds. The seeds are the brown circles, not the white cottony material.



**Purple Coneflower:** the center orange cone dries to form many seeds.



**Tulip Poplar** trees produce structures where seeds' form at the base. Each seed breaks off as the cone ripens.



**Pin Oaks** produce their acorns in the fall. Once ripe, the seed releases from the cap.

Keep coming back to the “Hub” page as material is constantly being added and updated.

- Websites will have all the information
  - Lesson plan
  - Materials to print
  - Other materials not hard to find
  - Questions for engagement
  - Form for feedback



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# Questions