Hi, friends, my name is Wayne - Wayne Drop. No, not Rain Drop, Wayne Drop. I know, I know! My friends always tease me about my name, too. I want to talk to you about how I became more confident about taking the FSPLAT. What is the FSPLAT, you ask? It’s only the most important test a water drop can take in elementary school!

About a month before the test, I was sitting in class and squirming in my seat. My teacher, Ms. Dew Right, noticed I seemed nervous and irritable. “Wayne, is something wrong?” she asked. “I’m sorry Ms. Dew Right,” I answered, “I guess I’m just worried about taking the FSPLAT.”

“You know, Wayne, I think I have just the thing to help you.” Ms. Dew Right took a study guide from her file cabinet and gave it to me. “If you’ll review this guide about the Everglades, I know you’ll have the information you need to do well on the FSPLAT,” Ms. Dew Right told me.

As I read over the study guide, I became more and more excited. “Ms. Dew Right! I can’t believe how much I already know about the Everglades!”
Even though there are different types of clouds, all clouds are made of water. Sometimes they are made of tiny drops, far apart, and held up by the wind. At other times, they are big drops, close together, held up by very strong upward and downward winds blowing inside the cloud. When the air temperature within the cloud becomes very cold, the drops become too heavy to stay up, so they fall to Earth as rain. If it’s cold enough, they fall to Earth as snow.

2 Vocabulary word: Gravity is the natural force that causes objects to move toward the center of the earth.

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3 A watershed is an area of land from which water collects, flows and drains into a river, estuary, lake, bay or ocean. Florida has five major watersheds. We will learn about the southernmost watershed, which extends from Orlando to the Florida Keys and from the Atlantic coast to the Gulf of Mexico. This watershed is divided into three regions: the Kissimmee, the Okeechobee and the Everglades. Did you know that this watershed is sometimes called the KOE Watershed, covers 16 counties and is home to more than 5.5 million people?
**It was awesome!** There were hundreds of fish of different sizes, shapes, and colors. They swam all around us, darting in and out of vegetation and bumping and poking us. We just decided to cling together and enjoy the journey. We traveled through an intricate pattern of lakes called the “Kissimmee Chain of Lakes,” and before long, we were swept south into the **Kissimmee River**.

This beautiful river used to twist and turn slowly for 100 miles. It had a 1-to 2-mile-wide floodplain. These wetlands were naturally flooded on a regular basis. In 1954, the citizens of Florida asked the government of the United States to design a plan to prevent flooding in their communities. The **U.S. Army Corps of Engineers** changed the shape of the river, digging a straight canal, 300-feet-wide and 30-feet-deep. The straight canal was very effective in preventing flooding, and the wetlands that were next to the canal were drained and turned into pasture. Years later, residents discovered that changing the natural flow of water damaged the ecosystem. The Army Corps of Engineers is now working with other agencies to restore the portions of the Kissimmee River and its adjacent wetlands. Native wetland plants and wading birds have already returned to the restored areas.

As I was enjoying my peaceful, relaxing ride down the Kissimmee River, I felt a sudden jerk. Then things got so rough it felt as if I was being batted about like a ping-pong ball. I soon realized I was riding on the tail of a large mouth bass that had been hooked and was being pulled from the water. Boy, was it angry! It was fighting so hard as it was pulled ashore that I was flung onto the sunny bank. Luckily, a swamp lily leaf cushioned my fall, but I almost immediately evaporated back into the atmosphere. As a result, I didn’t get to finish my trip down the Kissimmee River.
“Wayne, that was cool!” Alonzo exclaimed. “Tell us about your second trip to the Everglades.”

My second trip was last spring, when my family and I flowed down the Kissimmee River to the middle region of the Everglades watershed to attend a family reunion. This middle region is known as Lake Okeechobee. The Seminole and Miccosukee Indians call it “Big Water” because it stretches for 730 square miles—almost as big as 800,000 football fields.

As morning dawned on the third day of my family reunion, some of us were gently filtering our way through plants that were hidden under water, floating on top of the water or emerging out of the water. Before I knew what was happening, my family was scooped up in a clear tube. As we were lifted higher, we came face to face with a smiling scientist from the South Florida Water Management District. She was conducting a field study by taking water samples to test for pH and chemicals such as phosphorus and nitrogen. She was testing to see whether the delicate balance of the Everglades was disturbed by runoff from agricultural and other developed lands. After recording the results of her field study, she carefully cleaned the test tubes and delivered us back to the lake.
A few hours later, it got a little cool and the wind started to blow. Out of the sky, millions of drops fell, joining the reunion. Floating together, we all seemed to make the lake swell so much that I thought we might get to the top of the 34-foot high limestone dike surrounding Lake Okeechobee. Suddenly, some drops started streaming left and some to the right. We weren’t sure which direction we were going next. When Lake Okeechobee receives a lot of water, humans release some of it through the St. Lucie River, on the east side of the lake, or through the Caloosahatchee River on the west side. We could see why the humans needed to protect their surrounding towns from flooding during big storms and hurricanes! The Kissimmee watershed sends a lot of water to Lake Okeechobee.

Our visit with family was interrupted as the South Florida Water Management District opened the canal gates to the Caloosahatchee River and we streamed west out to the Gulf of Mexico. Once again, I was unable to complete the entire journey through the Everglades watershed.
As I finished my second story, I noticed Tanesha waving her hand. “Do you have a question for Wayne, Tanesha?” asked Ms. Dew Right.

“No, but Wayne’s story reminded me of a short trip I took to the Everglades Agricultural Area.”

“Tell us about it!” yelled the other classmates.

Tanesha told a story about how humans grow their food. “I was hanging out in Lake Okeechobee, and decided to squeeze through one of the water control structures in the dike that surrounds the lake. I flowed south into a big canal, and then a smaller one, until I was sucked into a pipe. Woo hoo! I splash-landed in a field ditch, surrounded by acres of green, leafy sugarcane plants. SWEET! I seeped down into rich, dark soil until I was absorbed into a root. Next, I was pulled upward through tubes in the stem and out into the veins of the flat leaves. My trip ended with transpiration, when I changed to water vapor and was released into the air through a small pore on the bottom of the leaf. Of course, I ended up with my head in the clouds again!” Tanesha told us that if the plants don’t get enough water they can die, so farmers use irrigation systems to make sure plants will get all of the water they need to stay healthy and grow. Some man-made, landscaped areas such as golf courses also need nutrients such as nitrogen and phosphorus. They can be irrigated with treated wastewater instead of fresh water. This recycled water is perfect because it has the built-in fertilizers the grass needs, and conserves fresh water for other uses such as drinking and taking showers.

“You know what, Ms. Dew Right, maybe if I finish my journey through the Everglades, I’ll know all the answers to the FSPLAT.”

“I have an idea. Since you ALL must pass the FSPLAT, let’s ALL take a trip tomorrow to the Everglades,” said Ms. Dew Right. “Yeah!” the class shouted in harmony together. “That will be fun!”
We had a restless night, since we were too excited about our field trip to sleep. The next morning, we looked forward to the arrival of our fine-feathered friend, the endangered wood stork, who comes by every morning looking for food. He would transport us to the southern part of the watershed—the Everglades region.

The flight was smooth when we were gliding, but very bumpy when he flapped his wings, which spanned more than 5 feet wide. I had a wild ride on one of his black tail feathers and didn’t think that I would survive the flight. My classmate, Misty, distracted me when she pointed out a prowling endangered Florida panther directly below us. “What a rare sight,” she whispered.

We traveled further south, passing a few South Florida Water Management District pump stations and teardrop-shaped tree islands rising above the rest of the landscape. Unexpectedly, our feathered friend started to descend, performing amazing dives, rolls and turns, and finally splash-landing in a shallow pool of water. Ms. Dew Right calmed down the group after its wild ride and announced that this was our last stop. We thanked our endangered friend for the ride and rolled off his black wing tips into the Shark River Slough of Everglades National Park. As we looked back at the wood stork, he waded around on his long, skinny black legs. He was pretty fussy—he didn’t like to fish in water that was too deep or in water that was too shallow. He scratched around with his big pink feet, trying to stir up something to eat. He stuck his open beak into the water and groped around. When his beak made contact with a small fish, “SNAP!” He slammed it shut in a lightning-fast reflex.

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As we drifted through the open-water slough, we bumped into some tall, sharp-edged sedges emerging from the water. My classmates began to snicker because they could tell I was nervous being in this new environment. Ms. Dew Right explained that this habitat was called a “sawgrass marsh.” The water here was not very deep and animals seemed to be everywhere. Some were swimming through the water and some were walking. We rested for a while on light brown floating mats of periphyton, which our teacher told us was a very important algae complex that cleans and filters phosphorus out of the water.

After our break, we cautiously pushed on, banging and scraping our way through the edge of the sawgrass ridge until we caught up with a park ranger who was explaining to visitors why the area we were in was called “Shark River Slough.” “Did he say sharks?!” one of my classmates asked Ms. Dew Right as he huddled near her in fear. Just then we heard the ranger say, “There really aren’t any sharks in the slough; it’s just called that because the fresh water from the Everglades runs to Shark River. Shark River meets up with the salt water in Florida Bay and makes brackish water, creating the perfect nursery for real live sharks to give birth to their young.”

The natural cleansing ability of periphyton is being used to clean up water in man-made stormwater treatment areas as part of Everglades restoration. Not all algae are “good”. A “bad” exotic algae, native to the Pacific Ocean, is growing over and suffocating sea grass and coral reef areas on the coast of Florida. Excess nutrients contribute to harmful algal growth, including toxin-producing red tides.
Just a little relieved, we all looked over and saw a mellow red-bellied turtle sunning on a log, when all of a sudden, “SNAP!” Ms. Dew Right almost evaporated from shock, and we all laughed again. A giant reptile had come out of nowhere and caught the turtle in its powerful jaws! “The mighty alligator,” said Misty, “is the landlord of the Everglades.” I sure wouldn’t want to mess with something that had 80 big teeth and such powerful jaws! As we floated along, I saw a few other alligators basking and warming themselves in the sun along the banks.

“Wanna get a little gross?” Misty asked.
“Ummm...” I hesitated. “What do you have in mind?”
“Let’s go see where scat comes from,” said Misty.
“What?!”
“You know, if it’s from sea birds or bats, it’s called ‘guano!’ Oh come on, Wayne Drop. I’m talking about droppings!”
“Did you know that some scientists actually study animal droppings?” asked Juanita. “That’s correct,” added Jose. “For example, they dissect owl pellets to look for skulls and other bones so they can tell what kind of animals the owl had been eating.”
“Did you know that a single dairy cow produces more than 120 pounds of manure a day?” added Jamal. “Ugh! I think that’s more than I wanted to know...” Christopher moaned.

But the gator started to think.
“I need water to live and to drink.”
So he started to dig
A gator hole really big
It looked like a huge giant sink.

To the gator hole came so many fish.
To the birds it looked like a big serving dish.
The gator didn’t grow any thinner
Because he had plenty for dinner.
The birds and the fish were delish.
Since the only water around was in his pool,
The gator decided not to be so cruel.
He didn’t eat all of his guests
He allowed some of them to rest
But his hole he always did rule.

* Carlos Mancebo,
4th Grade Teacher,
Dante B. Fascell Elementary School
As we continued to float south, I noticed that our class joined some salty water drops to create a brackish estuary that flowed through the tangled roots of coastal mangroves. These trees had long prop roots and looked like they were walking on stilts out toward the ocean.

As we made our way through the mangrove roots, a kayak paddle swooshed us up onto the hull and we hitched a ride into Florida Bay. As the kayak slowed, we could see a shadow heading toward us. When large nostrils arose from the water with a snort, followed by a rough whiskered muzzle, we knew it was our gentle friend, the manatee. As the slow moving herbivore came closer, we slipped off the kayak onto the manatee’s back and headed toward one of the last stops of this miraculous journey through the Everglades. We were heading directly toward the Florida Keys, which were once secret hideouts for pirates and their stolen treasure ...
We flowed under one of the bridges along U.S. Highway 1, and I saw the beautiful coral along the ocean floor. The class discussed how tiny animals create coral reefs and how their complex patterns of nooks and crannies provide homes for many other marine animals. A barracuda flashed a sinister grin at us while brightly colored saltwater fish guarded their territories. We floated past green sea turtles, munching on meadows of seagrass. I spotted a group of large creatures whose fins broke the surface of the water in graceful arcs before they dove back down. Ms. Dew Right explained that these animals, known as bottlenose dolphins, were mammals, not fish, that live in the water. “What do you mean?” I asked. She explained that dolphins breathe air through a blowhole on top of their head and have lungs just like humans do. Ms. Dew Right decided we should take a ride on these playful mammals. We had so much fun as the dolphins leaped and dove in and out of the turquoise waves!

After a while, all of the excitement began to catch up with us. Ms. Dew Right decided that the class would take a little siesta. We didn’t realize that the temperature was rising, and that we were being drawn up as water vapor into the large storm clouds that were filling the sky. We awoke to find ourselves floating high above the ground in dark, angry clouds. Our clouds marched across the sky to the north, passing the large cities where humans lived. When the clouds floated into the right position, Ms. Dew Right gave the signal, and we all fell as rain to our earthly homes.
The following day, Ms. Dew Right reminded the class of the many things we learned on our journey. We talked about the scientific field study, our encounters with many creatures, and our amazing journeys through the Kissimmee-Okeechobee-Everglades watershed. We laughed as we remembered the tales we had heard from each other. “It feels good to be important,” Misty said seriously. The class nodded in agreement. We knew that water drops like us are critically important to the plants, animals, humans and environment of south Florida. We all realized that the resources of the Kissimmee River, Lake Okeechobee, the Everglades, Florida Bay and the Florida Keys of today are different from what they were in the past and even different from what they will be in the future, and that everyone needs to help keep them healthy.

As we ended our discussion, Ms. Dew Right told us how proud she was of us and reminded us that we were more than ready to take the FSPLAT the next day.

How well do you think Wayne and his classmates did on the FSPLAT?

Ms. Dew Right’s class would like you to share a story. Describe your outdoor experience in the Everglades, a neighborhood park, or even in your own backyard.
Materials: Gameboard, gamepiece of your choice (use a small object you like or use your imagination—for example, draw a small picture of an alligator or make a small sculpture out of clay), dice

How to play: Each player rolls one of the dice. The person with the highest number goes first. Roll one of the dice and move your gamepiece. When you land on a space, follow the directions. Take turns rolling the dice and making a move.