**What’s Your Contribution?**

H2O. Perfect. No calories, no aftertaste, thirst-quenching, amazing, powerful little molecules that we can’t live without for more than a couple of days. What happens when fresh, clean water becomes as scarce and as precious as oil, coal or natural gas? In some places we are paying $5 a gallon at the pump, and we don’t even need oil to survive. What would we pay for water when/if it becomes scarce or maybe too polluted to drink? Right now the average American pays less than a penny per glass of water (Crane, 2011) straight from the tap. Taking for granted that there’s a tap at all, and that out of that tap comes clean, crisp, refreshing, H2O molecules all bundled together to quench the thirst of our daily needs and addictions.

In my language arts class, we are reading a book called *A Long Walk To Water* by Linda Sue Park. It’s based on a true story about two young adults living at different time periods in Sudan and their daily struggles to survive simply because fresh, clean water is unavailable to them. I have truly realized through reading this book that its not money that distinguishes the “haves and the have-nots”, its resources, more specifically water. The average American uses somewhere around 176 gallons of water per day compared to the 5 gallons per day an African **family** may use. (water.org) Devastatingly enough, as many as 5 million people die each year due to lack of water and water related illnesses; one-third of the deaths are children under the age of 5. (Discover, 2008) Makes me think differently about the water that comes out of my tap. Clean, life-giving, nourishing, water.

So what’s my contribution, my community’s contribution, or even my nation’s contribution to water quality in my backyard, the nearest creek, river and even the Gulf of Mexico? How do I impact water quality in the ocean when I live in Henry County, Kentucky? In my science class, we have been investigating watersheds and through this investigation, I have realized that water flows downhill and takes pretty much everything with it that’s not nailed down. The majority of which includes; the trash that gets thrown out on the side of the road and the billions of cigarette butts, pavement runoff from parking lots, agricultural runoff that includes animal waste, fertilizers and pesticides, etc. and just about anything else that would be considered non-point source pollution.

Lets talk trash. The majority of our trash these days is plastic. Plastic makes the world go round. Its cheap, its disposable, it doesn’t shatter or break like glass so its widely used. However, it’s also non-biodegradeable. It never goes away! In fact on our field trip and tour to the New Castle Waste Water Treatment Plant (WWTP), it was widely evident and thoroughly disgusting that plastic doesn’t break down by the numerous plastic tampon applicators scattered about the 1st lagoon. Plastic just breaks into smaller and smaller pieces over time. Luckily, the WWTP will clean these up, I am more concerned about the plastic trash that will wash away into our waterways that will eventually make its way into the ocean, and possibly into the belly of the fish I may be eating for lunch one day. Recently we watched a video from *Good Morning America* about the Great Pacific Garbage Patch, the largest landfill in the world that’s actually located in the ocean!! It’s an accidental floating island of plastic twice the size of Texas and some believe larger than the continental United States caused by ocean currents! The scary thing about this is that animals are not only getting tangled up in these messes, but that the smaller pieces of plastic are actually being mistaken for plankton and are therefore becoming part of the food chain. In some places, there are 6 times more plastic pieces than plankton. Bird carcasses have been found with bellies full of plastic and it is actually believed that they starved to death, thinking that they were full. So if we are what we eat, should we be worried?

Did you know that there are 150 dead zones in the world’s oceans as well, including one at the mouth of the Mississippi River Delta in the Gulf of Mexico? Dead Zones are places where oxygen in the water has been depleted due to the amount of algae decomposing in the water. Recently we learned that all aquatic organisms need oxygen in the water to survive and actually conducted dissolved oxygen tests in the stream behind the WWTP. We found out through our research that the Gulf of Mexico is the largest watershed in the United States because the majority of all the rivers east of the Rockies and west of the Appalachia’s dump into it. This includes runoff from all of these areas, mainly agricultural runoff of fertilizers and pesticides and animal waste and is causing dead zones in the gulf where no aquatic organisms can be found. Fertilizers and animal waste are high in nitrogen, but nitrogen can be put back into the soil naturally through crop rotation and compost.

It’s the 40th anniversary of the Clean Water Act!! We watched a video and read an article about what life was like in America before the clean water act. Nothing was protected, rivers caught on fire, fishing and swimming was limited especially in urban areas because of the stench and filth. We have come a long way since those dark days, however, I think there’s more to do. With new problems such as plastics and fertilzers and dead zones and water shortages and waterborne diseases, we should never stop wondering about our contributions to water quality, locally or globally. And so I leave you with this, how much would you be willing to pay for a gallon of water? How long would that last you?