HOT TYPE

a weekly exploration of people, places and things by kids, for kids

The Rain Barrel Report: Part 1

And the Rain Came Down

If you look at pictures of Earth from space, or at a globe or a map, one thing stands out: our planet is just swimming in water. Nearly 70% of the Earth's surface is covered with it. And that's really good, because water is very important for life. In fact, without it, there is no life, at least no life like us, like people.

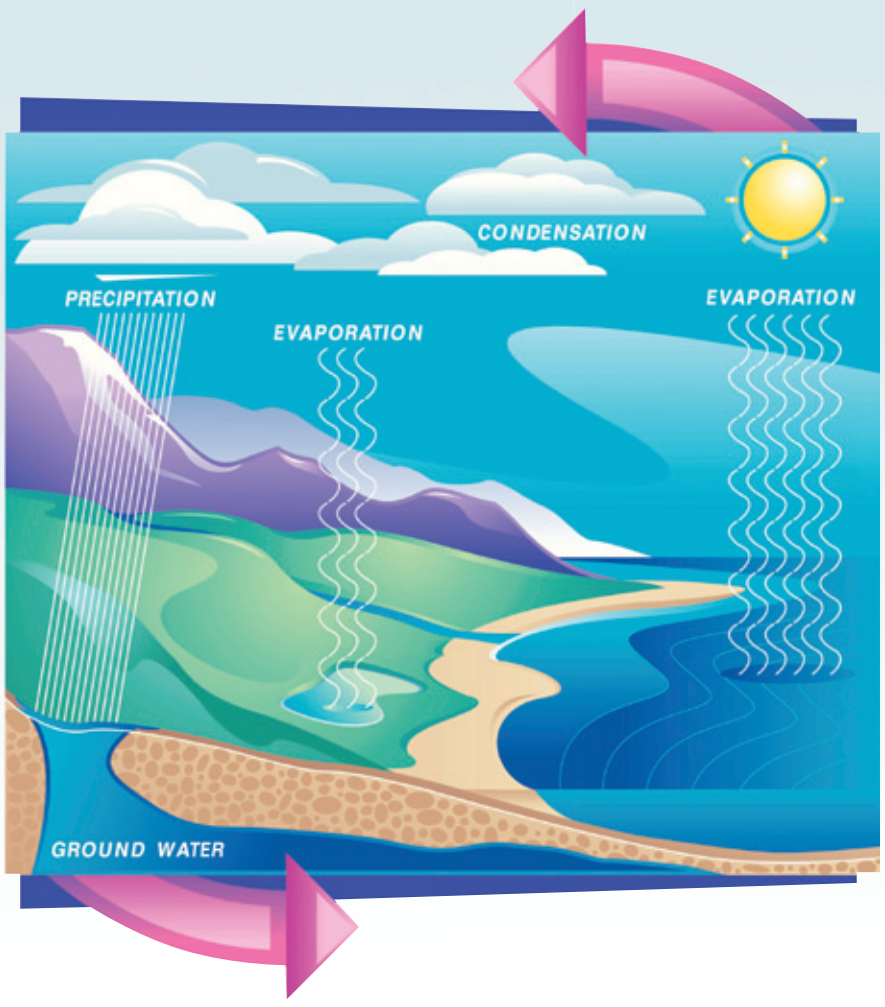
But even though there's all that water, we can't use or drink most of it without treating it first. See, about 97% of water is salt water. And without desalinization—that's what the treatment is called when you take out salt and other minerals – we can't drink it. So that means that just 3% of all the water on Earth is fresh water, water we can drink and use without first getting rid of the salt and other minerals that make it undrinkable.

Even that 3% figure is misleading. When you really look at fresh water, you realize that over 99% of the 3% of all the water on Earth that we can drink is ice. Most of Earth's fresh water is locked up in glaciers and in the polar ice caps. So, really, that means that less than 1% of all the water on this planet is water that we can actually use for drinking, for transportation, for heating and cooling and for all the other things that we need fresh water to make work.

Just in case you haven't already figured it out, without fresh water, we're sunk. So we have to look after it, preserve it wherever and whenever we can.

The Water Cycle

Your drinking water comes from different sources. A variety of water sources ensures a diverse, reliable water supply network. Sources include groundwater from aquifers (a layer of holey rock, sand, or gravel that ground water passes through), river water and water stored in a reservoir. But all of these water sources rely on the continuous water (or hydrological) cycle.



- **CONDENSATION**: Water vapor in the air loses heat and changes into a liquid.
- **PRECIPITATION**: Water vapor in the air falls to Earth as water by rain drops (or snow) onto the ground…
- **RUNOFF**: What isn't infiltrated flows as surface water through various waterways, like creeks and rivers, to the oceans.
- **INFILTRATION**:…where it seeps underground to become groundwater, filling underground aquifers, and fills creeks, rivers, lakes and wetlands.
- **EVAPORATION**: This water finally travels back into the air and the process begins all over again. There's no stopping it, and that's good news for us.

FUN FACT:

Groundwater moves very slowly, and may return as surface water or be stored within an aquifer (an underground bed or layer of permeable rock, sediment, or soil that yields water) for thousands of years.

Good Runoff vs. Bad Runoff ...What's the Problem?

When land is left in its natural state, most rainfall soaks into fields, forests and meadows, flows slowly underground, just as you read to the right.

The natural process of water soaking into the earth is destroyed when we cover the land with buildings, roads, and parking lots. Meadows and forests are replaced with roofs, concrete, and asphalt. These are called impervious surface. That means they don't allow rain to penetrate the earth. Instead, the fallen rain quickly runs directly into storm drains, ditches, and streams, all without the benefit of filtration.

To add to this problem, the water that is running directly into the streams usually picks up pollutants along the way. These pollutants can include motor oils and gasoline that leak from vehicles, fertilizers and pesticides from lawns and gardens, and anything else that will float or dissolve in water. Polluted runoff is nonpoint pollution, which means that you can't point right to one spot and say, "Yep, that's it! That's where the pollution is coming from" and stop the polluting.

Nonpoint source pollution can make river and ocean water unsafe for humans and wildlife. In some areas, this pollution is so bad that it causes beaches to be closed after rainstorms!

DID YOU KNOW? The average driveway car wash uses a total of 116 gallons of water! Most soap contains phosphates and other chemicals that harm fish and water quality. The soap, together with the dirt and oil washed from your car, flows into nearby storm drains which run directly into lakes, rivers, or marine waters. The phosphates from the soap can cause excess algae to grow. Algae look bad, smell bad, and harm water quality. As algae decays, it uses up oxygen in the water that fish and other wildlife need.

Source: Massachusetts Department of Environmental Protection

THE LIMA NEWS & LIMA PUBLIC LIBRARY BOOK REVIEWS

Mya Raczynski
School: St. Charles
Grade: First
Age: 7
Book title: "Roses are Pink, Your Feet Really Stink"
Author's name: Diane de Groat
What happens: Gilbert had to write 15 cards with nice Valentine poems for his classmates. He didn't want to write a nice poem for Lewis who had tweaked his nose or Margaret who made fun of his glasses. So Gilbert wrote two bad poems. They asked Gilbert why he wrote two mean Valentines and he said because you hurt my feelings. Lewis and Margaret said they were sorry and Gilbert wrote two nice poems for them.
Why I liked this book: I liked this book because of the funny poems Gilbert wrote. My favorite poem was "Roses are red, you wet your bed. I think that you have rocks in your head.

Olivia Shenanda
School: St. Charles
Grade: First
Age: 7
Book title: "Shoe-la-la"
Author's name: Karen Beaumont
What happens: Four girls needed shoes to wear because they were invited to a birthday party. They tried on every single shoe at the store and made a big mess. They did not clean their mess! They did not like any shoes at the store so they decided to design their own shoes. At the end, they went to the party with the shoes they designed.
Why I liked this book: I liked the book because it had a happy ending. The book was funny in the middle of the story, too!

Megan Peppard
School: St. Charles
Grade: First
Age: 7
Book title: "The Little Gymnast"
Author's name: Sheila Haigh
What happens: Anda was a little girl and her family was very poor. On Anda's eleventh birthday her gran got her tickets to a gymnastics club. She tried to win but she couldn't. Finally in the finales she won a scholarship and got to keep doing gymnastics.
Why I liked this book: Because Anda was very brave. She would not stop trying to win.

SEND IN YOUR BOOK REVIEWS

If you wish to submit a book review get a form at the Lima Public Library. Enclose your photograph, and turn it in at the Lima Public Library at 650 W. Market Street, Lima, OH 45801, or pick up at The Lima News and mail to The Lima News at 3515 Elida Road. Lima, OH 45807. A photo must be enclosed.