

Popular Science. "Machine Squeezes Drinking Water From Your Sweaty T-shirt" popsci.com, 2013.
<<http://www.popsci.com/science/article/2013-07/machine-squeezes-potable-water-your-sweaty-t-shirt>>

Earth Science For Kids. "Erosion" Ducksters, 2014.
<http://www.ducksters.com/science/earth_science/erosion.php>

Nature works more like a car. If the battery dies, it cannot drive. If the tire pops, it cannot drive. If it runs out of gas, it cannot drive. When one part is broken, the rest won't work either. **Biodiversity** is all the kinds of different living things that all live in an environment. We need all of the different kinds of living things for all the other ones to work. Protecting animals by putting them on endangered lists, or even breeding them in captivity to put them back into the wild is a very hard thing to do. There are a lot of animals that need our help! Some people may work on saving while others keep hunting. It's like you're trying to do a magic trick and someone keeps coming up and breaking your wand in half.

Some damage is tougher to see than others. It's obvious that if somebody shoots a wolf or cuts down a tree they can make a big difference on the wildlife's health. But there are smaller things at work. Even taking a walk through the woods off of the path can hurt the wildlife there. **Erosion** is when dirt or rock move from one place to another. Water and wind move most of the dirt and rocks around us, but humans can make this happen faster by cutting down trees and killing plants. It happens even faster in places where we farm or build. Humans can do in a few minutes what would take wind and water hundreds of years. Planting plants and trees will help to keep the soil healthy and slow down the wind and rain from washing away the land.

The main ingredient of life is no secret. It's water. Every living thing we know of needs it. If a water supply runs out, you get a desert. This is ok for the living things that are used to being in the desert, but when a forest turns into a desert, we've got problems. Unfortunately, there are so many people in the world today that some of our bodies of water looks more like toilets or trashcans. We have filled them with oil, garbage, sewage, boogers, you name it. Some rivers have become poisoned so that fish who swim in them float to the surface and birds who land on it sink to the bottom. This is not easy to fix. **Water purification** is the process of making water clean again for people and other living things. There are many ways of doing this, from building a machine that use filters and cleaners to take in the water that is dirty and pump out clean water. Or . . . we can plant trees. Lots and lots of trees and other plants. It turns out many plants will clean water. Their roots are like magic wands . . . that work over a very long time. In order for the cleaning to work, we have to stop putting trash and chemical into the water.

If you want to renew the environment, make it so it's good as new again, you are going to need to throw away that magic wand. You are going to need to get your hands dirty. Biodiversity, or the many kinds of living things that live in one place, is important for everything to work together, like a car with all its parts.

We can build trees or put up signs to stop erosion or the wearing down of healthy soil. And finally, we can build plants or plant trees to purify the water that we have made so dirty. We are just like the guilty kid that knocked down the blocks that took so long to build. It's time for us to get rebuilding.

References:



Name _____

Period _____

Date _____



Bringing it Back

renewal, biodiversity, erosion, water purification

Human Impact Unit

Here's a wand. I want you to go around the earth and fix all of the things people have done to it. With a flick of the wrist, clean up the oil from the seas. With a little swivel, clear the smog out of the air. With a wide rush, clean up all of the trash from the forests and bring back the trees we chopped down. Get back to me when you have made the world well again. What do you mean the wand does not work?! Right. Magic wands are not real. Guess we will have to do this the hard way.

Have you ever spent hours building something out of blocks or sand only to have someone come around and knock it over, breaking it in seconds? People have knocked over a lot of the things that Nature has built, but these things are way harder to rebuild than a sandcastle. **Renewal** is to fix something that is broken or replace something that has run out. Like the guilty kid who knocked down the sandcastle, people are starting to realize just how much damage we have done and how hard it will be to fix. But . . . nature grew itself, right? Can't we just put a fence around a wild area and wait for it to regrow?

Sometimes. But sometimes we have done so much damage that we need to get in there and fix what we did so that it will be able to regrow on its own later on. It's time to rebuild . . . and it's going to take a lot more than a magic wand.

You might think you have an understanding of how all animals work in the wild. Wolves eat deer and bite people. Mushrooms will either kill you, or you can eat them on salads. But everything in the environment is connected in ways we cannot see. Those wolves eat the deer who eat the trees that feed the other animals. Mushrooms clean the water and dirt of dead stuff where all the other animals drink and the plants grow.