Stafford Township Arbor Day 2014

"B.O.G."

(Befriend Our Groundwater)

Sherry L. Roth

This Arbor Day, in Stafford Township, we will celebrate the importance of our groundwater. The purpose of this year's theme is to encourage our role in being good stewards of our groundwater. Additionally, the theme ties into how Stafford Township hopes to utilize our historic cranberry bogs to improve groundwater quality in our community. Improving groundwater quality is paramount to making improvements to the Barnegat Bay because contaminated groundwater can harm the environment, including the ecosystems that depend on it.

To develop a better understanding of the importance of groundwater protection, the Stafford Township Environmental Commission developed as its year 2014 theme, "BOG" (Befriend Our Groundwater). Each year, through our Arbor Day and Tree City Celebration, we encourage all children in Stafford schools to participate in our poster, poem and essay contest based on our theme. Medals and awards will be given in each category to the winning students grades K-12 who best represent an understanding of the theme. The awards will be presented at the televised Arbor Day and Tree City ceremony on Friday, May 2nd beginning at 3:45 pm at the Ocean Acres Community Center located at 489 Nautilus Drive, Ocean Acres, Manahawkin.

Groundwater is part of the hydrologic cycle. Precipitation falls on land and seeps into the soil or runs off the land into streams, lakes, bays and oceans. Evaporation and transpiration carry the water back into the atmosphere where it once again condenses and falls to land. Water that doesn't run off, or is not evaporated or transpired, filters through the soil and becomes groundwater. Groundwater eventually surfaces at a lower point such as a spring, stream, lake, or wetlands where it can evaporate back into the atmosphere.

Water filtering down through the subsurface first moves through an unsaturated zone where the spaces between solid particles or rocks contain both air and water. The rest of the water continues moving downward to the zone of saturation where the pore spaces are completely filled with water. Water in this zone is called groundwater. Areas of rock or soil layers that store a large supply of water are called aquifers. Our wells pump groundwater from the aquifer and the water is delivered to our homes through a network of pipes.

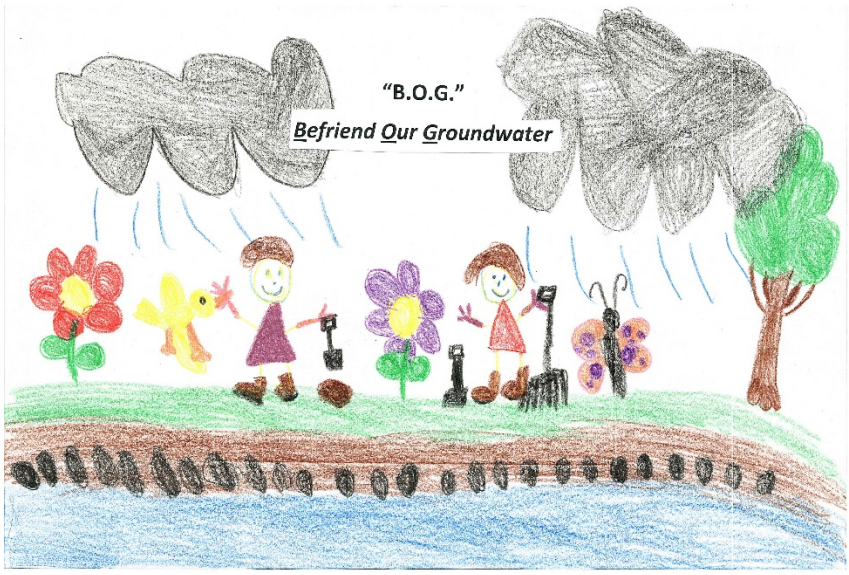
Here in Southern Ocean County, all of our drinking water comes from groundwater supplied to us by wells. Whether we have a private well on our property, or we are serviced by municipal systems that pump water to our homes from larger community wells, we all need to be concerned about protecting the water that we drink. The first step toward protecting groundwater is to become aware of how it can be contaminated. The second step is to do your part to keep from contaminating groundwater.

Many human activities can negatively affect groundwater quality as well as quantity. Those activities can include waste disposal, resource extraction (such as mining), agricultural practices and urbanization. Sometimes contamination is a result of a point source, or a single source that is obvious. In our community, the most significant type of groundwater contamination is called "nonpoint" source. Nonpoint source groundwater pollution is that which comes from numerous sources which combined have a significant impact on the groundwater. This is the most difficult type of pollution to control because it is a result of every day human activity. Sources include fertilizers, pesticides, animal waste, leakage of oils and contaminates from automobiles or other machinery, construction activities, stormwater runoff from parking lots, soil erosion, etc. Once contaminated, groundwater is very costly and difficult to clean up. The best approach to maintaining groundwater quality is to prevent contamination in the first place.

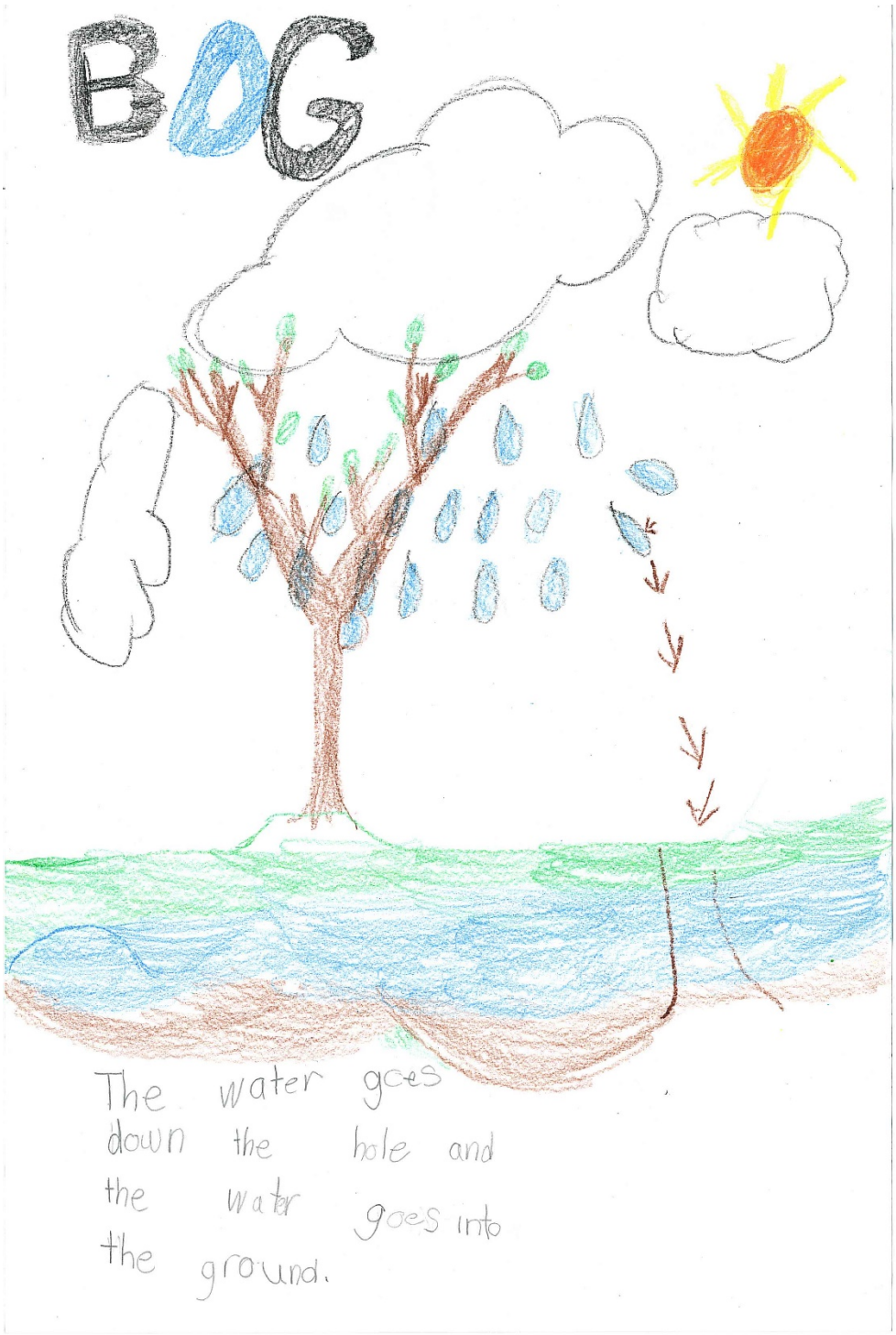
The regional environment is changing as a result of the rapid decline of the Barnegat Bay due to nonpoint source pollution and over-development. Dramatic increases of jellyfish underscore the need for restoration planning. Stafford Township is working to improve the quality of our watersheds using a variety of strategies. Efforts that have already been accomplished (and are continually updated and improved) include watershed-based planning, reducing nonpoint source pollution through strict storm water management standards, open space preservation, groundwater recharge of rainfall, strict tree ordinances, bio-retention basins, and groundwater and wellhead protection standards. Additional efforts that Stafford Township is pursuing involve two projects which, if approved, will have tremendous positive impacts on groundwater quality. Both of these projects have been in the media; the proposed Neptune Basin and the Cranberry Bogs.

Stafford Township is attempting to partner with Edwin B. Forsythe Wildlife Refuge to use the former cranberry bogs that exist at the headwaters of Manahawkin Lake for management of stormwater runoff. The former cranberry bogs were created by Nathaniel Holmes Bishop during the 19th century. They have been abandoned for many decades and the area has evolved with successional species. The cranberry bogs currently receive stormwater runoff from approximately 12,150 acres. The contributing drainage area includes portions of Ocean Acres, Fawn Lakes and undeveloped land.

The proposed project involves designing a system to detain stormwater runoff to encourage additional settling of solids and increase nutrient removal. The project includes the restoration and reconstruction of formerly operational outfall structures to allow the bog to function as a stormwater management facility and convey the required flows, maintain the necessary water quality storms and respect the historical significance of the former structures. Other benefits would include such things as stabilizing areas that have eroded, improving vehicular access for emergency vehicles and trails for firefighting and maintenance. If approved, this project can serve as a model for implementation to other bogs along Ocean County's coastline. Don't get bogged down with all the details, suffice it to say that Stafford Township is trying innovative ways to "Befriend Our Groundwater"! Please support these types of projects and do your part to protect the quality of our/your groundwater.



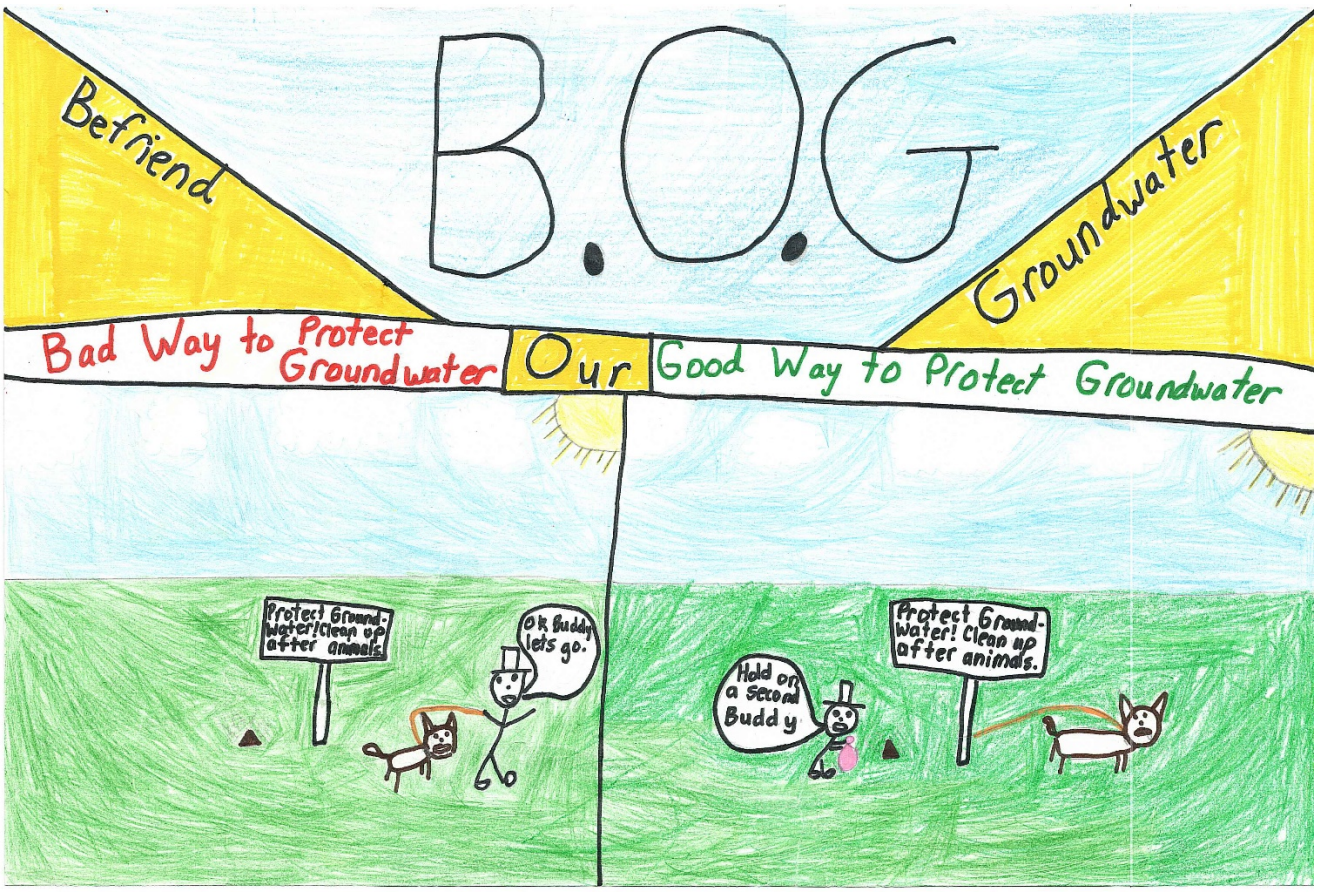
Saphira, Kindergarten



Zoey, 1st Grade

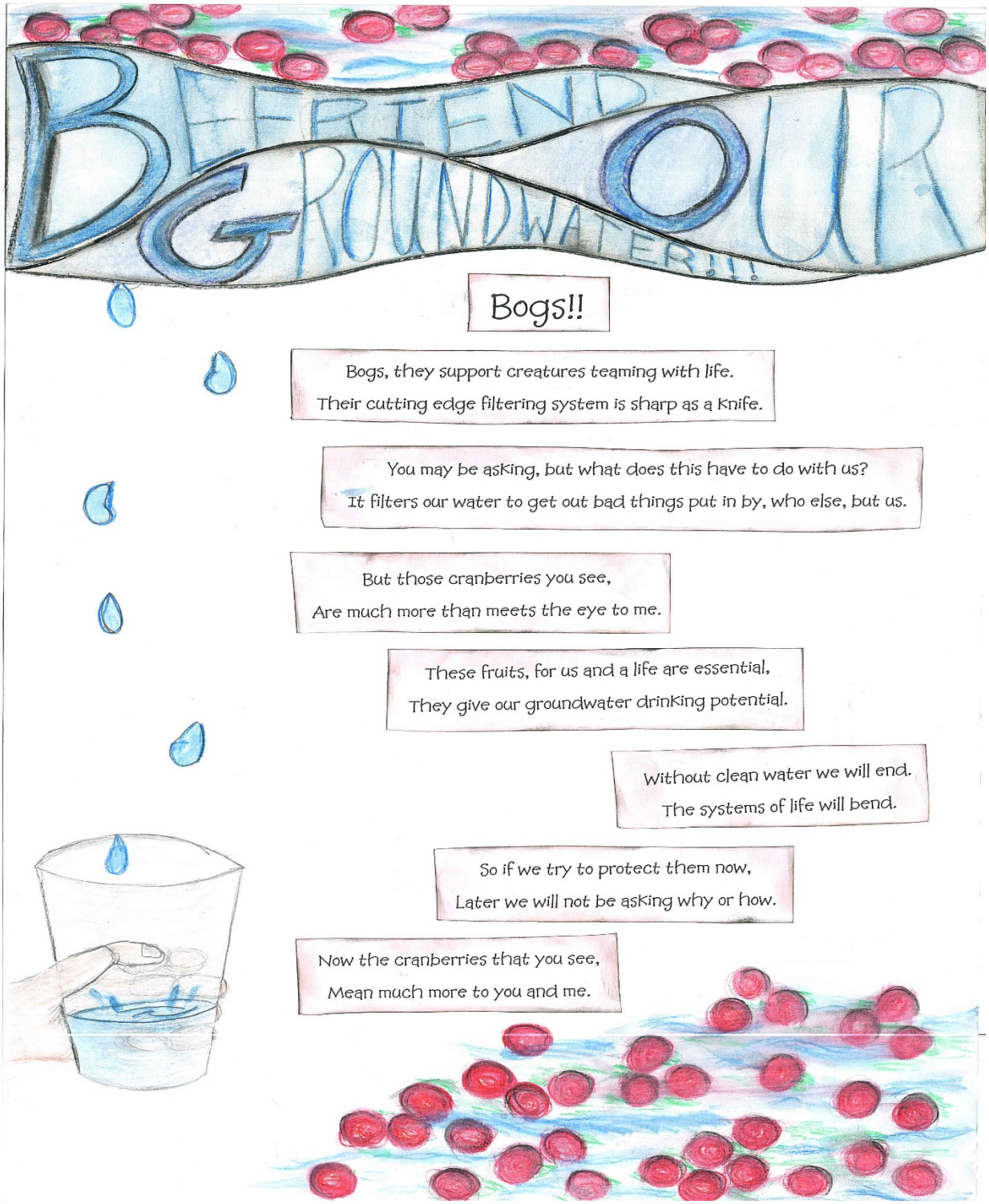
Elaina, 2nd Grade

Angelina, 3rd Grade

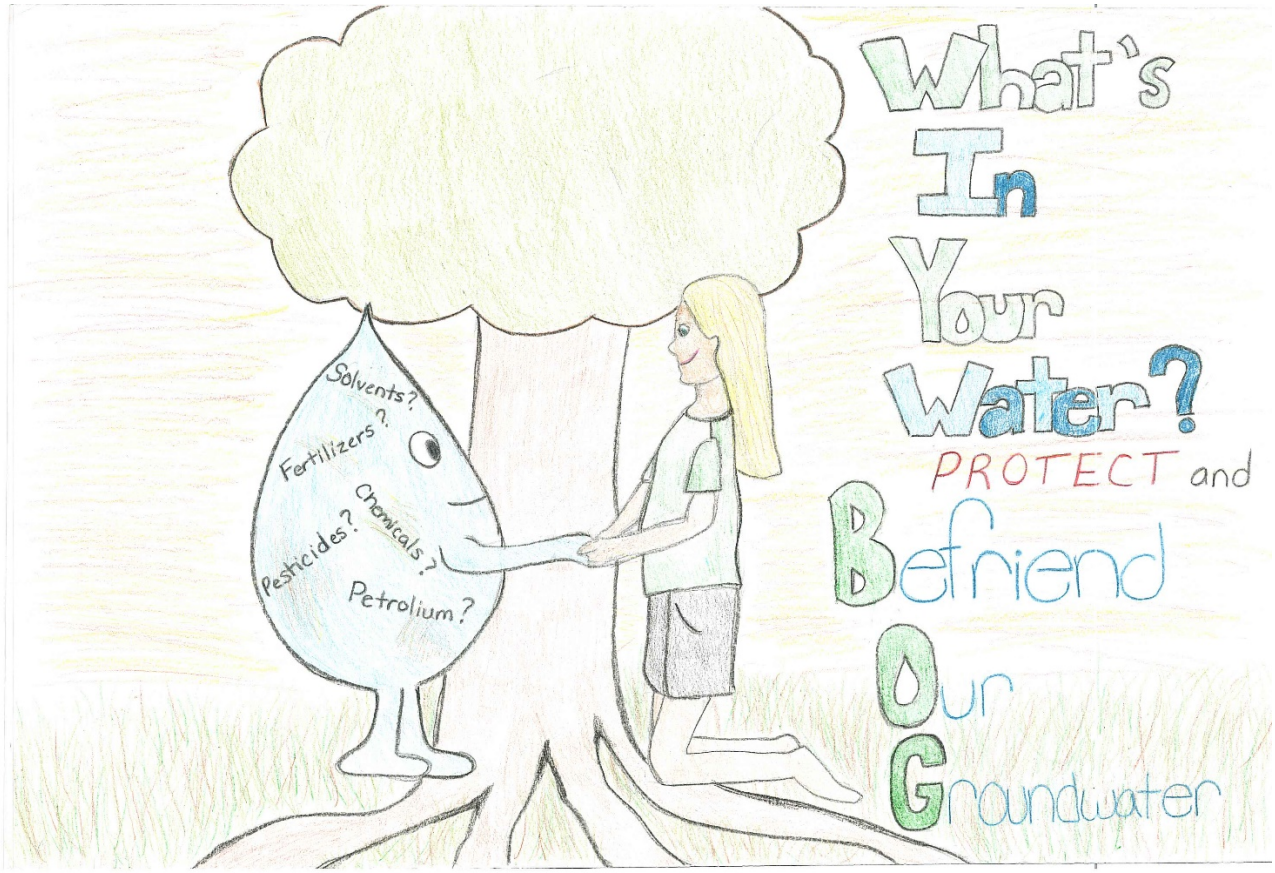


Sean, 4th Grade

Killian, 5th Grade



Belle, 6th Grade



Sarah, 7th Grade

I BOG do u? :)

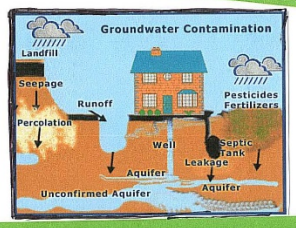
What's BOG??

Befriend Our Groundwater

Cool what's Groundwater?

It's the water that comes from your sink! :)

Wow! I use groundwater a lot! Why should we become friends with it? lol



Lol. It means we should protect it! Things that can harm our ground water are car oil, road salt & detergents.

Eww! How can we protect it if we need the things that harm it.

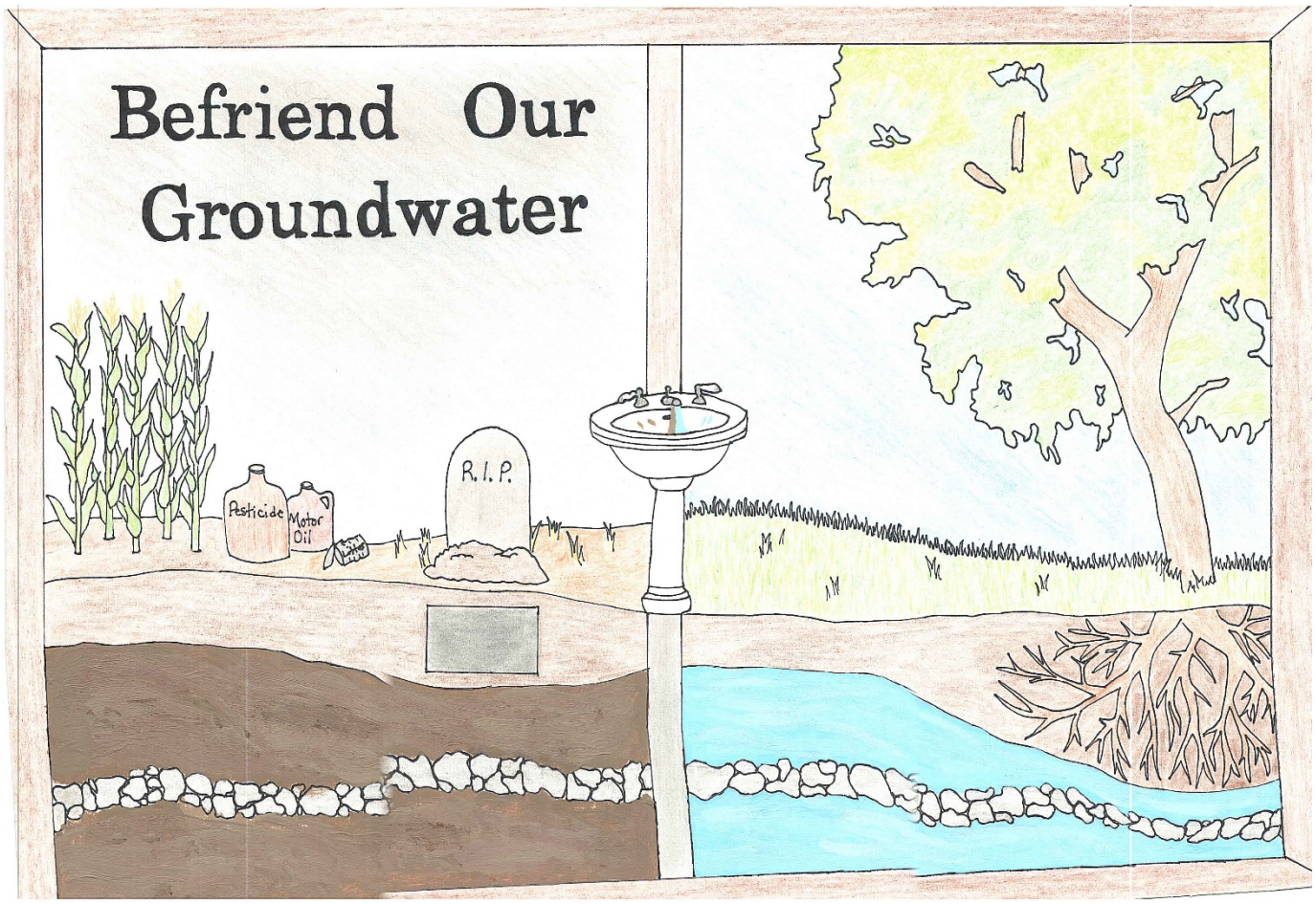
You can check to see if your car is leaking or use eco-friendly detergents. I also found an alternative for road salt! Ecotraction! Here's the website: www.ecotraction.com

Thanks SO much!!! Gtg! Looking for more ways I can BOG!! :D

Glad I could help!! ;)

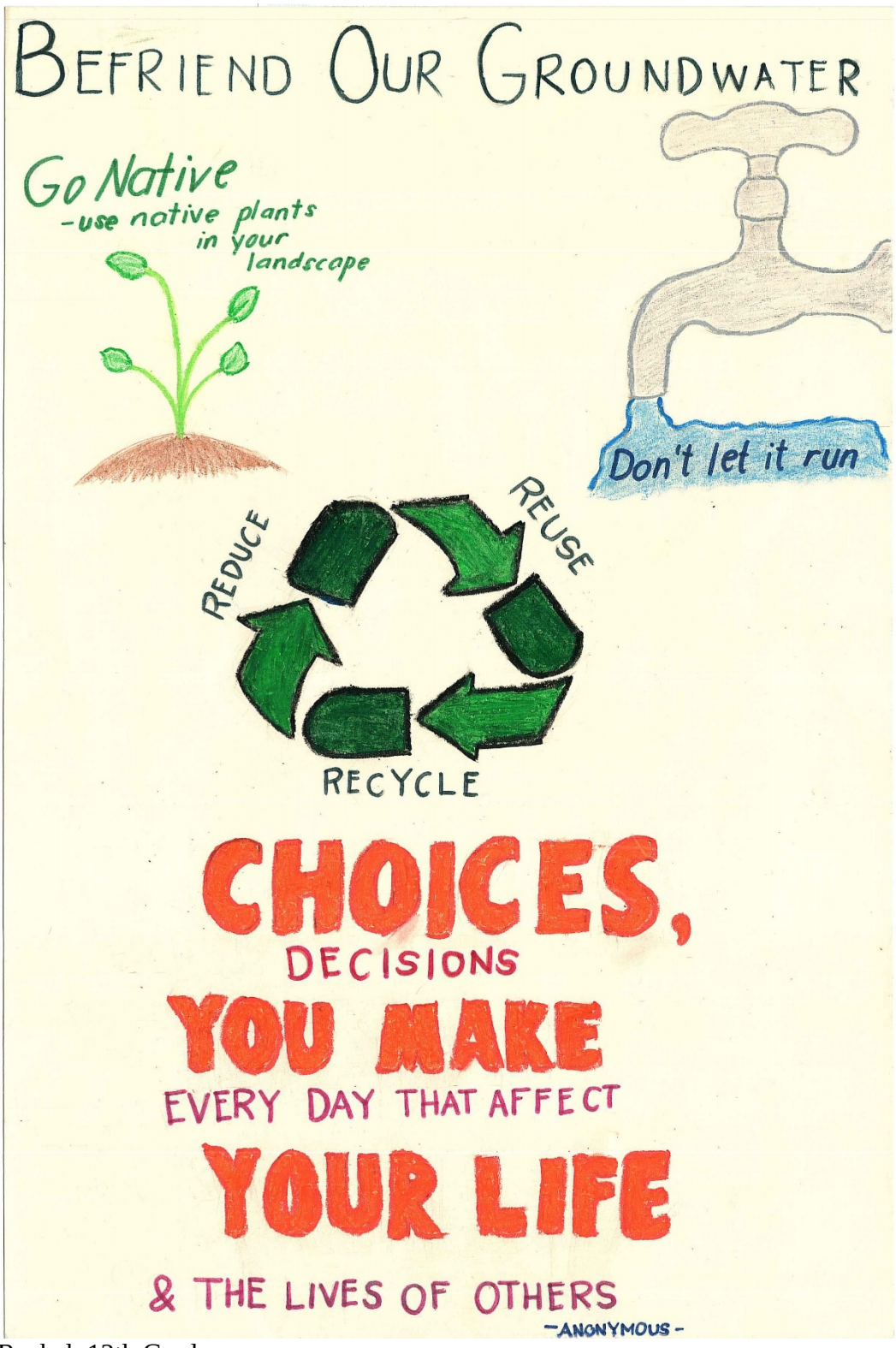
Carly, 8th Grade

Shayne, 9th Grade



Brianna, 10th Grade

Lauren, 11th Grade



Rachel, 12th Grade