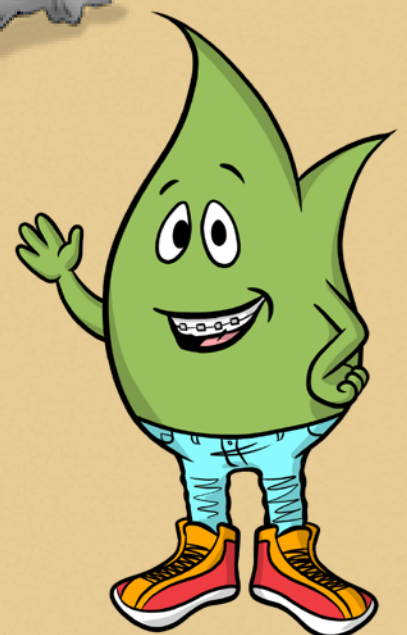
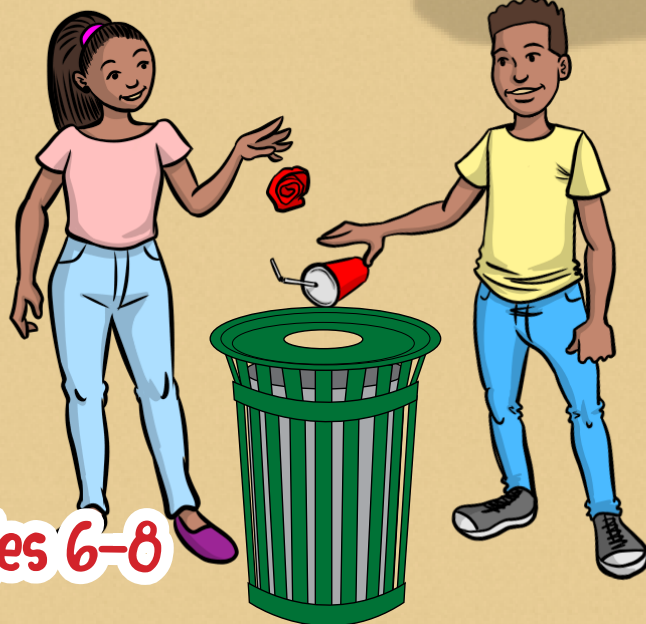
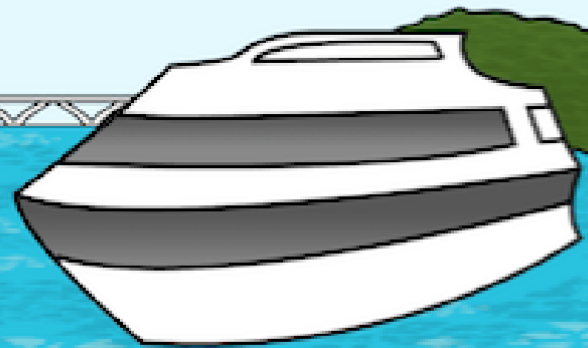
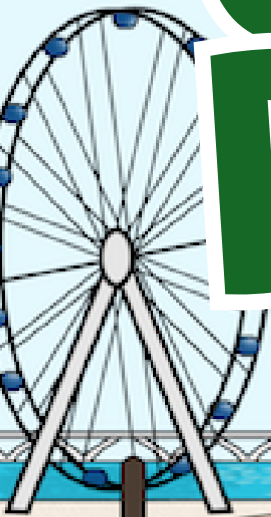


Prince George's County **CLEAN AND BEAUTIFUL**



Vol. 3 Grades 6-8

MY PROGRESS BAR

Fill in your points from each activity
and add them all up to get your score!

ACTIVITY 1: What is a Watershed?
Page 4

Total Points _____

ACTIVITY 2: Watersheds Close to Home
Page 6

Total Points _____

ACTIVITY 3: Study the Picture
Page 12

Total Points _____

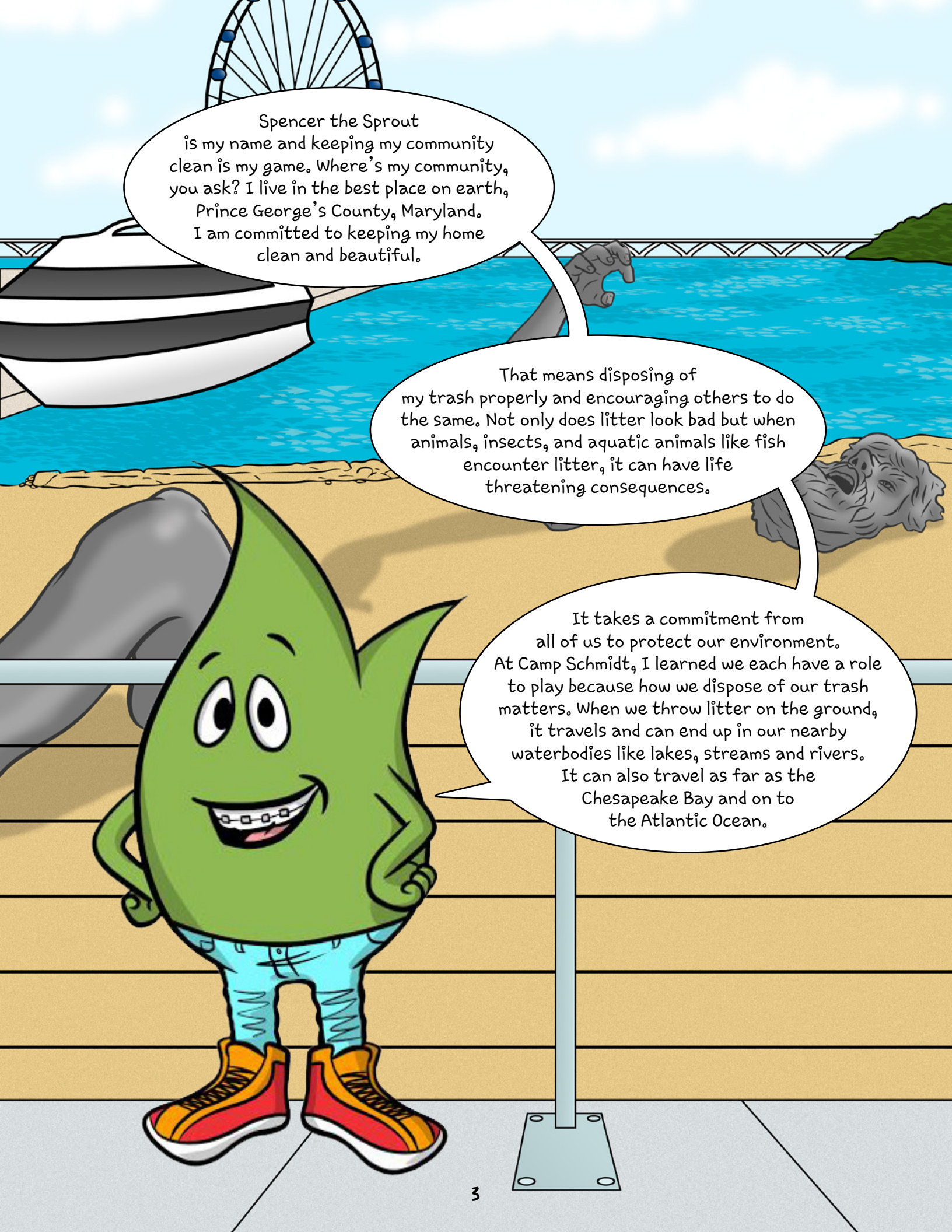
ACTIVITY 4: Anagrams
Page 14

Total Points _____

ACTIVITY 5: What's in Your Trash?
Page 15

Total Points _____

TOTAL POINTS _____



Spencer the Sprout
is my name and keeping my community
clean is my game. Where's my community,
you ask? I live in the best place on earth,
Prince George's County, Maryland.
I am committed to keeping my home
clean and beautiful.

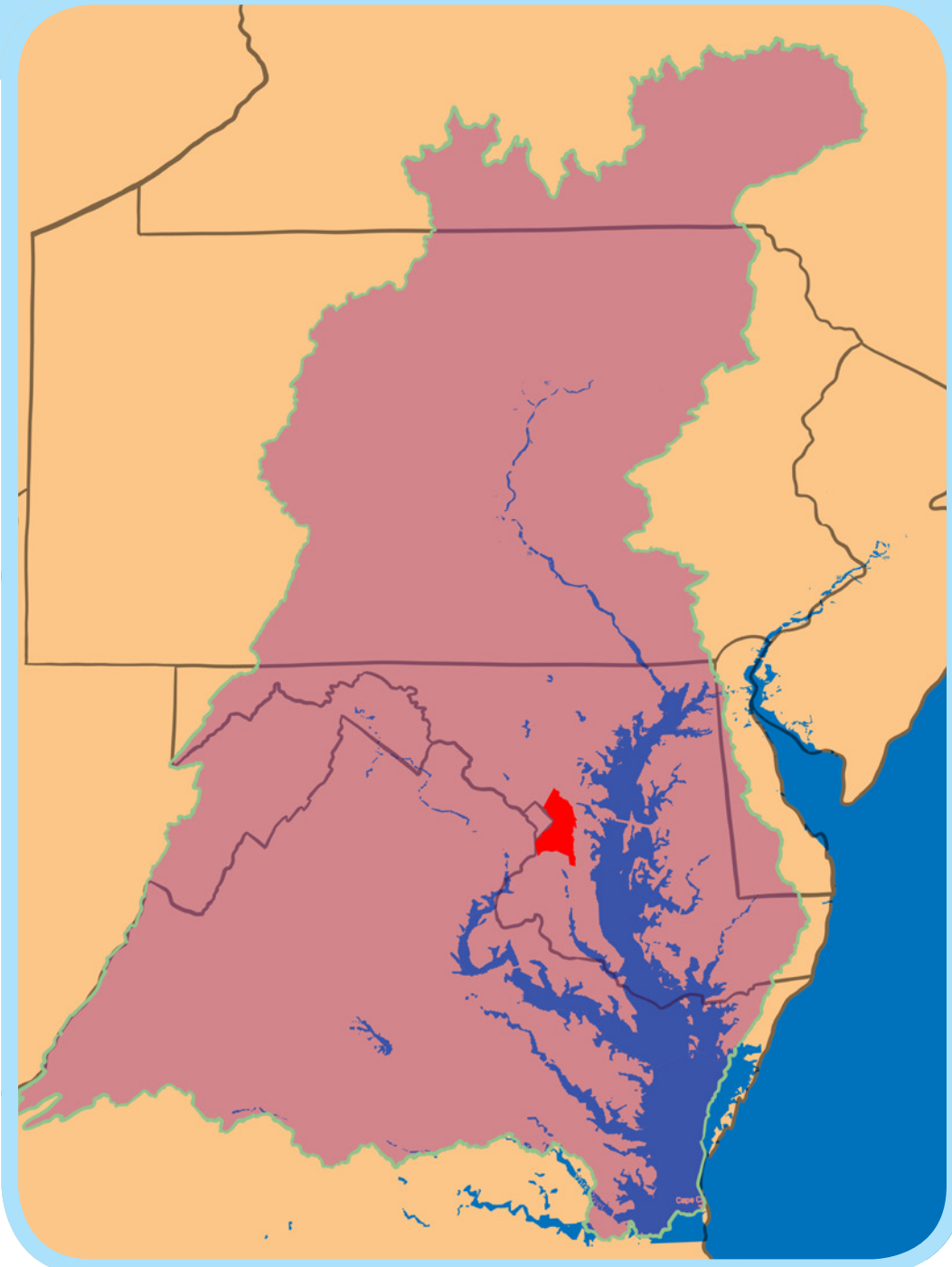
That means disposing of
my trash properly and encouraging others to do
the same. Not only does litter look bad but when
animals, insects, and aquatic animals like fish
encounter litter, it can have life
threatening consequences.

It takes a commitment from
all of us to protect our environment.
At Camp Schmidt, I learned we each have a role
to play because how we dispose of our trash
matters. When we throw litter on the ground,
it travels and can end up in our nearby
waterbodies like lakes, streams and rivers.
It can also travel as far as the
Chesapeake Bay and on to
the Atlantic Ocean.

What's a Watershed?

Have you ever heard of a watershed? On a field trip to Bladensburg Waterfront Park, I learned that Prince George's County is in the Chesapeake Bay watershed. A watershed is the name for an area where all rainwater that falls on the land will drain and collect at the same place, such as a river or bay.

Bay watershed spans across six states and includes most of Maryland. All of Prince George's County falls within the Bay watershed, where rivers, creeks, and streams collect water from the land and carries it into the Bay. All of these rivers and creeks have their own smaller watersheds which are sometimes called sub-watersheds.



Activity 1: These questions require you to research on your own. You may search for this information on the internet. Some example websites include Maryland Department of Natural Resources (<https://dnr.maryland.gov/waters/>) and the Chesapeake Bay Program (www.chesapeakebay.net)

1. What six states and one special location are a part of the Chesapeake Bay Watershed? (6 Points)
2. Name one endangered species that can be found in the Chesapeake Bay. (6 Points)
3. Name two other large watersheds that exist within the United States. (8 Points)

Bonus Achievement (10 Points)

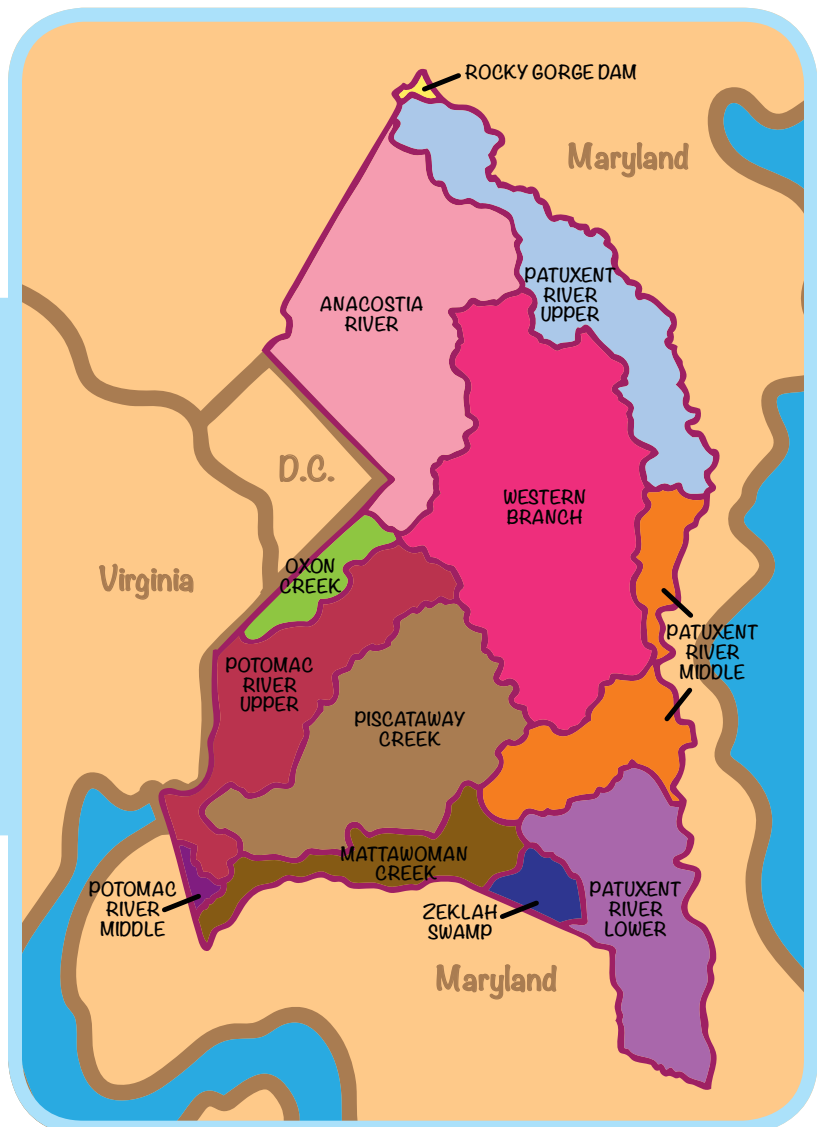
Timed Activity (60 seconds):

You and a friend write down as many aquatic animals that live in creeks, streams, ponds, and lakes. When time is up, the person who wrote down the most earns 10 Points.

Didn't win this time? Challenge someone else until you do.

Sub-Watersheds inside Prince George's County Watershed

Study this map of sub-watersheds to help complete the activity on the next page by figuring out what landmarks fall in which sub-watersheds.



Activity 2: Watersheds Close to Home

Prince George's County has several smaller watersheds or sub-watersheds. Can you study the map on page 5 and help me by writing the name of the sub-watershed next to the places listed below?

Example: Prince George's County Community College: Anacostia River Watershed

1. Your Home _____ (2 Points)
2. Greenbelt Lake _____ (2 Points)
3. Bladensburg Waterfront Park _____ (2 Points)
4. Camp Schmidt _____ (2 Points)
5. Six Flags of America _____ (2 Points)
6. Bowie State University _____ (2 Points)
7. University of Maryland College Park _____ (2 Points)
8. National Harbor _____ (2 Points)
9. Oxon Hill Farm _____ (2 Points)
10. Your School _____ (2 Points)
- Bonus: NASA _____ (3 points)
- Bonus: Rocky Gorge Dam _____ (3 points)

Bonus Achievement

Timed Challenge: You and a friend have 60 seconds to list animals, birds, and plants you are likely to encounter when you visit natural areas in the watershed. The person who named the most gets 10 Points. If you didn't win, challenge someone else until you do.

Bonus Questions:

1. Which of the animals you listed above is your favorite? (2 Points)
2. If your favorite animal had a superpower, what would it be? (5 Points)
3. Which watershed in the County is fully contained within the County? (2 Points)
4. Which watershed seems to cover the largest area of the County? (2 points)
5. Do you have a favorite watershed? Write down what makes it your favorite. (5 Points)



Litter doesn't have to travel far to cause harm. The fish and other animals like turtles and ducks can be harmed by litter in our waters close to home. Think about the Anacostia River. The water that makes up the Anacostia River comes from different streams in Prince George's and Montgomery Counties. The water then flows to our neighbors in the District of Columbia where it meets up with the Potomac River and flows on through Virginia making its way down to the Chesapeake Bay.

Not only does litter impact the food chain for people and animals, it can also limit our ability to do fun things on and around the water like kayaking, canoeing, cruise boating, paddle boating, fishing, swimming, and walking and biking along the riverbank. While on our field trip to Bladensburg Waterfront Park a park ranger took us on a really fun canoe ride on the Anacostia River. We learned that the river isn't clean enough for us to swim in yet; but we were able to see a different view of the land, trees, and animals along the river.



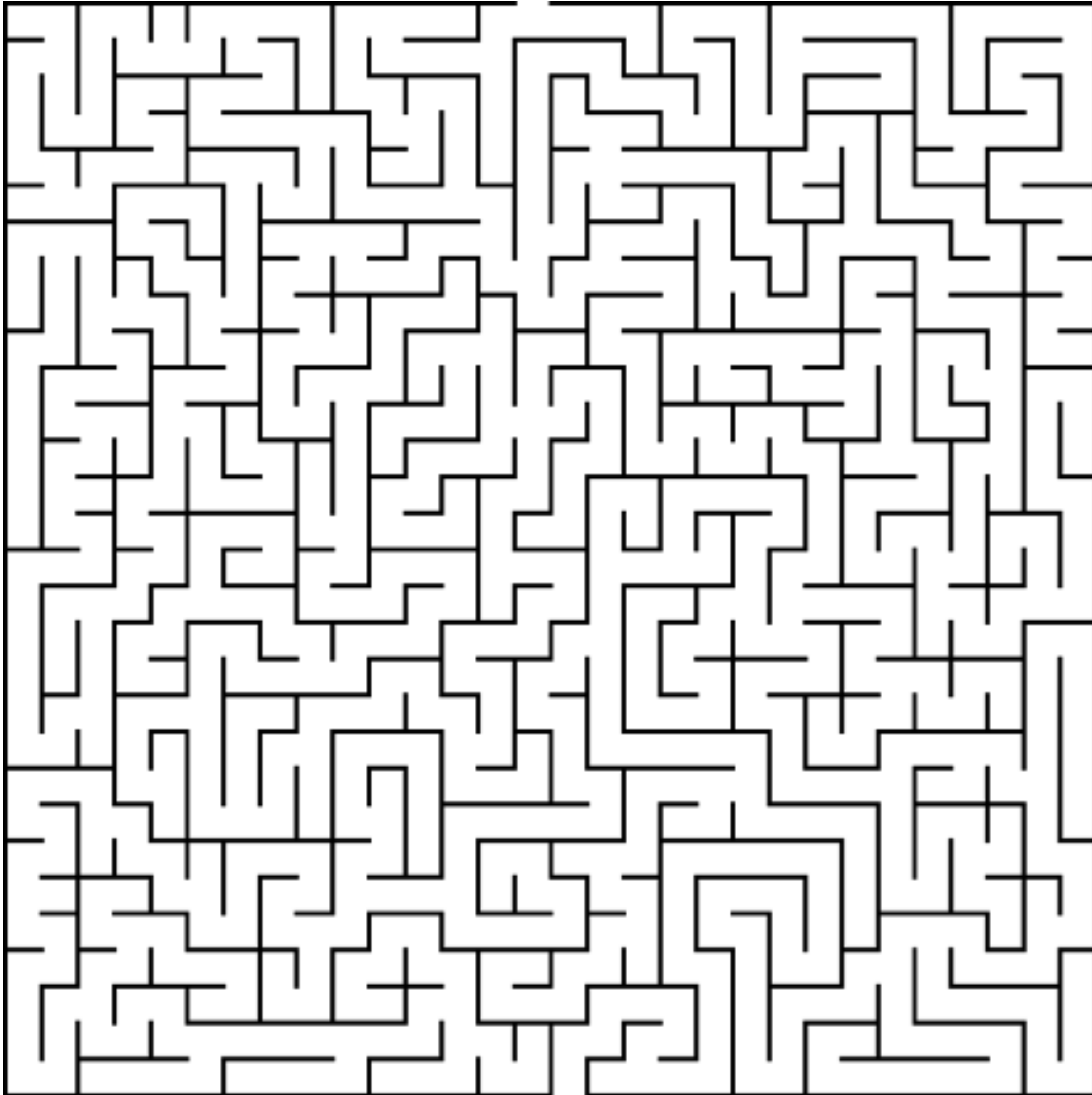
With all those connected rivers, stream and creeks in the County, it's easy to see how litter can hitch a ride on flowing water and make it to the Bay or ocean. When litter makes it to the Bay and later to the ocean, it is then called marine debris because of the impact that it can have on marine life.

Think of all of the fish species, animals, and plants that live in and depend on our waters. From the delicious Maryland Blue Crab to our Rockfish, Blue Catfish, oysters and more. The food that we eat is threatened by litter we toss on the ground and eating seafood that is contaminated, because of our litter, can cause us harm.

And it is not just the fish we eat, our litter can cause harm to any other living creatures that call our County home or live in the Bay. And when we harm one type, it can ripple and affect other creatures that depend on it. We are all a part of the same ecosystem and are inter-connected. An impact on one species is an impact on all.



Spencer is eating his lunch from a cardboard container. Help him find his way to the recycle bin so the animals don't mistake his container for food that they can eat.

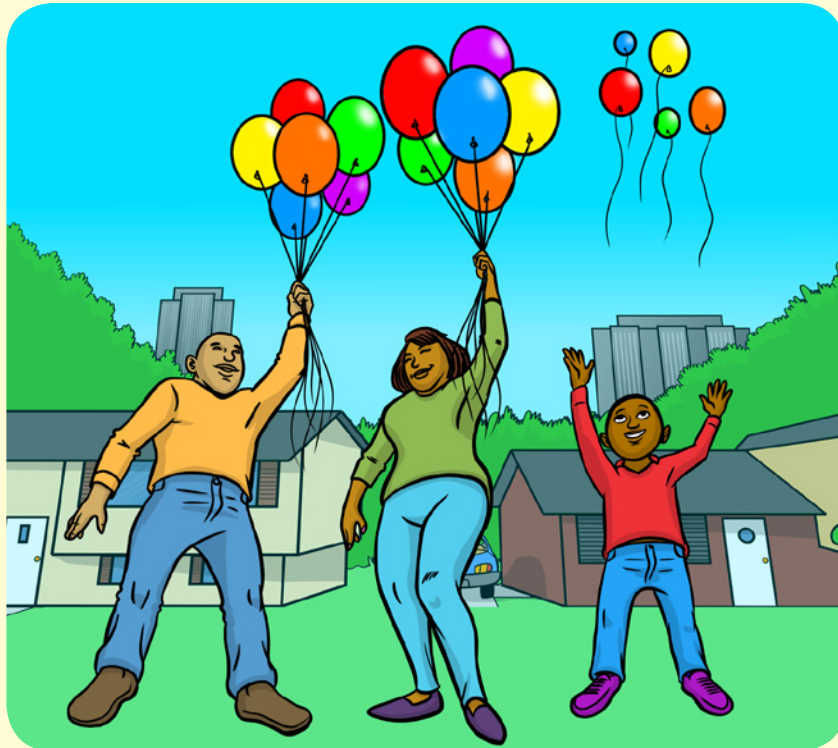


When Good Goes Bad

Sometimes, we can litter and not even know it. Have you ever been to a balloon release? Balloon releases are popular events at birthday parties and even to honor someone we love. When people release balloons in the air the sight can be very pretty as the balloons float off in the distance.

But did you realize balloons have to land somewhere? As the helium slowly leaks out of the balloon, it lands somewhere deflated. Balloons can land anywhere on land, power lines, and in our waterbodies. Animals, birds, and fish can mistake the balloons for food. They can also become entangled in the ribbons and strings from the balloon.

While we definitely want to honor the people we love, we don't want to cause harm to the animals in our environment. Balloon releases are strongly discouraged and in our neighboring state Virginia it is against the law.



Our water can become polluted with more than the litter that we see on the ground. Other activities contribute to pollution too. The wind and rain can carry all of the pollution away to our nearby waterbodies. Whether it is tossed directly in the water or goes down a storm drain and makes its way to the river, it all ends up in the same place.

Activity 3: (3 Points for each pollutant listed)
Study the picture. List all of the things that have the potential to pollute our water.

Bonus Achievement Timed Challenge:
List as many items as you can in 60 seconds. Earn Bonus Points based on all the pollutants you listed.

1-2 +3 Points
3-4 +7 Points
5-6 +9 Points
7-8 +12 Points
9 or more +15 Points



Activity 4: Anagrams

An Anagram is a word or phrase that comes from rearranging the letters of another word or phrase.

Activity : Solve these Anagrams to discover common types of litter found in our watershed.

Anagram	Word or Phrase	Difficulty
Ex: Slags	Glass	
Claps It	_____	No Problem (1 Point)
Bride Remains	_____	Challenging (3 Points)
Big Cat Slaps	_____	Challenging (3 Points)
Bit Plot Castles	_____	Challenging (3 Points)
Retypes Only	_____	Challenging (3 Points)

Anagram	Word or Phrase	Difficulty
Drabble Cyan Mural	_____	No Problem (1 Point)
Awake Bathysphere Ceased	_____	Challenging (3 Points)
Berserk Hundred Tentacle Ate Algae**	_____	Challenging (3 Points)

****HINT:** First word is from the glossary

Activity 5: What's in Your Trash?

In this activity, you are going to sort through your waste bin at home to determine what items you believe you can stop using, items that could have been reused, and items that should be recycled. This activity should be completed with adult supervision. Please watch out for broken glass or sharp objects.

Materials Needed:

- Protective Gloves
- Pen/ Pencil
- Additional Sheets (as necessary)

Please complete the table.

Item	Reduce	Reuse	Recycle	Compostable
What is it?	Decrease or eliminate	Use over again	Can be turned into something new	Organic material like leaves or food scraps

Activity : (1 Point for each item you list in the table above) Take action. Have a family meeting and let them know your findings. While you may not be able to do everything, decide how you can reduce waste in your household.

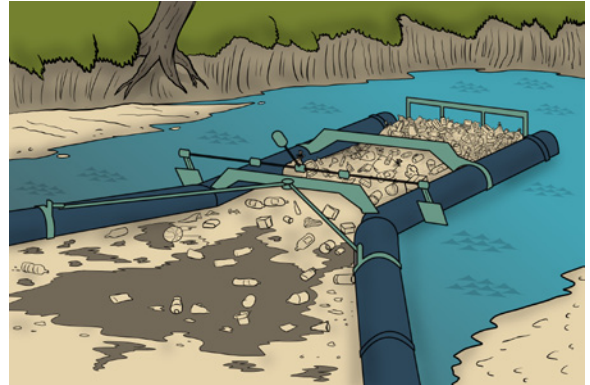
Bonus Achievement:

For each item in your trash that you also listed on the previous activity, gain +3 Points

Did you know the Prince George's County Department of Environment has several programs to help reduce litter? These aren't all but here are a few tools used to keep our waterways free of litter.

Bandalong Litter Trap

The Bandalong Litter Trap is a device that is used to trap litter and other forms of debris. Litter travels. The wind and rain can carry litter to our waterways making them polluted and causing harm to fish and other animals. The Bandalong Litter Trap in Prince George's County was installed in a stream in the City of Mount Rainier. It captures litter before it reaches the Anacostia River. The great thing about this trap is that it is safe for fish and other aquatic life.



Adopt A Stream

Residents, businesses, schools, and organizations can adopt a stream in Prince George's County to help reduce litter. The group monitors the stream, hosts cleanup events, and notifies the Department of Environment of pollution issues in the stream.



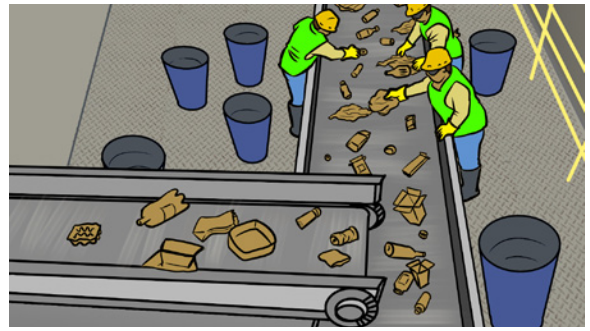
Big Belly Smart Trash Compactors

These recycling and waste bins are placed in targeted locations around the County to capture waste that can be recycled. They are usually placed in areas where there are a lot of people walking. These "smart" bins use technology are connected to the cloud and can detail the volume of waste in the bin in real time.



Recycling

Prince George's County owns a Material Recovery Facility that handles about 70,000 tons/year of recyclable materials. These materials come from residents, businesses, and government agencies. The materials recycled at this facility include paper, plastics, aluminum, glass, steel cans, and metals.



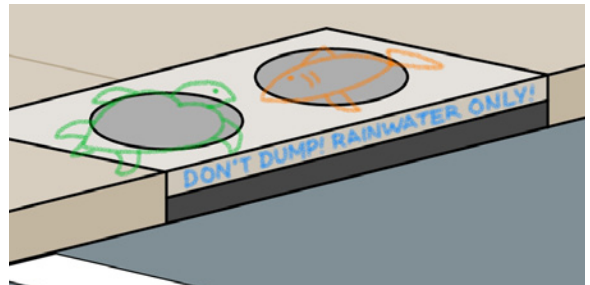
Composting

Prince George's County has an Organic Composting Facility where leaves, grass, food scraps, brush and yard trim are composted. These materials also come from residents, businesses, institutions like schools. The compostable materials are processed into Leafgro and used in the landscaping industry to improve soil quality.



Storm Drain Stenciling

Painting or drawing on storm drains informs people that what goes in that drain goes directly to a nearby water body and could travel to the Chesapeake Bay.



PGCLitterTRAK

This is an application (app) that can be downloaded on your smartphone and used to report how you or organizations you participate with are reducing litter in your community.



How can I help?

We each have responsibility to take care of our environment. Sometimes we think items are biodegradable and will disappear when we throw them on the ground. This is especially true when things we discard are small. All of us have used plastic straws to sip our favorite drinks. These straws, while small, are harmful to the environment if not properly discarded. We usually think they are small enough to not be harmful but that is not the case. Did you know that they now make straws from paper which are biodegradable?

We must put waste in its proper place. There are many ways to minimize the waste that we generate or to dispose of it properly.

Here are some examples:

Reduce – To decrease or eliminate the use of an item.

Example: In 2018, the School Without Walls at Francis Stevens, won the Caring For Our Watersheds contest because they came up with the idea to have Finger Food Fridays. To reduce the use of plastic utensils in the cafeteria, students petitioned the school to only serve food that could be eaten with your hands-on Fridays.

Reuse – To use something for the same purpose or another purpose.

Example: A sauce jar can be reused to store food or even as a way to save money. Another example: We use reusable bottles for beverages to eliminate the need for plastic bottles.

Recycle – To take a material and process it into another item.

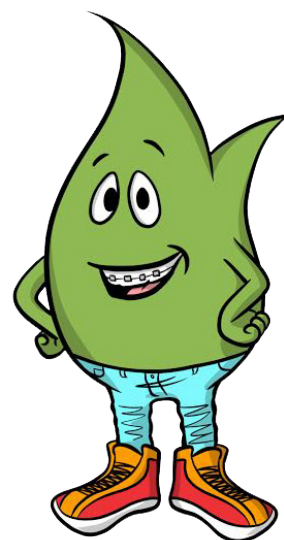
Example: Plastic bottles can be converted into new uses like a park bench.

All material that cannot be reused or recycled goes in a regular garbage bin where it is taken to a landfill. Items are stored at the landfill until they decompose.

Activity 5:

Research and find out how long it would take the following items to decompose:

- A. Banana Peel (3 Points)
- B. Aluminum Can (3 Points)
- C. Paper (3 Points)
- D. Polystyrene (Styrofoam) (3 Points)
- E. Plastic Bottle (3 Points)
- F. Ink pens (3 points)



It's Time to Take Action In Your Own Community!

Now that you know the impact that litter has on our watershed from the animals to the food that you eat, create a campaign or direct action that you can use to discourage other people from littering. Use this page to help you plan.

Step 1: What action are you taking?

Step 2: What is the purpose of your action? Ex: Is it a campaign to inform others, or do you need people to take a specific action?

Step 3: Who do you want to see or to participate with you? We will call this your target audience.

Step 4: How do you plan to advertise the campaign?

Step 5: Develop a supply list.

Step 6: What is the date(s) of your event or campaign?

Step 7: Develop a list of volunteers and make sure everyone knows their assignments.

Step 8: Find out if you need any special permits or licenses if this is an event.

Step 9: Have participants sign a photo/video release form if you plan to use pictures publicly.

Step 10: Have fun!

These are some basic steps, but you may make your campaign unique.

Note: If you choose to do a community clean up, the Prince George's County Department of Environment's Litter Reduction Program can assist you by providing bags and gloves. Also If you take any pictures or videos during your campaign, please tag #pgcsprout on social media.



Glossary

Study these definitions and then look for the new words we learned in the word search below. There may be a few bonus words that are not listed here.

Biodegradable – Something that is able to break down and return to nature such as animal waste, leaves, food waste
Watershed – a place where all of the water drains off the land to the same place.

Compost – Decayed or processed organic material, such as food scraps and leaves, that can be added to soil to help plants grow.

Ecosystem – a community of living things that are connected to each other and may include nonliving things.

Endangered – At risk of extinction due to factors such as habitat loss, poaching, and invasive species.

Landfill – a place where waste materials are disposed.

Marine Debris – Litter that is disposed of in or travels to a marine environment such as a bay, ocean, sea, estuary, or other major waterbodies.

Pollute – To make something unclean.

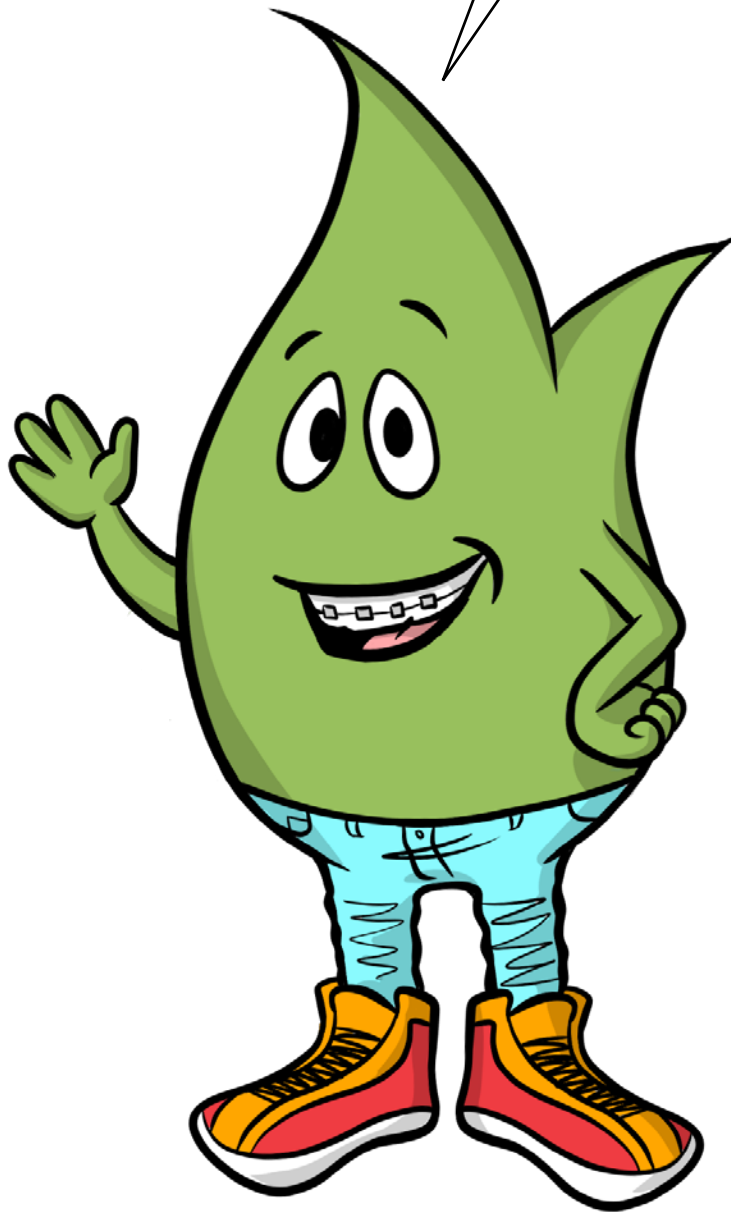
Subwatershed – a smaller part of the larger watershed that drains to a specific place.

R	C	H	E	S	A	P	E	A	K	E	B	A	Y
O	Y	L	L	I	F	D	N	A	L	O	O	U	B
B	P	O	L	L	U	T	E	C	L	A	T	D	I
R	L	L	T	P	O	T	O	M	A	C	N	N	O
A	T	R	E	U	S	E	G	L	O	A	U	A	D
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A	L	S	T	T	L	O	R	R	Y	S	A	S	L
N	O	B	P	C	P	T	C	A	G	T	R	L	E

RECYCLE
 BLUE CRAB
 COMPOST
 NATIONAL HARBOR
 CHESAPEAKE BAY
 ENDANGERED
 MARYLAND
 POLLUTE
 REUSE
 REDUCE
 BIODEGRADABLE
 LANDFILL
 POTOMAC
 ECOSYSTEM

THANKS!

Thank you for keeping our home clean.
I've learned a lot and hope you have too.
Remember, when we keep our home
clean and beautiful, we can all be
Prince George's County Proud!



ANSWER KEY:

Page 3-4

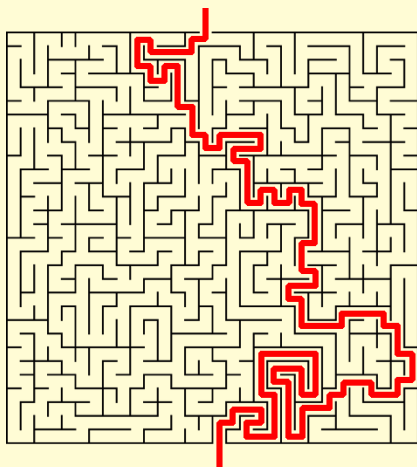
1. Maryland, Delaware, District of Columbia, Virginia, West Virginia, New York, Pennsylvania,
2. Answers will vary but here are a few: Maryland Darter, Shenandoah Salamander, Virginia Big Eared Bat, Dwarf Wedge Mussel, Atlantic Sturgeon, Shortnose Sturgeon, Piping Plover
3. Answers will vary

Page 5: Answers vary

Page 6 :

- Greenbelt Lake - Anacostia River
- Bladensburg Waterfront Park - Anacostia River
- Camp Schmidt - Patuxent River Middle
- Six Flags of America - Western Branch
- Bowie State University - Patuxent River Upper
- University of Maryland College Park
- Anacostia River
- National Harbord - Potomac River Upper
- Oxon Hill Farm - Oxon Creek
- Your School - Answers vary
- Bonus: NASA
- Bonus: Rocky Gorge Dam - Rocky Gorge

Page 10: Maze



Page 13: spilled paint, blowing leaves in street, oil dripping from car, fluids spilling from container at gas station, gas leaking near pump, girl dropping litter, litter outside of trash can, air pollution from car emissions, construction materials dropping from wheelbarrow, rocks dropping from truck, emissions from truck

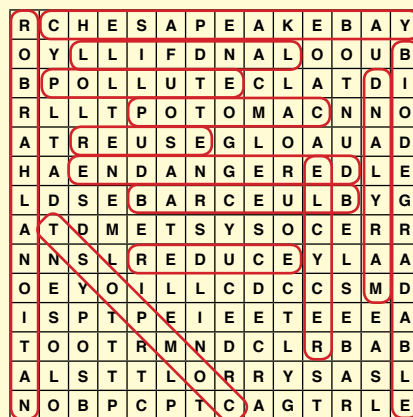
Page 14: Plastic, marine debris, plastic bags, plastic bottles, polystyrene

Page 14: Bonus - Maryland Blue Crab, Endangered Leather Back Turtle

Page 15: Answers vary

Page 18: Banana Peel - Two years, Aluminum Can - 200 to 500 years, Paper - Two to Six Weeks, Polystyrene- 500+ years, Plastic Bottle - 450+ years, Ink Pen- 100+ years

Page 20: Word Find



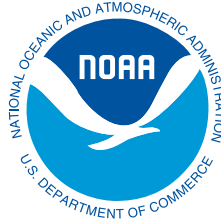
Prince George's County Clean and Beautiful



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Michael C. Lurry

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