

2010

George Washington
Regional Commission



Virginia Coastal Zone
MANAGEMENT PROGRAM

GEORGE
WASHINGTON
REGIONAL COMMISSION

[CHILDREN AND NATURE NETWORK GRANT FINAL REPORT]

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Introduction

As part of the scope of work under GWRC's FY 2009 CZM- funded technical assistance grant, GWRC has collaborated with local stakeholders to pursue implementation of a feasible regional children and nature program which would expand on the environmental education work performed currently in the Region.

This report summarizes meetings held with local stakeholders, the needs established from those meetings, and the products that resulted.

Part 1. PLAN Meeting, March 1, 2010

PLAN is a bi-annual meeting held among local environmental educators. At this meeting, the group name was changed to GROE, Greater Rappahannock Outreach Educators. Ms. Hammig attended to present the framework of the Regional Children and Nature Network and recruit members and gather suggestions from those already in the field. Members provided names of stakeholders from whom to recruit participation. Based on community research and GROE member's suggestions, a database of stakeholders was created.

Part 2. GWRC Staff Meeting with RAOOY, March 24, 2010

GWRC Staff met with the executive director of the Rappahannock Area Office on Youth, Ben Nagle. Mr. Nagle provided his comments and suggestions on the development of a Regional Children and Nature Network program as well as described his current programs.

Part 3. Children and Nature Network Survey

In order to inventory current opportunities for children to connect with nature and to identify areas of need, GWRC launched a survey in April 2010. Ms. Hammig was interviewed by Ted Schubel, host of Fredericksburg Today 1230WFVA AM. Radio spots ran once an hour for eight hours promoting the survey.



1.mp3



2.mp3



3.mp3

GWRC Staff also provided an opportunity for interested individuals to take the survey at the Rappahannock Group of the Sierra Club and Fredericksburg Parks and Recreation's Annual Earth Day Celebration, Saturday, April 24, 2010. The survey questions and results are below:



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| Question | Yes | No | Somewhat Or N/A | Open Ended Responses |
|---|--|----|-----------------------|--|
| What is your organization type? | Local Government (2), Local Parks and Rec (4), Parent (6), Social Services (7), Non- Profit Environmental (1), K-12 Education (8), Historic Site (1), Other (12) | | | |
| Are you familiar with Richard Louv's Last Child in the Woods book and the Children and Nature initiative? | 12 | 8 | 11 | |
| Do you offer nature-based activity programming for youth in the George Washington region? | 21 | 7 | 3 | |
| If yes, please describe your program(s) and the resources you need to support/expand your nature-based programs for youth. | Walking tours, Earth Day celebrations, restoration projects, field trips (Friends of the Rappahannock), scout badge classes (Friends of the Rappahannock), day camps, naturalist classes, walking trails, summer programs(Stafford County Parks and Recreation, Fredericksburg Parks and Recreation, George Washington Foundation), hiking (Fredericksburg Parks and Recreation), campouts (Stafford County Parks and Recreation), kayak program(Rappahannock Area Office on Youth), gardening, natural history appreciation, "Meaningful Watershed Experience" (Caroline County Planning Office), Bugbox (Bugbox), tree planting, bike rally(Tree Fredericksburg), natural resources field day(Spotsylvania County Cooperative Extension 4-H Youth Development) | | | |
| If you do not currently offer any nature-based programs, are you interested in doing so in the future? | 14 | 7 | | |
| If you are interested, what resources would you need to start a nature based program oriented toward youth? | Support staff, ideas, funding (Friends of the Rappahannock, Central Rappahannock Regional Library, Rappahannock Area Office On Youth, Fredericksburg Parks and Rec, Stafford County Public Works), ways to gather children. | | | |
| Do you have any nature-based facilities? If yes, what kind of property and who uses it? | 8 | | 12 | Edge of dirt on parking lot for planting (CRRL), Kayaks (RAOY) Oakley Farm (Spotsylvania County Schools), material art school (Aikido in Fredericksburg), walking trail, meadow, State Fair of VA Facility (Caroline County Planning Office), 3 miles of nature trails, government property, Motts Run Nature Center (Fredericksburg Parks and Recreation), regional landfill, park facilities, riverside forest buffer, City parks (Fredericksburg Parks and Recreation), "Nature Cottage" at Ferry Farm (George Washington Foundation), Curtis Park (Stafford County Parks and Recreation) |
| What resources do you need to support/expand your facility to serve more area youth? | Programs, instructors (George Washington Foundation), shelter (FOR), volunteers (CRRL) , public relations (Aikido in Fredericksburg), nature center (Stafford County Parks and Recreation), area/space, materials, money/funding/support (Fredericksburg Parks and Rec, Stafford County Public Works, Spotsylvania County, RAOY, CRRL, FOR) | | | |



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Part 4. Kick-Off Meeting, June, 15, 2010.

Based on the survey results, interested parties and key stakeholders were invited to a kick-off meeting on June 15, 2010.

Meeting Summary

Attendees: Daria Blom (FOR), Donna Boyd (Rappahannock Big Brothers Big Sisters), Collette Caprara (FLS Young Life column), Paula Chow (Sierra Club/City Clean and Green Commission), Andrew Deci (Spotsylvania Co.), Chris Folger (SGI), Heather Hamm (Stafford Parks and Rec), David Nunnally (Caroline Co.), Donna Pienkowski (SGI/Aikido in Fredericksburg), Shari Rosenberg (FOR), Paul Santay (Stafford Co.), Eric Lawrence Stott (Sierra Club), Suzanne Smith (Stafford Parks and Rec), Alma Withers (George Washington Foundation), Kevin Utt (City of Fredericksburg)

Staff: Kevin Byrnes, Laurel Hammig, Wade Dickinson

Agenda:

1. Program Background
 - a. Goals of the Program
 - b. Goals of the meeting
2. Current Environmental Education Programs
 - a. Friends of the Rappahannock
 - b. Tri County-City Soil and Water Conservation District
 - c. Others
3. Survey Summary
4. Identified Possible Pilot Opportunities
 - a. Hazel Hill Garden
 - b. City of Fredericksburg Property
 - c. Children and Farms
 - d. Mattaponi Canoe trip grant
5. Brainstorm other possible opportunities
6. Roles and Responsibilities for the group
7. Next Steps

Program Background

After introductions, Mr. Byrnes introduced the group to the background information for Children and Nature Network program in the George Washington Region. He summarized the inspiration from Richard Louv's book Last Child in the Woods as well as the grant deliverables from the FY2010 Virginia Coastal Zone Program Technical Assistance Grant.



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Goals of the Program

1. Identify opportunities to enhance existing Children and Nature Network related activities
2. Identify resource constraints and new project and funding opportunities
3. Leverage these to secure additional resources and forge partnerships to-
 - a. Expand existing Children and Nature Network activities
 - b. Develop new Children and Nature Network activities... one or more successful pilot projects

Goals of the Meeting

1. Provide a brief introduction to existing major Children and Nature Network related programs
2. Discuss Children and Nature Network survey findings
3. Discuss pilot opportunities
4. Assess the group's sense of importance of this topic and commitment to invest time
5. Develop a meeting schedule and team roles to assist GWRC staff

Current Environmental Education Programs

F.O.R. - Ms. Blom, FOR education director, provided an overview to the existing educational opportunities for children through FOR. She also described pilot projects currently being developed. The programs include: summer camps, fishing program, nature center, partnership with Stafford County high school students, My Life partnership with RAOY, environmental leadership program at Heritage Park. The program hopes to move downstream and engage more children from Caroline and King George Counties and the City of Fredericksburg.

Ms. Rosenberg introduced the thought of developing a regional 'passport to the outdoors' program similar to the existing National Park Service's Junior Ranger Program to connect different natural programs in the area and to encourage families' participation and visitation. Two FOR handouts were distributed: one describing the outdoor environmental education program and the 2010 Calendar of Events.

Tri-County/City Soil and Water Conservation District (TCC-SWCD) - Ms. Hammig provided an overview based on the information provided by the TCC-SWCD District Manager (see handout). The group was interested in learning more about the Envirothon event. TCC could possible coordinate the development of school yard habitats or school gardens, i.e. Alice Water's California model.

Others- Mr. Utt (Fredericksburg) provided a brief overview on outdoor educational opportunities summarized by the City as part of the 2008 VML Go Green Virginia Challenge. The major programs include sponsoring Earth Day, Motts Run Reservoir Recreation Area, and Camp Wildwood. Mr. Utt stated Linda Bailey, Nature Education Coordinator, would have updated information on these programs.



Mr. Nunnally (Caroline) described the Meaningful Watershed Experience sponsored by the Hanover-Caroline Soil and Water Conservation District conducted at Virginia State Fair Grounds for Caroline 6th graders.

Ms. Hamm (Stafford) described Stafford County's Great American Campout upcoming event and referred the group to www.Staffordparks.com for additional information.

Mr. Deci (Spotsylvania) introduced the City's Urban Fishing Program sponsored by DGIF. Other resources include wetlands off canal path in the City, Lake Anna State Park with reduced prices given to school groups, the Master Gardener and Master Naturalist programs sponsored by Extension, and Oakley Farm in Spotsylvania which provide all Spotsy 5th graders with a day- fieldtrip.

Survey Summary

Ms. Hammig provided an overview of the surveys conducted March-May 2010 to gather information on current programs throughout the Region and resources required to expand or begin programs. (See handout.)

Identify Possible Pilot Opportunities

Hazel Hill Garden- Ms. Hammig described the community garden project currently underway at the Hazel Hill subsidized housing complex. The group endorsed exploring the possibility of the R-Board and Spotsylvania County donating local compost to enrich the garden sites and help ensure the success of the program. A group member also suggested contacting the Master Gardeners program as Master Gardeners are required to complete a certain number of community service hours.

City of Fredericksburg Property – Mr. Utt described a city property of approximately 9 acres located off River Road, near Prettyman's Camp that abuts the Rappahannock River, which was recently acquired by the City. The City hopes to build a shed to house environmental education equipment and build information signs and open the property to local citizens, school groups, etc. for environmental education use. The property is located at the confluence of two proposed trails.

Mr. Utt also distributed copies of an April 16th Press Release from the White House titled "A 21st Century Strategy for America's Great Outdoors". He encouraged the group to read the document and be aware of potential opportunities that may come out of the program (see appendix 3).

Children and Farms- Mr. Byrnes described the Buy Fresh Buy Local pilot program in Spotsylvania County, coordinated by Elizabeth Borst. Ms. Borst has developed a relationship with farmers within the GW Region and has learned that farmers have produce that sits in the field unharvested for a variety of reasons. The Northern Virginia Buy Fresh Buy Local program sponsors picking crews to go into local fields to glean food for donation to shelters, soup kitchens etc. Our Children and Nature Network program could link transportation with teenage crews for community service to glean produce for family consumption and/or donation to a local homeless shelters or soup kitchens, etc.



Mattaponi Canoe Trip Grant – Mr. Nunnally described the canoe program to be implemented upon a successful grant application. In order to raise awareness for green infrastructure planning, children and nature, and scenic river designation, the seed grant through the Kodak Conservation Fund proposes to offer children the opportunity to take canoe trips down the Mattaponi River. This more unstructured program would let kids develop more analytical skills and experience a relatively undeveloped corridor that runs through the center of Caroline Co. Children would document the trip using disposable still and video cameras and then upload the pictures to a website to promote further awareness in the community. Potential program sponsors include local hunting/fishing stores, the State Fair, Rappahannock Area Office on Youth, the American Canoe Association, and the Mattaponi Canoe and Kayak Company.

Brainstorm Other Possible Opportunities/Roles for the Group/Next Steps

Spotsylvania Greenway Initiative (SGI) - Ms. Folger informed the group that SGI has a public outreach program they want to develop but they need assistance in the following areas: marketing, grant writing, forum for sharing ideas. She made the point that successful programs need local stakeholders to work. She suggested that the group pilot project be bigger than a small, localized pilot and suggested a catalog of all the CN&N-related opportunities in the Region. She also suggested the benefits of an on-going regional forum to exchange ideas, coordinate project development plans and competitive grant applications and work cooperatively to expand existing programs into other areas of the region. Ms. Folger also suggested ranking the CN&N-related programs within the catalog to give an understanding of the amount of “structure” or independent activity in each program.

Mr. Deci put forth the idea of not only cataloging programs, but also places and resources which received widespread group support.

Ms. Pienkowski described the low-impact development at Aikido in Fredericksburg, including an environmental sensitive meeting place with 20 parking spaces. She also suggested a calendar to help ensure programs do not compete with one another as well as possible coordination across groups to gain more community recognition.

Ms. Caprara suggested a meeting of all parks and recreation staff in the Region would increase communication and help the flow of ideas between jurisdictions.

Next Steps

- The group agreed that the first step was to build a “catalog” or comprehensive inventory. Non-profits with programs and local government staff will provide GWRC staff with program information within two weeks. GWRC staff will provide a template example of information needed on each program, place or resource.
- The group agreed to meet in mid-July to look over a draft of the “catalog”, the related regional “passport program”, and an inventory of information received to date. Another meeting will be



held in mid-September and then the group will move to meeting on a quarterly basis. Members who are unable to attend the meeting will be afforded the opportunity to provide electronic input. Ms. Rosenberg offered to spearhead the development of the passport program.

- In the future, Ms. Blom suggested the group could collectively pursue large grants and offer smaller mini-grants to applicable organizations. Mr. Byrnes agreed and proposed that with regional collaboration growing out of this effort, an identified program need could be taken to a foundation or government agency to build the case for a large grant award to meet that need.
- The group identified as a longer-term goal the need to identify local policies or procedures that prohibit children experiencing nature in an unstructured manner.

Part 5. Children and Nature Network Meeting, July 27, 2010

Meeting Summary

Attendees: Chris Folger (SGI), Heather Hamm (Stafford Parks and Rec), Shari Rosenberg (FOR), Eric Lawrence Stott (Sierra Club), Kevin Utt (City of Fredericksburg)

Staff: Kevin Byrnes, Laurel Hammig, Wade Dickinson

Agenda:

1. Review the Resource Catalog
2. Update on the Passport Program
3. Additional Project Resources
 - a. Apprentice Ecologist Project
 - b. Nature Rocks
4. Next Steps

Review of the Resource Catalog

The group reviewed the draft resource catalog and suggested ways to make it more user friendly. New formats will be distributed at the September meeting including an online web-based catalog, an online calendar of events, and a hardcopy format. Other thoughts including pursuing possible grant monies from NPS, DCR; talking to the FLS about how to get visibility on Fredericksburg.com; making recommendations to the GWRC to how to incorporate the resource catalog into tourism and economic development efforts.

Passport Program Update

Ms. Rosenberg walked the group through the draft version of the passport program. Suggestions included: posting children's names on a website who complete the program to give them more recognition, discuss collaboration with the MWH Needs Assessment Steering Committee, set a goal of



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participants for the first year, promote through the science directors in the various school systems, collect demographic information from the children and program suggestions from parents.

Additional Project Resources

Mr. Broughton provided the following information for the group's consideration and discussion.

Apprentice Ecologist Program

The Apprentice Ecologist Initiative is a unique leadership and service-learning opportunity (with a multi-award \$850 scholarship component) and a student can choose from a variety of options for their project. The time, location, and scope of the project is up to each individual student.

Currently, there have been about 20 Apprentice Ecologist projects completed in Virginia but so far none in Fredericksburg. They would be very interested to see our group start a group or incorporate this program into our existing group (Children in Nature). This program is self-directed by nature but is a great way for kids to take the initiative in thinking about, planning, and conducting their own project. The important thing is that the project becomes their own. Generally, there is one author for the project (motivated teenager) but we've also had younger kids participate and each one writes a short essay on what they gained from the project.

The Wilderness Project folks can help out to some degree from their end by providing information/contacts for potential project sites in our area but they also welcome the opportunity for us to decide on a place for our project or have the kids look into it themselves.

Here is some more general information and links:

Please read through this page to see how to register and participate, to learn more about possible project options, and for tips on conducting a project and writing your essay:

http://www.wildernessproject.org/volunteer_apprentice_ecologist

To view the hundreds of past projects that motivated volunteers, like you, have completed, please browse through our Apprentice Ecologist photo essays:

http://www.wildernessproject.org/apprentice_ecologist

Recent award winners can be found at:

http://www.wildernessproject.org/apprentice_ecologist/awards_2009



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Visit us online at: <http://www.wildernessproject.org>

Volunteer at: http://www.wildernessproject.org/volunteer_apprentice_ecologist

Facebook: Nature Rocks

www.NatureRocks.org

It would be great if our group was able to link somehow to the FB Nature Rocks page and also have our information on their website. It really is a great website with some awesome ideas. This could be a great opportunity to try to work with the folks at Nature Rocks.org and try to put something together about our area on their website. We could work with them to populate the local site a bit more.

Next Steps

- GWRC staff will develop a draft method of displaying the resource catalog including a web-based map form, a web-based calendar, and a hardcopy to print.
- FOR staff will update the Passport Booklet and finalize activities for each participating site by August 9th. Staff will also pursue boy scouts as an option to build the stamp boxes at each site. A finalized booklet will be presented at the September meeting.
- GWRC staff will develop a draft strategy for presenting this information to localities.

Next meeting- mid-September, then moving to a quarterly basis

Part 6. Children and Nature Network Meeting, September 14, 2010

Meeting Summary

Attendees: Daria Blom (FOR), Linda Bailey (City Parks and Rec), Ben Nagle (RAOOY), Shari Rosenberg (FOR), Kevin Utt (City of Fredericksburg)

Staff: Kevin Byrnes, Laurel Hammig

Agenda:

1. Review the Resource Catalog
2. Update on the Passport Program
3. Next Steps



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Review of the Resource Catalog

Ms. Hammig presented the hardcopy of the resource catalog. Suggestions included adding icons to indicate available facilities; list state and national park websites; FOR offered the use of their pictures for better cover art; change name to Children and Nature Guide. The group brainstormed methods of distributing the document to the community. Electronically was the general consensus. FOR staff offered to distribute it to instructional coordinators. Mr. Byrnes suggested creating a separate publication and distribution tracks, the first being an accelerated "Fast" track approach to get limited copies distributed in the community to raise awareness in measure community support for more copies and a slower track that would be based on the identification of funding resources to cover the cost of mass-producing the catalog so that it could be distributed on a wholesale basis through the public & private schools and at children-oriented outdoor events."

Ms. Hammig presented the draft online map. The group made suggestions including color coding the map placements into categories (city park, regional park, national park).

Ms. Hammig suggested groupsite.com would be a tool to maintain a group calendar. Ms. Blom suggested partnering with Fredericksburg.com to make a "children and nature" category. Mr. Nagle suggested recommending to localities the adoption of a similar calendar system that could automatically pull in regional information.

Passport Program Update

Ms. Rosenberg walked the group through the draft version of the passport program. Suggestions included: contacting staff at Fort A.P. Hill, utilizing the graphic design class at Spotsylvania Tech or the COAR office at UMW. Mr. Byrnes suggested a future passport that is more generic and Chesapeake Bay related. RAOOY could donate kids to help build and/or install stamp boxes if adequate oversight and supervision is provided.

Mr. Nagle described the upcoming high school student survey.

Next Steps

Ms. Hammig will make the suggested updates to the resource catalog and to the website map.

Members will respond to the survey to be emailed so staff can gauge how to move the project forward.

Part 7. Next Steps Questionnaire

In order to guide the future of the program, a questionnaire was distributed to the Children and Nature Network members. The question and responses are listed on page 12:



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| Question | Responses |
|---|--|
| Who is the C&NN Audience? | All of the Above, Others including local political and community leaders, and environmental stewards |
| Need for Organizational Structure | Yes, we've established a good starting point. Quarterly meetings with special meetings if needed. Commitment depends on the purpose. |
| Periodic Updates... local commitment to maintain community calendar? | Needs to be simple to update and maintain. Must not add another layer of administrative busywork. Maybe only list major events. |
| Program conflicts? | Events occurring on the same day is a sign of a vibrant community. |
| Needs Assessment | More large natural areas, education and interpretation, informed and committed community leaders |
| Gap Analysis | Money to purchase land, make upgrades, employee naturalists and educators, and produce quality programming. |
| Researching and coordinating grant opportunities and benefits | Focus on funding current programs and advertising our efforts. Coordinated regionally. Opportunity possibly through the federal MOU released on April 16 th . |

Products -

Appendix 1. Resource Guide

1. PDF
2. [Online Map](#)

Appendix 2. Passport



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Look deep into nature, and then you will understand everything better.
-Albert Einstein

George Washington Regional Children and Nature Guide

Fall 2010

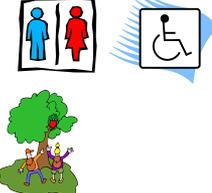


| CAROLINE COUNTY | | |
|---|---|--|
| <p>Alexander Berger Memorial Sanctuary</p> <p>No Street Address Call or see website for directions</p> <p>434-951-0572</p> | <p>This area is on two terraces overlooking the Rappahannock River and has trails throughout mature second-growth forest. It has a diverse variety of plants and wildlife as well as being an encampment for the Confederate army in the Civil War.</p> | <p>http://www.nature.org/wherewework/northamerica/states/virginia/preserves/art1228.html</p> |
| <p>Caroline Recreational Park</p> <p>19127 County Park Dr. Milford, VA</p> <p>804/633-7277</p> | <p>Basketball, tennis, and volleyball courts. Baseball and soccer fields. Playground/tot lot. Picnic Shelter. Skateboard park.</p> | <p>http://www.co.caroline.va.us/parksandrec.html</p>  |
| <p>Lowe-Massie Park</p> <p>Behind Dawn Progressive Center 16315 Dawn Blvd Hanover, VA</p> <p>804/633-7277</p> | <p>Basketball courts. Baseball field. Exercise/walking trail. Playground/tot lot. Picnic shelter.</p> | <p>http://www.co.caroline.va.us/parksandrec.html</p>   |
| <p>Pettigrew Wildlife Management Area</p> <p>Rt. 615/Buckner Road 540-899-4169</p> | <p>Allows for hunting, limited fishing, and hiking in both upland and wetland areas.</p> | <p>http://www.dgif.virginia.gov/wmas/detail.asp?pid=7</p> |
| <p>Robert Farmer Park</p> <p>Behind Bowling Green Elementary School 16261 Richmond Turnpike Bowling Green, VA 804-633-7277</p> | <p>Basketball courts. Exercise/walking trail. Playground/tot lot. Picnic shelter.</p> | <p>http://www.co.caroline.va.us/parksandrec.html</p>   |

CITY OF FREDERICKSBURG

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|--|--|--|--|
| | <p>Alum Spring Park</p> <p>99 Greenbrier Drive Fredericksburg, VA 540-372-1086</p> | <p>Historic 35– acre wooded park with cliff rock formations, Hazel Run, walking trails, picnic areas with grills/tables, picnic shelter (available for rental), playground, bathrooms.</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p>  |
| | <p>Bug Box</p> <p>10822A Courthouse Road Fredericksburg, VA 540-710-0776</p> | <p>Check out exotic insects, arachnids, crustaceans, and a pet snake, turtles, frogs, toads, and salamanders.</p> | <p>http://www.bugbox.net/index.html</p>  |
| | <p>Canal Path</p> <p>Starts at Rappahannock River (old dam site) and ends in downtown Fredericksburg 540/372-1086</p> | <p>Paved trail buffered by woods. Passes by diverse wetland areas.</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p> |
| | <p>City Dock</p> <p>East end of Sophia Street Fredericksburg, VA 540/372-1086</p> | <p>Dock and historic civil war site with fishing access and benches.</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p> |
| | <p>Dixon Park</p> <p>1300 Dixon Street Fredericksburg, VA 540/372-1086</p> | <p>46 acre park with athletic fields, outdoor swimming pool, playground, 1.5 mile jogging/walking trail, nature preserve area/wetlands, restrooms.</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p>  |

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| | <p>Fredericksburg Battlefield</p> <p>1013 Lafayette Blvd Fredericksburg, VA</p> <p>540/373-6122</p> | <p>6.7 miles of trail and a picnic area within 1,458.1 acres of historic battlefields</p> | <p>http://www.nps.gov/frsp/red.html</p> |
| | <p>Motts Run Reservoir</p> <p>River Road Fredericksburg, VA 540/372-1086</p> <p>Open April–October</p> | <p>860–acre park including 160-acre reservoir with canoe and jon boat rentals, fishing, picnicking, hiking on 4.5 miles of trail, orienteering course, Motts Run Nature Center (open weekends 12-5pm).</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p>  |
| | <p>Old Mill Park</p> <p>2401 Caroline Street Fredericksburg, VA</p> <p>540/372-1086</p> | <p>Located on the banks of the Rappahannock River with picnic shelters (available for rental), grills, playground, nature preserve, 1-mile orienteering course, boating access, fishing. NOTE: River can be dangerous– do not enter without a life preserver.</p> | <p>http://www.fredericksburgva.gov/departments/recreation/index.aspx?id=1100</p> |
| | <p>Downtown Greens</p> <p>206 Charles Street Fredericksburg, VA</p> <p>540/371-7315</p> | <p>This is a garden in downtown Fredericksburg with a variety of trees, flowers, and sometimes vegetables.</p> | <p>www.downtowngreens.org</p>  |
| | <p>Snead's Farm</p> <p>18294 Tidewater Trail Fredericksburg, VA</p> <p>540/371-9328</p> | <p>This farm's stand is open daily from the last weekend in April through Christmas eve and has U-Pick pumpkins and Christmas trees.</p> | <p>www.sneadsfarm.com</p> |

| | | | |
|---------------------------|---|---|--|
| | <p>Friends of the Rappahannock</p> <p>3219 Fall Hill Avenue Fredericksburg, VA</p> | <p>Interpretive canoe trips and hikes. Scout, school, youth and adult environmental education programs. Check website for current offerings.</p> | <p>www.riverfriends.org</p>  |
| | <p>Virginia Outdoor Center</p> <p>3219 Fall Hill Avenue Fredericksburg, VA</p> <p>540/371-5085</p> | <p>Canoe and kayak rentals on the Rappahannock River, 35-acre site with a riverfront beach and campsites; kayak touring classes; ropes course; kayak classes; climbing wall; day hikes and backpacking; youth camps.</p> | <p>www.playva.com</p>  |
| KING GEORGE COUNTY | | | |
| | <p>Barnesfield Park</p> <p>3360 Barnesfield Road King George, VA</p> <p>540/775-4386</p> | <p>A park with softball fields, a concession stand, basketball courts, picnic areas, soccer fields, hiking nature trails, a playground, and horseshoe pits. The pavilion can be rented for free by residents and for a fee for non residents.</p> | <p>http://www.virginia.org/site/description.asp?attrid=12398</p> |
| | <p>Caledon Natural Area</p> <p>11617 Caledon Road King George, VA</p> <p>540/663-3861</p> | <p>This is a state park with one of the largest concentrations of bald eagles on the East Coast in the summer. The park has picnic areas, a visitor center and trails through mature forests on the Potomac River.</p> | <p>http://www.dcr.virginia.gov/state_parks/cal.shtml</p>  |

| SPOTSYLVANIA COUNTY | | |
|----------------------------|---|--|
| | <p>Arritt Park</p> <p>9718 Wallers Road, Spotsylvania, VA 540-507-7529</p> | <p>A 26.5 acre park with hiking trails, a swampy pond, a picnic shelter, a playground, and ball fields.</p> <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p> |
| | <p>Chancellorsville Battlefield</p> | <p>4.1 miles of trail and a picnic area within 1,703.5 acres of historic battlefields</p> <p>http://www.nps.gov/frsp/index.htm</p>  |
| | <p>Harrison Road Convenience Center Park</p> <p>5917 Harrison Road Spotsylvania, VA 540-507-7529</p> | <p>Athletic fields, playground, and biking or walking trail.</p> <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p> |
| | <p>Hunting Run Trail</p> <p>9701 Elys Ford Road Spotsylvania, VA 540-507-7529</p> | <p>This park has lots of fishing facilities including a boat rental facility, fishing pier, and boat ramp.</p> <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p> |
| | <p>Lake Anna State Park</p> <p>6800 Lawyers Road Spotsylvania, VA 540-854-5503</p> | <p>2,304 acre park with 8.5 miles of lakefront. It has extensive wooded hiking trails, picnic areas, beaches, boat ramp, children's and handicapped fishing pond, camping, cabin, concession stand, bathhouse, and a visitor center. Parking, swimming, brining horses, and launching a boat all have a fee which varies during the season and day of the week.</p> <p>http://www.dcr.virginia.gov/state_parks/lak.shtml</p>  |

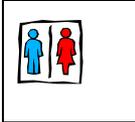
| | | | |
|--|---|---|--|
| | <p>Loriella Park</p> <p>10910 Leavells Road Spotsylvania, VA 540-507-7529</p> | <p>This park has a swimming pool, tennis courts, athletic fields, a Frisbee golf course, a picnic area, and hiking trails. There is a fee for using the pool, a slightly larger fee for city residents, and an even larger fee for non-residents.</p> | <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p> |
| | <p>Spotsylvania Battlefield</p> <p>9550 Grant Drive West Spotsylvania, VA</p> | <p>7 miles of trails and a picnic area within 1,328.4 acres of historic battlefields.</p> | <p>http://www.nps.gov/frsp/index.htm</p> |
| | <p>Mary Lee Carter Park</p> <p>9901 Benchmark Road Spotsylvania, VA 540-507-7529</p> | <p>Small park with a soccer field and a walking trail</p> | <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p> |
| | <p>Ni River Recreation Area</p> <p>10516 Gordon Road Spotsylvania, VA 540-507-7529</p> | <p>Boat launch and rental area, restrooms, picnic area, and fishing area.</p> | <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p>  |
| | <p>Patriot Park</p> <p>5710 Smith Station Road Spotsylvania, VA 540-507-7529</p> | <p>A park with baseball diamonds, basketball courts, fields, an amphitheater, bathrooms, and trails.</p> | <p>http://www.spotsylvania.va.us/departments/parksandrec/index.cfm?id=700</p>  |

| | | | |
|-------------------------------|---|--|--|
| | <p>Salamander Loop of the Ni River Trail</p> | <p>Over 2 miles of trail through beautiful upland forest featuring a farm pond with active beaver lodge and dam, interpretive signs, and an extensive vernal pond area. A portion of the pond is ADA accessible.</p> | <p>http://www.spotsylvania.org/greenways.org</p> |
| | <p>Virginia Central Trail</p> <p>5917 Harrison Road Spotsylvania, VA 540-507-7529</p> | <p>Wooded trails either 1.2 or 0.9 miles long</p> | <p>http://www.spotsylvania.va.us/departments/parksanddrec/index.cfm?id=700</p> |
| <p>STAFFORD COUNTY</p> | | | |
| | <p>St. Clair Brooks Memorial Park</p> <p>80 Butler Road Stafford, VA</p> <p>540/658-4871</p> | <p>80 acres with woods, nature trails, grills, picnic shelters, basketball courts, a sand volleyball court, a horseshoe pit, a skate park, a playground, baseball fields, and a football field.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |
| | <p>George Washington Ferry Farm</p> <p>268 Kings Highway Stafford, VA 540-370-0732</p> | <p>George Washington's boyhood home with a visitors center, archaeology lab, demonstration garden, and nature trails.</p> | <p>http://www.kenmore.org</p>    |

| | | | |
|--|---|---|--|
| | <p>Historic Port of Falmouth</p> <p>401 River Road Stafford, VA 540-658-4871</p> | <p>Along the river you can fish and there are picnic areas.</p> | <p>http://www.staffordparks.com</p>  |
| | <p>Willowmere Park</p> <p>21 Willowmere Pond Rd Stafford, VA</p> <p>540/658-4871</p> | <p>A park with baseball fields, picnic shelters, soccer fields, a playground, concession stand, and trails.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |
| | <p>John Lee Pratt Memorial Park</p> <p>120 River Road Stafford, VA</p> <p>540/658-4871</p> | <p>A park with picnic shelters, grills, basketball courts, tennis courts, a horseshoe pit, a Frisbee golf course, a gravel track, a walking/biking trail, nature trails, playgrounds, a baseball field, soccer fields, and restrooms.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |
| | <p>Patawomeck Park</p> <p>25 Chopawamsic Pkwy Stafford, VA</p> <p>540/658-4871</p> | <p>A park with sports fields, a playground, open space, trails, and a pavilion.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |
| | <p>Smith Lake Park</p> <p>370 Doc Stone Road Stafford, VA</p> <p>540/658-4871</p> | <p>A park with baseball fields, two athletic fields, paved trails, a playground, and a picnic shelter.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |

| | | | |
|--|---|--|--|
| | <p>Gari Melchers Home and Studio</p> <p>Belmont 224 Washington Street, Stafford, VA 540-373-3448</p> | <p>Home of the late artist, Gari Melchers, it now gives historic tours, displays some of his artwork, and has nature and garden trails around his estate.</p> | <p>http://www.umw.edu/gari_melchers</p>  |
| | <p>Mount Olympus Farm</p> <p>23298 Jefferson Davis Hwy. Stafford, VA 804/448-0395</p> | <p>Open seasonally for U-Pick strawberries, blueberries, and blackberries.</p> | <p>www.mtolympusfarm.com</p>  |
| | <p>Abel Reservoir</p> <p>Kellogg Mill Road Stafford, VA 540-658-4871</p> | <p>Stocked for fishing, boating (with an electric motor), hiking, and picnicking.</p> | <p>http://www.staffordparks.com</p> |
| | <p>Aquia Landing Park</p> <p>2846 Brooke Road Stafford, VA 540-658-4871</p> | <p>Beach for sunbathing, picnicking, fishing, and 2 large shelters for rent.</p> | <p>http://www.staffordparks.com</p>  |
| | <p>Curtis Memorial Park</p> <p>58 Jesse Curtis Lane Stafford, VA</p> | <p>A park with natural hiking trails, picnic shelters, a playground, ball field, sand volleyball courts, an amphitheater, a pool, a wading pool (both for a small fee), tennis courts, skateboard park, a lake with fishing and a boat landing, and a golf course for a fee.</p> | <p>http://stafford.va.us/parks/index.shtml</p>  |

KEY

| | |
|---|--|
|  | City/County Park |
|  | State Park |
|  | National Park |
|  | Private/Non-Profit |
|  | Handicap Facilities |
|  | Restroom Facilities |
|  | Field Trips/Camps/Special Events Held Here, Contact Site for more information |



In Partnership With:

Parks and Recreation Departments of Caroline, King George, Spotsylvania, and Stafford Counties and the City of Fredericksburg

Friends of the Rappahannock

Spotsylvania Greenways Initiative

George Washington Ferry Farm

Rappahannock Area Office on Youth

The Bug Box

Rappahannock Big Brothers Big Sisters

the Rappahannock Group of the Sierra Club



passport to the Rappahannock



This booklet belongs to:

Date started:

Date completed:

So you want to be an ECO EXPLORER?!!

Follow these simple steps and you're on your way!
You have one year to complete the following:

1. The Map Reading activity on page 4
2. The Leave No Trace activity on page 3
3. Go to at least 3 of the 8 parks, do the corresponding activity, and use the stamp at the park to stamp page 17.
4. Do at least 3 of the 15 at home activities.
5. Bring this completed pamphlet into Friends of the Rappahannock and they will give you a patch OR mail in the stamped page (page 17) and the survey page (page 18), and Friends of the Rappahannock will mail you a patch at home.

SAFETY IN THE OUTDOORS

You should have with you the following items before you go outside! Having these items will make your trip more enjoyable and safe.

- Water
- Snacks or a lunch
- Sunscreen and a hat
- Bug Repellant
- Appropriate dress for the weather
- Protective footwear (sandals with a heel strap, sneakers, or hiking boots)



Be aware of poison ivy and ticks.



LEAVE NO TRACE ACTIVITY

When you go outside, try to leave the area just the way you found it. Here are some "Leave No Trace" guidelines to follow when you go outside:

*Take only memories.
Leave only footprints.
Kill only time.*

Now that you know these guidelines, **what would you do** in these different scenarios to make sure that you are leaving nature the way you found it?

...a bug was crawling up your sleeve?

...you saw your favorite wildflower blooming?

...you saw your friend breaking a branch off a tree?

...you found some beautiful rocks on the beach of the Rappahannock River that you wanted to take home with you?

...you brought your lunch with you to picnic at a park but there were no trashcans?

Follow the guidelines of "Leave No Trace" to enjoy the outdoors and let others enjoy the outdoors too.

MAP READING ACTIVITY

Maps are a type of model of the land around us. They can tell you where things are located, help you plan a route, and can even help you draw conclusions about the world around us. Since maps have so many uses it is important to know how to read a map.

The map key (or legend) shows you what the *symbols* on the map stand for.

How many drainage basins are shown on this map?

You can use the scale bar and a ruler to help gauge *distances* on a map.

About how many miles is it from Salamander Loop to Friends of the Rappahannock?

The compass rose tells you the *direction* of things on a map.

What *direction* is Curtis Park from Caledon Natural Area?

Contour lines show *elevation* by showing how high above sea level the land along the line is. They are drawn in intervals because if you tried to draw a line for every elevation the map would be too full of contour lines to see anything else! Usually not every contour line is labeled, but the height between every line is always consistent on a map.

What are some elevations near the Western border of the George Washington Region?

BUG BOX INSECT ZOO

1. Do insects have an **exoskeleton** (a hard covering that protects their insides) or an **endoskeleton** (a set of bones inside their body)? (circle the correct answer)
2. Which of the following is not food for insects?
 - a. soap
 - b. nectar
 - c. other insects
 - d. plants
3. How many different kinds (species) of insects are there?
 - a. 100
 - b. 1,000
 - c. 1,000,000
 - d. 1,000,000,000
4. Which of the following is **not** true for moths but **is** true for butterflies ?
 - a. thick body
 - b. antennae with enlargement on end
 - c. spin a cocoon
 - d. fly mostly at night
5. In which environment do insects live?
 - a. Forests
 - b. Grasslands
 - c. Swamps
 - d. Streams
 - e. All of the above

CALEDON NATURAL AREA

Bald Eagle Identification



Bald eagles are the largest raptors in Virginia, with a wingspan of 70 to 90 inches. Adult bald eagles are unmistakable with a white head and tail, dark brown body, and a large yellow beak and yellow eyes. Birds less than four years old are mostly dark with irregular white mottling and lack the white head and tail.

Bald Eagles and Caledon Natural Area

Although bald eagles can be seen at all Virginia state parks in the Chesapeake Bay region, Caledon Natural Area is unique as a special eagle haven. For years eagles have nested at Caledon and each summer, large numbers of eagles congregate there from all over the southeastern United States. More than 50 eagles have been spotted at or near Caledon in a single day!

Activity:

Try hiking the Boyd's Hole Trail! This trail is **open Oct1-Apr 1** annually. The trail is an easy 3.5 mile round trip hike to the Potomac River. Ranger led Eagle Tours are available weekends mid-June thru early Sept.

Did you see any eagles?!

What was your favorite part of the hike? _____

CANAL PATH

The canal path in Fredericksburg is a 1.8 mile path that follows the canal from Princess Anne Street to Fall Hill Avenue. The canal was built from 1829 to 1849, but the company that maintained the canal was only in business for twelve years before going bankrupt!

Do you see the large pipe on the side of the canal? This was originally used to carry drinking water from the Rappahannock River to the town of Fredericksburg, but today it is used for aerating the water in the canal (sending up air bubbles so the water does not stand still). This helps make the canal excellent habitat for wildlife.

Activity: Go On a Scavenger Hunt

See if you can find the following plants or animals on your walk on the Canal Path. Put an X through the box if you see one!

| | | |
|------------------|--------------------------------|---------------------------|
| Painted turtle | Family of ducks | An ant crawling up a tree |
| River birch tree | Plants growing in the water | Great blue heron |
| Spider web | Poison ivy vine (don't touch!) | Cardinal |

CURTIS PARK

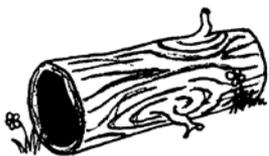
Optional Materials:

- Flashlight
- Magnifying glass



(clipartheaven.com)

Part 1: Find a stump where a tree has been cut down somewhere in Curtis Park. Each pair of light and dark rings within the tree stump counts as one complete ring. Each complete ring represents one year that the tree was alive. Count the rings in the stump beginning at the center. How old was the tree when it was cut down?



(arthursclipart.org)

Part 2: Find an old log somewhere in Curtis Park. Using the flashlight and magnifying glass, examine the inside of the log. Do you see any insects or spiders? Are any mosses and lichens growing on the side of the log? If you would like, carefully turn over the log and examine any creatures underneath. Logs serve as important habitat for all of the organisms that you observed. As logs are slowly decomposed by bacteria and fungi, they release their nutrients into the ground. If this decomposition didn't happen, the forest would be filled with dead trees and the soil wouldn't have any nutrients! Considering these facts, do you think that if you were the manager of Curtis Park you would leave the log in the forest or take it away?

FRIENDS OF THE RAPPAHANNOCK

Nature Journaling

Several famous naturalists kept nature journals to record their experiences in the outdoors. Sometimes they wrote descriptions of what they saw or felt, and other times they drew pictures. Walk along the trails here and find a comfortable spot where you have a good view of the river. Use this space to draw a picture of what the river looks like from your perspective, or write about what you are seeing or feeling.

How do you feel listening to the sound of the water?

Fun Facts about the Rappahannock River:

- 185 miles long and 2,700 sq. miles
- Largest nesting population of bald eagles in Virginia
- John Smith traveled around the Chesapeake Bay from 1607-1609, and came up the Rappahannock River in 1608.
- Several Native American tribes lived along the river, including the Rappahannock tribe, which the river is named after. "Rappahannock" means "rapidly rising and falling waters."
- The geology of the Chesapeake Bay region was formed about 35 million years ago, but the Bay itself formed its present shape about 3,000 years ago when sea levels rose following the end of the last Ice Age.

LAKE ANNA STATE PARK

Bird Scavenger Hunt



Your mission is to find as many things as you can that relate to birds. Use this list to check them off, but also write things down that are not on the list. Remember to be quiet, patient and use all your

observation skills by looking and listening. Select different areas (different trails, lake, pond, wooded areas, picnic areas, etc.) of the park to see who and what lives in the park. Have fun exploring the park by staying on the trails, leaving everything (except litter) where you found it.

A bird nest

The call of a bird (1 or 2 notes)

The song of a bird (series of notes)

A colorful bird

A bird flying low near the ground

A bird flying very high

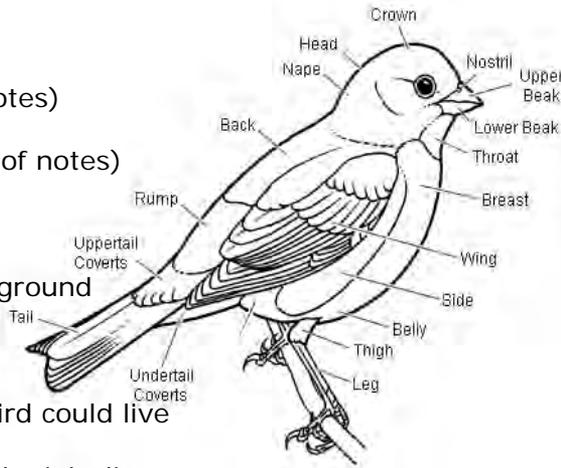
A hole in a tree where a bird could live

A place where a water bird might live

Something that might harm a bird

A place where a bird might bathe

A part of a plant a bird could eat



MOTT'S RUN NATURE CENTER

Orienteering Course – This is a great way to enjoy the outdoors, get exercise and learn the valuable skill of using a map and compass! It's best for anyone 9 and older (with adult). Information is available at the center or online: fredericksburgva.gov (Parks and Recreation, Parks, Motts Run Nature Center Orienteering Course). Compasses and maps are available for check-out at the center during operating hours. Please hike with a companion and bring water!

Dipnetting – A whole host of aquatic insects and other lakeshore life (crayfish, newts, frogs) may be discovered using a "dipnet!" These are available for check-out at the nature center during operating hours. Specimens may be collected along the lakeshore, gently observed, then released. Field guides are available for identification. Aerial sweepnets are also available for catch-and-release of butterflies, dragonflies and other flying insects.

Turkey Ridge Nature Trail – This self-guided nature trail follows Turkey Ridge Trail. A brochure leads hikers to 12 posts which pose questions and encourage discovery of the trail's features. Under a mile. Allow about 40 minutes to complete.

Tree Leaf and Animal Track Identification – Two interactive exhibits in the nature center offer participants an opportunity to test their knowledge of common leaves and animal footprints. Simple to use and try over and over again!

Record in the space below which activity you did. Did you find or see anything cool?!?! Write about what you discovered.

SALAMANDER LOOP TRAIL

Welcome to the Salamander Loop Trail! Please read the interpretive signs along the trail to learn how the trail got its name. As you are enjoying the trail, also look for small signs at the base of some trees.

The signs include the *common names* for some of the trees found in the forest as well as the *scientific names*. Scientific names are written in Latin and have two parts: genus (the first word that starts with a capital letter) and species (the second word starts with a small letter). For each tree sign, find the common name listed below, and fill in the scientific name from the sign.

| Common Name | <i>Genus</i> | <i>species</i> |
|------------------|--------------|----------------|
| American Beech | _____ | _____ |
| American Holly | _____ | _____ |
| Black Oak | _____ | _____ |
| Dogwood | _____ | _____ |
| Mockernut | _____ | _____ |
| Red Maple | _____ | _____ |
| Southern Red Oak | _____ | _____ |
| Sweet Gum | _____ | _____ |
| Tulip Poplar | _____ | _____ |
| Virginia Pine | _____ | _____ |
| White Oak | _____ | _____ |
| Willow Oak | _____ | _____ |

What do you notice about the scientific names? Look at the names for White Oak, Black Oak, and Willow Oak; what part of the name is the same? All oak trees belong to the genus _____!

AT-HOME ACTIVITIES

DECOMPOSITION

Materials: fertile soil, small plastic container, thin bits of trash

Directions:

- Collect a small square container something like what strawberries or blueberries come in at the grocery store with air slits.
- Collect some soil from your yard (make sure it is soil from a fertile part of the yard, not soil from a sandbox or from where it has accumulated on the driveway or something, if you collect it from the woods make sure to get soil from underneath the leaf litter layer on top).
- Layer the soil in the container with different waste objects such as a milk cap, a piece of string, a piece of paper, a bottle cap, toothpick, rubber band, tin foil (all small and thin) – make sure to include some different food wastes too such as a cucumber skin peel, an apple slice, a piece of bread, and a piece of candy. *avoid meat products
- Make sure that all the objects are covered by soil.
- Put some water in the container, just enough to make the soil moist but not saturated.
- Leave the container for about a month, monitoring it to make sure it stays moist.
- Open the container back up and empty the contents, look to see what happened to the waste you put in it.
- Do the experiment again with different objects, try leaving the container for different amounts of time, or see if anything happens if the soil is not moist or is left in the dark or whatever you can think of.

BUGS AT NIGHT

Materials: iron, electric lamp, different sheets of colored plastic (different colors of tissue paper will work too)

Directions:

- Set up an iron and an electric lamp (which produces light with little heat) at least a meter apart on a stable surface. *be careful of the hot iron

- Point the heat and the light away from you.
- Notice if bugs are more attracted to the heat from the iron or the light.
- Making the light different colors by putting the plastic sheets or tissue paper in front of the light.
 - Are bugs attracted to different colors?
- Why do you think bugs might be attracted to this? Do you think human development has had any unnatural affects on this natural attraction?

MOON CALENDAR

Materials: pencil, small circular object you can trace, paper

Directions:

- Draw the moon every night for two months (use a coin or lid to help draw the circle).
- Write down the time of night that you draw it and any other observations.
 - How high off the ground is it? Is it hazy or a particular color? Can you see the moon? Is the sun still out?
- What are some conclusions you can come to about the moon.
- A lunar month is the time between phases of the moon (ie., from one full moon to the next full moon). Based on your observations, how many days long is a lunar month?

NATURE OBSERVATION JOURNAL

Materials: pencil, paper

Directions:

- Sit in the same spot somewhere natural outside (in the grass, dirt, or woods) for at least 20 minutes.
- Write down all the wildlife you see and keep a tally of how many of each creature you see: birds, bugs, rodents, trees, flowers, etc.
 - If you don't know what they're called, just describe it.

- Do this once a week for 4 weeks, you will probably begin to see more wildlife as you become better at noticing it.
- Do you see different creatures if you go at different times of the day, if the weather is different, or for any other reason.

BAROMETER IN A BOTTLE

Materials: clean glass jar with a wide open mouth (top), like a jelly jar, a balloon, scissors, rubber cement (not necessary but it helps), straw, tape, paper, pencil

Directions:

- Cut the neck-end of the balloon off.
- If you have rubber cement, brush a little of it around the rim of the jar.
- Stretch the hollow piece of the balloon over the jar, and fit it so that you get a nearly flat sheet of rubber stretched over the mouth of the jar. (You may have to clean your hands now.)
- Tape the straw to the balloon with the end of the straw right in the middle of the jar and the long part of the straw going over the edge of the jar.
- If you'd like, tape a piece of index card or paper to the jar and trim the straw so that it makes a pointer on the card. Mark where your pointer starts.
- Monitor the pressure from day to day. (Keep the barometer in the same spot, but one without too much sun or the heat from the sun will make the air inside the jar expand, giving you a false reading.)



What's Happening?

When the air pressure around us, and around your barometer, goes down, the air in the jar expands. The balloon swells out a little bit, and the pointer tips down on your scale. When the air pressure goes up, the balloon gets pushed in a bit, and the pointer goes up. Watch the pointer as a storm comes through. You can predict the weather. It's an old and accurate first look at a forecast.

TEMPERATURE TIME WARP

Materials: a glass jar or plastic container, a cloth and rubber band to cover the container top, a house fly

Directions:

- Catch a fly and get him or her in the jar. He or she must be alive. It may take a while. But don't worry, if you're patient, you can catch one.
- Put the cloth over the top and then the rubber band around the cloth. Try turning the jar upside down.
- Put your experiment in the refrigerator for half an hour. Don't forget about it in there, since being in there too long could kill your fly.
- Take the jar out and watch your fly for a few minutes. Notice how fast it's moving.
- Put your experiment in the sun for a few minutes, and check on your fly again. How fast is he or she moving now?
- Your fly has served you well. Let him or her go free.

What's Happening?

Bugs are cold blooded, meaning their temperatures inside change with the temperature outside unlike humans. When a cold-blooded creature gets cold, everything inside it slows down. So the fly moved slowly. The same is true for reptiles. After some time in the sun, the fly gets warmed up, and starts moving faster. That's why snakes always lie around on rocks and roads, especially early in the morning — they get cold overnight, and they need to soak up some heat to get revved up again. Reptiles, insects, temperature, and motion – they're hot topics that are quite cool!

RECYCLED BIRD-FEEDER

Materials: empty quart sized cardboard milk carton, scissors, string or cord, hole punch or pencil, bird seed

Directions:

- Have an adult help you cut a hole in the bird feeder – it should be big enough so a bird could come and sit and eat the feed, but not too big or the carton will become unstable.
- Have an adult help you cut a hole using the hole punch in the top of the milk carton and put a string through the hole. Alternatively, you can poke a hole on either side of the flap at the top of the carton by poking a pencil through the top.
- Tie a knot in the string.
- Fill the carton with bird seed until it reaches the top of the hole.

- Hang the cart on a tree branch and watch the birds enjoy their snack. *Make sure to refill as needed

TERRARIUM IN A BOTTLE

Materials: plastic 2 liter soda bottle with cap, very sharp scissors or craft knife, dirt or potting soil, seeds, water

Directions:

- Remove the label from the bottle, discard the label but save the cap.
- Wash and rinse out the bottle and cap. (This can also be done with individual sized bottles, but make sure not to plant more than two seeds or they will be overcrowded and won't grow.)
- Cut the bottle close to the bottom. There may be a "line" near the end of where the label was, that's a good place to cut. You can cut it higher if you want.
- Lightly place dirt or potting soil in the base.
- Plant a few seeds in the dirt (you can use bird seeds or other ones from a store).
- Lightly water the seeds.
- Put the cap on the bottle.
- Cover the base of the bottle that has the soil in it with the top of the bottle, you will have to fiddle with it a bit to fit it back inside the base. This will help to keep the moisture inside the terrarium so that you will not have to water very often.
- Place in a sunny spot and watch for your seeds to grow. If your soil starts to look a little dry before your seeds come up, you can unscrew the cap and insert the head of spray bottle of water. Spritz several squirts in the terrarium.
- When the plants are ready, repot them or plant them in your garden.

What's Happening?

The clear plastic of the bottle lets sunlight through but keeps most of the moisture in, simulating the atmosphere around our earth.

The plants can grow with minimal watering because the terrarium is a closed ecosystem, using the energy from the sun to grow the plants. It is good to eventually replant the plants so that the roots have room to spread out and the stems and leaves have room to expand. If you do not want to do this, then you will have to make sure to plant small plants that will not need more room.



NATURE MAP

Materials: paper and pencil

Directions:

- Walk around your neighborhood, but instead of noticing man-made objects usually used to find your way around, use natural objects. For example, instead of taking a right on Courtland Street, take a right after the coarse pinkish rock with shimmery surfaces or after the decaying oak tree stump.
- Write directions to a few different places in your neighborhood using these new landmarks and see if other people can follow them correctly.

LEARNING ABOUT WATER CONSERVATION

Discuss with your family how each of these people can change their behavior to help protect the health of the Rappahannock River and the Chesapeake Bay.

- Samantha loves to shower, and she likes to spend at least twenty minutes in the shower before she is ready to get out. The average shower uses five gallons of water a minute.
- Jamie likes to walk his dogs on the trails next to the Rappahannock, but he never picks up after his dogs when they go to the bathroom. This introduces bacteria into the river that doesn't belong there.
- Ben and his dad water their lawn in the middle of the day. Unfortunately, the water usually evaporates before being absorbed by the soil.
- Fernando finds that the faucet in his bathroom sink is leaky. A leaky faucet can waste 40 gallons of water in a day!
- Beth throws her empty soda cans and plastic juice bottles in the trash, which then gets sent to a landfill, never to be used again.

When we protect the Rappahannock River, we also protect the Chesapeake Bay! By doing changing our behavior, you can help protect the Rappahannock River from becoming polluted. You can help keep our waterways clean and scenic so we can all enjoy them again and again!

STAMP YOUR PASSPORT!

Once you have completed activities and stamped this page for each park you visited, tear it out and mail it to: **Friends of the Rappahannock, 3219 Fall Hill Ave., Fredericksburg, VA 22401** to receive your Eco-Explorer patch! *Don't forget to also send in the Passport to the Rappahannock Survey on the next page!*

Name: _____ Age: _____

Address to send patch to: _____

| <u>Place</u> | <u>Place</u> |
|----------------------|-----------------------------|
| Bug Box | Friends of the Rappahannock |
| Caledon Natural Area | Mott's Run Nature Center |
| Canal Path | Lake Anna State Park |
| Curtis Park | Salamander Loop |

Please write down which At-Home Activities you completed (you need a minimum of three to receive the patch!):

Please sign on the line to indicate you have completed the Map Reading Activity and Leave No Trace Activity. _____

Please check this box if you **do not** want your child's name to be made public on website

PASSPORT TO THE RAPPAHANNOCK SURVEY

Please send this page in with your stamped page!

For kids:

What were your top two favorite park activities? Why?

1. _____

2. _____

For adults:

What was your favorite part of the program?

For adults or kids:

Please write down any suggestions you may have to improve our program!

Thanks for participating in the program and congratulations on becoming an ECO-EXPLORER!!!

OVERVIEW OF PARKS

If weather is questionable, you may want to call the site before you visit to make sure they are open!

| | |
|--|---|
| <p style="text-align: center;">Bug Box Insect Zoo 540-710-0776 <i>10822A Courthouse Rd., Fredericksburg</i> Cost: \$2/person Open Mon-Fri 10-5pm Best time to visit: All Seasons</p> | <p style="text-align: center;">Caledon Natural Area 540-663-3861 <i>11617 Caledon Rd., King George</i> Cost: \$2 weekdays, \$3 weekends parking fee per vehicle Open Daily 8am-sunset Best time to visit: All Seasons</p> |
| <p style="text-align: center;">Canal Path 540-372-1086 <i>Winds along the canal from Fall Hill Avenue (across from Friends of the Rappahannock) to Princess Anne Street (across from _____).</i> No Cost Open Daily: sunrise-sunset Best Time to Visit: All Seasons</p> | <p style="text-align: center;">Curtis Park 540-752-4028 <i>58 Jesse Curtis Lane, Fredericksburg</i> No Cost Hours: Mid-Mar thru Oct 3, Mon-Sun, 8 am-8 pm; Oct 31 thru Mid-Mar, Mon-Sun, 8 am-5:30 pm; Open 7 days a week. Best Time to Visit: All Seasons</p> |
| <p style="text-align: center;">Friends of the Rappahannock 540-373-3448 <i>3219 Fall Hill Ave, Fredericksburg</i> No Cost Monday-Friday, 9am-5pm. Best Time to Visit: All Seasons</p> | <p style="text-align: center;">Motts Run Nature Center <i>Located on River Road in Spotsylvania County</i> No Cost Thursdays - Mondays April 1 - October 31 from 7:00am - 7:00pm, Closed Tuesdays and Wednesdays. Best Time to Visit: All Seasons</p> |
| <p style="text-align: center;">Lake Anna State Park 540-854-5503 (park office) 540-854-6245 (visitor ctr.) <i>6800 Lawyers Road, Spotsylvania</i> Per Vehicle Parking Fee: \$4 weekdays, \$5 weekends Daily, daylight to dusk; beach is open 10-6 weekdays and 10-7 weekends. Best Time to Visit: All Seasons</p> | <p style="text-align: center;">Salamander Loop <i>8020 Stone Drive, Fredericksburg (on Rt.1 across from Massaponax High School)</i> No Cost Daily, sunrise to sunset. Best Time to Visit: All Seasons</p> |

Thank you for participating in the Passport to the Rappahannock program! If you have any question or comments on this activity booklet, please contact the Friends of the Rappahannock Education Department at 540-373-3448 or email us at education@riverfriends.org. We hope you enjoyed the program!



THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

April 16, 2010

April 16, 2010

MEMORANDUM FOR THE SECRETARY OF THE INTERIOR
THE SECRETARY OF AGRICULTURE
THE ADMINISTRATOR OF THE ENVIRONMENTAL
PROTECTION AGENCY
THE CHAIR OF THE COUNCIL ON ENVIRONMENTAL QUALITY

SUBJECT: A 21st Century Strategy for America's
Great Outdoors

Americans are blessed with a vast and varied natural heritage. From mountains to deserts and from sea to shining sea, America's great outdoors have shaped the rugged independence and sense of community that define the American spirit. Our working landscapes, cultural sites, parks, coasts, wild lands, rivers, and streams are gifts that we have inherited from previous generations. They are the places that offer us refuge from daily demands, renew our spirits, and enhance our fondest memories, whether they are fishing with a grandchild in a favorite spot, hiking a trail with a friend, or enjoying a family picnic in a neighborhood park. They also are our farms, ranches, and forests -- the working lands that have fed and sustained us for generations. Americans take pride in these places, and share a responsibility to preserve them for our children and grandchildren.

Today, however, we are losing touch with too many of the places and proud traditions that have helped to make America special. Farms, ranches, forests, and other valuable natural resources are disappearing at an alarming rate. Families are spending less time together enjoying their natural surroundings. Despite our conservation efforts, too many of our fields are becoming fragmented, too many of our rivers and streams are becoming polluted, and we are losing our connection to the parks, wild places, and open spaces we grew up with and cherish. Children, especially, are spending less time outside running and playing, fishing and hunting, and connecting to the outdoors just down the street or outside of town.

Across America, communities are uniting to protect the places they love, and developing new approaches to saving and enjoying the outdoors. They are bringing together farmers and ranchers,

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land trusts, recreation and conservation groups, sportsmen, community park groups, governments and industry, and people from all over the country to develop new partnerships and innovative programs to protect and restore our outdoors legacy. However, these efforts are often scattered and sometimes insufficient. The Federal Government, the Nation's largest land manager, has a responsibility to engage with these partners to help develop a conservation agenda worthy of the 21st Century. We must look to the private sector and nonprofit organizations, as well as towns, cities, and States, and the people who live and work in them, to identify the places that mean the most to Americans, and leverage the support of the Federal Government to help these community-driven efforts to succeed. Through these partnerships, we will work to connect these outdoor spaces to each other, and to reconnect Americans to them.

For these reasons, it is hereby ordered as follows:

Section 1. Establishment.

(a) There is established the America's Great Outdoors Initiative (Initiative), to be led by the Secretaries of the Interior and Agriculture, the Administrator of the Environmental Protection Agency, and the Chair of the Council on Environmental Quality (CEQ) and implemented in coordination with the agencies listed in section 2(b) of this memorandum. The Initiative may include the heads of other executive branch departments, agencies, and offices (agencies) as the President may, from time to time, designate.

(b) The goals of the Initiative shall be to:

(i) Reconnect Americans, especially children, to America's rivers and waterways, landscapes of national significance, ranches, farms and forests, great parks, and coasts and beaches by exploring a variety of efforts, including:

(A) promoting community-based recreation and conservation, including local parks, greenways, beaches, and waterways;

(B) advancing job and volunteer opportunities related to conservation and outdoor recreation; and

(C) supporting existing programs and projects that educate and engage Americans in our history, culture, and natural bounty.

(ii) Build upon State, local, private, and tribal priorities for the conservation of land, water, wildlife, historic, and cultural resources, creating corridors and connectivity across these outdoor spaces, and for enhancing neighborhood parks; and determine how the Federal Government can best advance those priorities through public private partnerships and locally supported conservation strategies.

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(iii) Use science-based management practices to restore and protect our lands and waters for future generations.

Sec. 2. Functions. The functions of the Initiative shall include:

(a) Outreach. The Initiative shall conduct listening and learning sessions around the country where land and waters are being conserved and community parks are being established in innovative ways. These sessions should engage the full range of interested groups, including tribal leaders, farmers and ranchers, sportsmen, community park groups, foresters, youth groups, businesspeople, educators, State and local governments, and recreation and conservation groups. Special attention should be given to bringing young Americans into the conversation. These listening sessions will inform the reports required in subsection (c) of this section.

(b) Interagency Coordination. The following agencies shall work with the Initiative to identify existing resources and align policies and programs to achieve its goals:

- (i) the Department of Defense;
- (ii) the Department of Commerce;
- (iii) the Department of Housing and Urban Development;
- (iv) the Department of Health and Human Services;
- (v) the Department of Labor;
- (vi) the Department of Transportation;
- (vii) the Department of Education; and
- (viii) the Office of Management and Budget (OMB).

(c) Reports. The Initiative shall submit, through the Chair of the CEQ, the following reports to the President:

- (i) Report on America's Great Outdoors. By November 15, 2010, the Initiative shall submit a report that includes the following:
 - (A) a review of successful and promising nonfederal conservation approaches;
 - (B) an analysis of existing Federal resources and programs that could be used to complement those approaches;
 - (C) proposed strategies and activities to achieve the goals of the Initiative; and
 - (D) an action plan to meet the goals of the Initiative.

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The report should reflect the constraints in resources available in, and be consistent with, the Federal budget. It should recommend efficient and effective use of existing resources, as well as opportunities to leverage nonfederal public and private resources and nontraditional conservation programs.

(ii) Annual reports. By September 30, 2011, and September 30, 2012, the Initiative shall submit reports on its progress in implementing the action plan developed pursuant to subsection (c)(i)(D) of this section.

Sec. 3. General Provisions.

(a) This memorandum shall be implemented consistent with applicable law and subject to the availability of any necessary appropriations.

(b) This memorandum does not create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(c) The heads of executive departments and agencies shall assist and provide information to the Initiative, consistent with applicable law, as may be necessary to carry out the functions of the Initiative. Each executive department and agency shall bear its own expenses of participating in the Initiative.

(d) Nothing in this memorandum shall be construed to impair or otherwise affect the functions of the Director of the OMB relating to budgetary, administrative, or legislative proposals.

(e) The Chair of the CEQ is authorized and directed to publish this memorandum in the *Federal Register*.

BARACK OBAMA

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