

Tyrone the Fish

By Ian.

Oh...Hello my name is Tyrone. I'm a tilapia fish and I live in the Aquaponics lab, in Trowbridge School. I live with all of my other fish friends. I am fed by all of the fourth graders. They take care of me and all of the others fish. Oh no! What's that? It's a hand taking me out of the tank, but where is it taking me?

It feels cold. It's darker here compared to the tank I was in and all of my friends have disappeared. I am starting to feel a little hungry and I'm pretty board in here. I'm beginning to feel a little scared. Wait! Where are all of the fourth graders at? I can't find them? Once again there is still no food to eat. For crying out loud I'm starving here! Come on, it's been two days since I've seen anyone!

Oh, here we go! The lights are back on and my friends are near. I think the tank went black, because there was nobody to take care of us. The fourth graders are back and wow, we have some food. I feel like I haven't eaten for a whole weekend. It's pretty hard on us when the kids go away like that. Our tank gets full of snails and our water goes down. It's really important to be looked after every day.

Trowbridge School
Ms. O'Connor
Grade 4

Tilapia

by

Jayla , & Cherrish

I am a male tilapia fish. I am in a small tank with other tilapia fish. I am native to the great lakes and I am from the Nile River in Africa. That was just a little background information.

Now let me tell you a little bit about my life in an aquaponics tank. I'm making a big hole on the bottom of the tank. I am digging a hole so I impress the females with my strong muscles. Then they will lay as many eggs as I can fit in my hole. I already have four baby fish, but I let the baby fish go in the water system. Then the other males won't eat my babies because they are jealous. Now that I know they are safe I can protect more babies.

The four babies, I have let go have grown from tiny eggs into small fish. The baby fish eat the extra algae off the bottom of the water drain. I have to keep on scaring the other fish away from my nest if I want more eggs. I always have to open my mouth as wide as it can open. Then I run up to them. I haven't gotten any food for a week, because I'm too busy protecting these babies! Man this is a lot of work!

We male fish fight each other to protect our nest we make. The pink males don't let the little males get any food. So they are still really small and may die!

Anyway the people that feed us are going into a different class in a few months. Then a new class will take care of us. That was a few days of my life with the class. I hope the new class is very nice to us and that they will test our water unlike this class!

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

Aquaponics

by

Aniles & Apolinar

Oh... hello there! My name is Aniles and I'm going to tell you all about the Aquaponics lab. The Aquaponics contains Tilapia and some plants. When Ms. O'Connor takes the class to the lab we all noticed that many of the fish are on one side of the tank. After observing the fish on a variety of occasions, we documented that one of the fish was making a nest on the bottom of the tank. All of the other fish were staying away from him on one side of the tank or the other. We thought this was kind of bullying, but also understood that this fish was protecting his territory.

So after we made note of this fish behavior we went about our business of taking care of the lab. This consists of taking the temperature of the tank. It is important that it stays close to 80 degrees so that the fish and the tank stay healthy. We also need to test the nitrates and ammonia levels and adjust accordingly. It is important that our plants do well and that our fish do their jobs of providing the plants with nutrition.

All of these jobs are important in keeping the lab up and running so that we can learn from it. It's not an easy job for us 4th graders, but we get it done. I hope you learned a little about aquaponics and maybe give it a try some day.

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

The Snail's Reputation

By

Avia

Hi my name is Bob the snail. I have a good reputation amongst the other snails in the aquaponic tank. I do very well in the warm 80 degree water temperature and I am thriving. I am so popular that even the humans pick me up in a little container for their pets. Sometimes when they keep the snails in the large tank, we grow and make it hard for everything else in the tank to grow. Our history states that we can really mess up the culture of the tank by hurting the plumbing and filter. We can migrate to just about anything, like the pipes and filters, and then the problems begin. I've heard the funny looking students on the outside of the tank make comments about how they are going to transfer us to another place with a natural resource of water so that they can maintain their tank. However we always seem to make our way back into the aquaponics tank. I am glad that I could be an adventurous part of this expedition. The students learn a lot from me.

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

Max
by
Richard & Carter

Max and his friends live in an aquaponics lab. Max is a tilapia fish in the tank. He has to be in warm water. If the fish don't have warm water they can die from too cold or too hot of water. The water is around 80. He also needs food to survive. Max and his friends are fed $\frac{1}{4}$ cups of food twice a day and they usually eat it all up. If there are a few pebbles floating around, they get taken out of the tank so that the levels of the tank stay stable. Yesterday the fish were fed more than usual, so there were high nitrate levels. When the levels are not where they need to be the system goes haywire. The amount of poop from the fish messes with the plants and then they die. These are some things you need to do on a daily basis to make sure your aquaponics tank is healthy.

Trowbridge Street School
Fourth Grade
Ms. Jennifer O'Connor

Aquaponic Inquires

by

Julian .

Cameron

Trowbridge Street 4th grade students have been learning a lot about the culture of an aquaponics lab. We have a history of data that compares and contrasts how the system works. Now I have gathered a few more areas of study I would like to investigate. Here they are:

- Could the water stay clean if there wasn't any filter? (Can the fish and plants do it alone?)
- What would happen if we let the water gets too warm, above the temperature of 80 degrees? (Does light have anything to do with the temperature?)
- Would the fish get too cold if the temperature fell below 50-52 degrees Fahrenheit?
- Would we have to feed the fish an immense amount of food before summer break rather than just twice a day of one-fourth cup of food?
- Could the system stay clean without snails clogging up the pipes and filters if we weren't there for a long time? Us 4th Graders usually clean the snails out of the tanks every day.

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

Plants in Need of Fish

By

Blaise & Collin

Hi I'm a plant in Trowbridge's Aquaponics Lab. I'm Blaise the Zinnia. My friends and I grow in a container of water. Right next to us is a tank full of Tilapia. They're fish and we grow from their waste. Tilapia are not native to the Great Lakes. They come from the Nile River in Africa, so they aren't very local. Today while I was supervising my plant friends, I overheard the students outside our tank, and they said that some of the fish were taken out. A few days before we had a major nitrate spike and the reading was 150 which is very unusual. I am wondering if those oversized fish were destroying our tank. However, my Zinnia friends and I were able to reclaim most of the nitrates. But today my friends and I barley absorbed any Nitrates. Two of my friends died because we weren't getting enough nitrates. The nitrates are important, because they act like fertilizer that helps us grow and servers as our food. I think I know why we had the major nitrates spike. A few days earlier the students fed the fish more than usual. Then that would mean more ammonia to transform into nitrates and nitrites. The students were able to retrieve more fish for the tank. Now I'm able to reclaim way more nitrates. We also have two new Zinnia friends whom names are Fred and Mr. Snorkel. More plant friends mean more stability. Now the Aquaponics Lab is safe and sound.

BUT there is one thing I still can't solve. It's that I keep hearing these funny little voices around and I keep seeing giant objects outside the tank. Another mystery for another day!

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

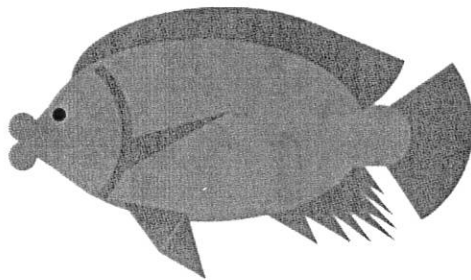
COMPETITION

By Anakin

The Tilapia

Look like they are kissing, but

They are competing



Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

The Lab
by Nadia
&
Cheyenne

Hi my name is Flippers and I'm the princess of Tilapia fish. I'm in Trowbridge's aquaponics tank with my friends and we are hungry a lot. If there is one thing I can tell you, the worse fight the Tilapia fish gets into is when we get fed. It's like a huge herd of tilapia fish in a brawl. It's like we have never eaten before. We usually get fed $\frac{1}{4}$ cup of food and we have to compete for every morsel! One thing that is not good for us is when we get overfed. When we eat numerous times each day, it could cause the ammonia levels to spike too high above the norm of 0-8.8 ppm. That is too high of a level for us and we may get sick. The ammonia, nitrites and nitrates are all over the place and we are in danger of dying. The plants we help grow don't do too well and then they can't survive and feed our adult friends. We need to preserve our good habitat with healthy levels of ammonia. Although I do have to say, Ms. O'Connor's 4th grade class at Trowbridge has been taking good care of us for a long while now and we are doing well.

Trowbridge Street School
Fourth Grade
Ms. Jennifer O'Connor

The Great Aquaponics Expedition

By Aiden & Enrique

Hi! I'm Benny the water droplet. I am unique because I am living in an aquaponics lab! I do a big part in my home. I have to keep my roommates Blaise, the Zinnia, and Bubble, the Fish, alive. Instead of keeping a fish and a plant alive, today I'm going to tell you what you really want to hear, a story of my history. And don't worry it won't be violent. First, an evil janitor named, Steve poured a bucket of cold water into the tank, water that measured below 50 degrees. Normally, I need to measure around 80 degrees; 50 degrees can kill me! Then all of the tilapia in the tank started going crazy and splashed around the tank. One of the tilapia was splashing so crazily that I flew out of the fish tank and on to the floor. I heard a big splat on the ground and before I knew it I was a little baby puddle.

Steve stepped on me and shook me off into the filtering tank. I fell in, and my experience was horrible! Besides the fact that I met a new friend, it was truly awful. There was fish waste everywhere!

My new friend was a snail and his name was Sammy. Right when I introduced myself, I got sucked up a pipe and it was complete darkness. Before I knew it, I was in a test tube and I was packed together with four other drops.

Steve put the test tubes on the table. There was 4 of them. I thought I was done for, but when he put the stuff in, it was harmless; it just made me a different color. However, after he was done performing some unknown tests, he rinsed the test tube out with hot water and I went down the sink drain. "I've had it up to here with Steve", I said to myself. So I came up with a nefarious plan to stop him.

First, I called to Bubble, the fish, to splash around her tank. Next I told all of the zipping and zooming water droplets to make a puddle in front of Steve, and some to overflow the filtering tank. Then, Steve slipped and made a big thud on the ground. Last, Sammy came out of the overflowed tank and I kept him inside of me. It was a stormy night and my job was completed, Steve was running away screaming and crying and my friends and I watched him through the window as we laughed until tears started streaming down our faces as well. It was the greatest day of my life, so I thought, I had many other expeditions besides that but I will tell you another time. The story is practically over so I guess this is where we say good-bye!

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

Tammy & Teddy

By

Angelina — & Raemond ‘

Hi! My name is Tammy and I am a female tilapia. I am the princess of my tank. My friend's name is Teddy. She queen of the tank in the aquaponics lab. She and I chase each other around. The people who take care of us give us water to survive. All of us fishes need water and food to survive. Our temperature needs to be round 78-80 degrees. On most days these funny- looking 4th grade students take care of us. They come in and checked the ph balance, nitrites, nitrates, and ammonia. I saw that the test results for the ph was 7.2, for the nitrites test it was 0.25 and for the nitrates test it was 150. The ammonia test was .25. These all must mean that our habitat is good, because I'm happy as a lark! However, these kids take care of us haven't come in for two weeks now and all of us were hungry. The water was freezing and low. And there was also a lot of snails in the tank! Don't they know they can't leave us along that long? When they finally came back and feed us. They washed the tank and put buckets of water in to help us out. I hope that never happens again! Now we can get back to doing our job and helping the plants at the other end.

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor

The Adventure

By

Samara & Jazariah

Hi my name is Bubble the tilapia and I live in the aquaponics lab at Trowbridge Street School. I have a great life here with all my fish friends. Life could never be better. Every day someone comes in and feeds us, takes the temperature of our tank, completes a PH and nitrate test. They also take out all the nasty snails.

One day bright and early someone came in- yay feeding time I thought! But instead of feeding my friends and me PLOP! They drop me in to a small round bucket. I am scared and wondering what is going on. After a long walk, I get dropped into what looked like a lake. It was not my tank or my home. Where am I? All of the fish here are looking strangely at me. I think that I migrated here, but I did not want to. All I wanted to do is go home and get my life back. Man its freezing in here! I'm use to 80 degrees- this is way not what I am use to! It must be around 40 degrees Fahrenheit in here! I do not like this place. Where is my food? It should be feeding time soon. Where is my 1/4 of a cup? It's 12:00pm! That's when I get feed. Well I will just have to eat later after I find my way out of here. Wait that's the same bucket I came in. Maybe if I got back in it I could get home. When I tried to get in the bucket a hand came in and took me out. Yes, I am back in the bucket. I am going back home. I am back in my fish tank! Home Sweet Home! This was a crazy trip, but I am just glad I made it home in on piece. When I got back in the tank I told all my friends and family about the crazy adventure everybody was just glad I made it home safe.

Trowbridge Street School

Fourth Grade

Ms. Jennifer O'Connor