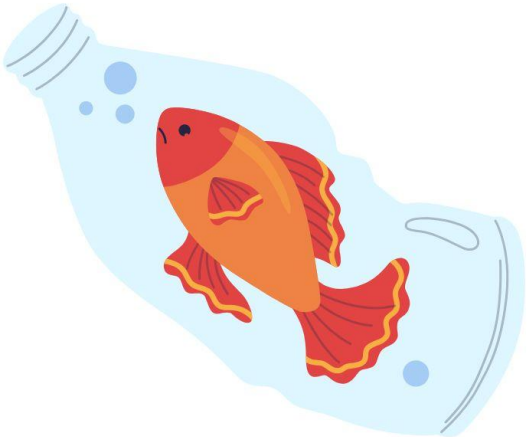
Ms. Lê's

IRW ESSAYS



A note to Ms. Lê and Readers

Hello readers and/or Ms. Lê! My name is Kathy Williams, and I had the privilege of being Ms. Lê's mentor teacher for their student teaching.

Lê is a natural in the classroom, and I am confident that they will succeed in their career. Their classroom management is centered with a very calm mindset and clear expectations for student behavior. In addition to their calming presence, they continue to create a safe and inclusive environment for students to be able to strive during their academic journey.

I am eager for you to read the essays that derive from Lê's unit for an integrated reading and writing essay. The authors of these essays were taught a three-week unit by Lê and are 8th grade students in a SWVA middle school. So, please be kind in your critiques! If you are not, our students may pounce on you in some way or another. You have been warned.

Before you move on, remember this quote and carry a life worth writing about!

"A word after a word after a word is power."
—Margaret Atwood

Lily P.

What microplastics is causing in our ecosystem:

Have you ever thought about the causes and effects that microplastics has brought to our world, and the amount of harm that's being done to marine life, and the amount of plastic that is being tricked into food for animals on the sea floor, like turtles are the main source on why we don't have that much sea grass growing out the ocean because the turtles job is to be like a lawnmower for the ocean. So, in this essay, I'll explain the threats microplastics cause to our ecosystem.

Microplastics bacteria is being spread out into the world causing harm to animals and affects that are better in human perspective. As well as the plastic being worn in our clothes and our personal care products, people are quite inconsiderate about how it unmeaningly affects animals in the ocean too. In the ocean it's different as we all know, though it makes plastic affect animals terribly than us humans. Animals confuse plastic as food causing them to possibly get sick or choke and die, which isn't right because no animal deserves to die due to our mistakes and laziness. People who see plastic or any trash on the ground or anywhere can pick it up and throw it away or easily recycle it.

P.E.T. is a worldwide used plastic that is basically the main cause of this microplastic issue. P.E.T. is used in clothing, food and beverage packaging too. Beverage packaging is like a Pepsi plastic bottle being thrown into the water, even a plastic lunch container, and even a plastic drink ring. All those examples could be the reason why marine animals are dying like turtles and other marine animals.

Scientists have recently discovered a bacterium that eats off plastic but is also lived off plastic waste, and just this one discovery has given the scientists an idea that'll help clean the tiny plastic pieces that are destroying marine life. So, after this they also decided to create a filtration to clean the plastic particles that'll leave less debris. This cleanup will not only help animals but humans as well because we drink water, swim in water, and water is basically a thing we use throughout our whole lives. It's a daily usage for us. As well as for animals, they need it to drink or even live in. Just think about the decreation in fish due to plastic and people fishing. People and animals need fish to survive, when the

world suddenly all falls apart and everyone is running low on food, water, hygiene, and shelter too.

In the final analysis, we now know what is happening when microplastics reach the ocean and marine life, and how microplastics affect our communities. With all being said, I do ask that we help the communities clean up plastics and recycle them as our own trash. As well as don't throw them into the ocean or any type of body of water because they all flow into the ocean and what is happening could most likely increase if we continue this behavior and we lose important animals that bring positive affects to our ecosystem rather than a negative affect that could again affect our ecosystem.

Christian V.

MICROPLASTICS

Have you ever wondered how much plastic is used though the whole year? There are approximately 14 million tons of microplastics in the ocean! Microplastics are very harmful to marine life and cause multiple issues for them. If pollution continues to be an issue in the future it can cause irreversible damage that can cause harm to us and animals. In this essay I will discuss what microplastics are, how microplastics are harming marine life, and see if polyethylene can help with microplastics.

Microplastics are microscopic chemicals that are damaging the environment. In the article it explains that ¨Microplastics are made up of break downs of large plastic debris, microbeads like personal care products and synthetic fibers from clothing¨ (Article Marine Ecosystems: The Impact of Microplastic Pollution). These breaking down cause plastic to enter the ocean. In the article it also says that ¨Imagine a garbage truck dumping a full load of plastic into the ocean every minute of every day¨ (Marine Ecosystems: The Impact of microplastic Pollution), that is an example of how much microplastics are in the ocean currently.

Microplastics are damaging the ecosystem because it is being consumed by marine life. The article it states that ¨There are two main ways of exposure, the first way is by direct consumption by directly eating by mistaking it by food, the second way is by consuming it from prey that has already consumed microplastics¨ (Marine Ecosystems: The Impact of Microplastic Pollution). The more plastic we use causes more plastic to get released into the ocean and makes it a worse situation for the environment. Microplastics are also magnets to harmful substances

Scientists have found two substances that could fight against microplastics in the ocean. One of them is called ¨Ideonella Sakaiensis¨ (eye-dee-oh-NEL-uh sah-kia-EN-sis). This is a good way to break the plastics down and get rid of them. The second one is called polyethylene.

Gianna A.

Imagine seeing more plastic in the ocean than the animals that live in the ocean, that is what the future of our ocean is going to look like if we keep putting plastic in the ocean. If you go to a beach in crowded city-like places the chance that you would see plastic or trash in the ocean is very high. In this essay I will write about the increasing levels of microplastic in the ocean, the disruption that microplastics have caused to marine food chains, and the possible solution to this problem.

The first issue is the microplastics that are in the ocean are rapidly increasing every day. As article A states, "Approximately 14 million tons of microplastics currently lie on the ocean floor." (3). An example, from article A is that, "Researchers have found 100% of microplastics in marine turtles, 66% in marine mammals, and 50% in seabird species." (3).

The second issue is that microplastics are disrupting the marine food chain. Not only is it disrupting the marine food chain, but it can soon start to affect human food chains as well. In paragraph 2 scientists say that, "Microplastics are being eaten by marine animals either directly or through eating prey that have already consumed plastic." (Article A). These plastics also attract dangerous chemicals that are already in the ocean. Which cements substances that are harmful to the marine food chain.

But there is a solution to this plastic nightmare, and it is something you wouldn't expect. This solution is surprisingly a type of bacteria known as, " *Ideonella Sakaiensis* a bacteria known to break down plastics called *P.E.T within weeks."* (Article B 2). Experiments have shown that this bacterium can turn plastic into natural materials and can survive in water.

To sum up, microplastics effect on the ocean and its marine life. There may be a solution that scientists have found but, there are many consequences that are headed towards our ocean and its marine environment if this "solution" does not work as intended. This solution scientists have found is a plastic-eating bacteria that breaks down plastic faster than the time plastic regularly takes to break down. But the consequences if this solution doesn't work can vary between mountains of trash in the ocean, losing the availability to

water sources, or the realisation that if plastic pollution does not stop soon or at all we could lose lots of marine life.

Angel L.

Microplastics are killing the Earth

Did you know that by 2050, experts predict that the oceans could contain more plastic than fish? These microplastics could seriously harm people and animals that swim in water. I have previously swum in infested waters without even realizing it. In this essay, I will discuss how microplastics enters food chains, the breaking down of larger plastic debris, and using plastic eating bacteria can all correlate with both passages.

One-way microplastics are harming marine life by entering the food chain. In passage A it states that "First Marine animals directly consume microplastics by mistaking them for food. Second, predators indirectly ingest these particles when they eat prey that has already consumed microplastics". This process can continue for a long time and due to this it can easily reach your body.

In addition, microplastics are ruining our oceans by breaking down larger plastics instead of recycling them. According to Passage A "The NOAA has identified several sources of these harmful particles including the breakdown of larger plastic debris". Recycling plastics is a better option than just breaking them down because they will slowly turn into microplastics and enter our oceans.

While microplastics are causing problems there is a solution becoming known. Scientists have noticed a certain bacteria that lives off plastic waste. In passage B it states that "One type of bacteria, called Ideonella sakaiensis is especially good at breaking down a common plastic known as polyethylene terephthalate (P.E.T.) is the same type of plastic used in many water bottles and food containers". This bacteria has

shown about 40% less bacteria after about six months of testing. If this bacteria does not cause problems to marine life, it could be an amazing opportunity to use it.

In conclusion, due to microplastics entering food chains and the breaking down of larger plastic debris, both animals and us humans have been severely impacted. If people don't step in to help stop this issue soon, not only will ocean life have microplastics but also land animals. Even with all these issues there is still hope. A microplastic eating bacteria called Ideonella sakaiensis is especially good at breaking the same plastics that are used in water bottles and more. So next time you use plastic items ask yourself if it is worth harming the environment rather than recycling.

Jacob W.

Microplastic pollution is a problem

Do you know what the most serious threat to the marine ecosystem is? Its microplastic pollution, microplastic are dangerous to the marine environment and harms the animals that live there. In my essay, I will talk about how this can seriously harm the marine ecosystem, how microplastics have reached threatening levels, and how microplastics are being solved today.

Microplastics have an enormous impact on the marine ecosystem. Animals often mistake microplastics for food, if that happens it can seriouly harm the marine animal. In passage A it says that "marine animals directly consume microplastics by mistaking them for food.". Predators can eat prey that has already eaten microplastics which will also harm them as in the diagram in passage A.

Over time microplastics have reached alarming levels. In passage A it states, "Environmental scientists have calculated that approximately 14 million tons of microplastics lie on the ocean floor". Every year there are 14 million more microplastics in the ocean. This is harming the marine ecosystem passage A also says, "researchers have found microplastics in 100% of marine turtle species, 66% of marine mammals species, and 50% of seabird species". What do you think will happen if this keeps up?

Thankfully microplastic pollution is being solved today. Scientists and engineers are working on ways to fix the microplastic problem in passage A it says," scientists and engineers are developing various solutions to address this environmental crisis". There is also a plastic eating bacteria that scientists are trying to use. In passage B it explains that "scientists have found something surprising in the fight against plastic pollution: bacteria that can eat plastic," passage B also says, "One type of bacteria, called Ideonella sakaiensis, is especially good at breaking down common plastic,". Do you think plastic eating bacteria can be used?

In conclusion, microplastic pollution is a problem to the marine ecosystem, so scientists are trying to fix it today. Due to microplastics entering the ocean marine animals are suffering and over time microplastic pollution has reached dangerous levels. Scientists are making an effort to solve this problem with the help of engineers and their own discoveries. They're developing many ways for this problem to be fixed including the discovery of plastic eating bacteria. Do you think with the help of scientists and engineers this major problem can be solved?

Thomas K.

Marine ecosystems: Microplastics are destroying the world

Do you want your pet, and the world to get infested by plastics that are bad for your body and the environment. Microplastics covers over 80% of the world and that can be dangerous for animals, humans and the ecosystem in general. What I'm going to talk about in this essay is why microplastics is bad for our world, why it is a growing problem in our world, and why microplastics are dangerous for the world, marine life, and ecosystems. How marine animals get this type of microplastic in their body is they directly eat it by mistaking it for food, or predators eat their prey, and their prey can have it.

In addition, Marine ecosystems have a lot of threats; a growing one is microplastics. The reason why microplastics is growing is because some predators eat their prey and some of their prey have these microplastics, so when they eat their prey, it transfers into their body. In passage A it says ¨the widespread of this contamination becomes clear is when examining its effect on marine animals, they have been found in 100% of marine turtle species, 66% of marine mammal species, and 50% of seabird species studied¨. ¨Scientists have calculated that approximately 14 million tons of microplastics currently lie on the ocean floor¨. ¨What's even more troubling is that an additional 12.5 to 14 million tons enter the ocean each year¨.

One way we can reduce microplastics is using P.E.T it is a type of bacteria that breaks down a common plastic used in many waters bottes and food containers. When they were using this type of bacteria in areas where they put the bacteria after six months it tested to be about 40% less. Engineers at the environmental solutions laboratory have created a new filtration system capable of removing extremely small particles as tiny as one micrometer. One way we can reduce this problem is recycling, if You recycle it will be reused again. Another way u can reduce the pollution is don't throw trash into the ocean if u have trash throw it into the trash can or a recycling can

In conclusion, Microplastics are harming the world, and the environment is getting damaged by this. In this essay I talked about marine life, why it is bad for our world, and

the ecosystems. I also talked about the solutions on how we can reduce microplastic pollution. I think people should stop taking the world for granted, we never know when this world will end, I think microplastics are the worst. I say this because it is harming our Environment, Animals, World, and Ecosystems.

Kailyn W.

Microplastics VS our ecosystems

Have you ever thought about how many microplastics are in the ocean? Well, there's over 1 million in the ocean and they are harming our underwater ecosystems! All the microplastics are making our animals disappear. This sadly, is the reality we are facing. What can be done to prevent microplastics from hurting the ecosystems? In this essay I will be talking about some ways scientists are trying to create ways to kill the microplastics, and ways that we can help the environment.

First, the number of microplastics in our ocean is rapidly increasing. There are over 4.5 billion microplastics in our ocean. For example, the widespread of this contamination becomes clear when examining its effect on marine species: researchers have found microplastics in 100% of marine turtle species, 66% of marine mammal species, and 50% of seabird species studied. Recycling can help stop this widespread and save our animals!

Second, Scientist are working on creating a microplastic eating bacteria to help with the crisis. For example, companies are now working to use these plastic-eating bacteria to help clean up polluted ocean areas. The scientists are a bit worried though, they don't want

to cause a disease and kill more ocean life. They are working to improve the bacteria and make it safer for the environment. Hopefully this new creation helps with the underwater crisis.

Third, scientists and engineers are developing various solutions to address this environmental crisis. Just like in my last paragraph, Scientists have created a plastic eating bacterium. For example, one approach focuses on preventing microplastics from entering waterways through improved wastewater treatment systems. This will help protect our sea life. (Recycling will help also!)

In conclusion, Microplastics are killing our ecosystems. All the microplastics in our oceans are rapidly increasing. Scientists are making plastic eating bacteria to eat up the microplastics. Scientists are also creating many other ways to get rid of all the microplastics. So don't be an icicle and choose to recycle!

Lakenzy H.

Do you know that when you shine light through your room, and those little particles are microplastics? People dump plastic and trash every day into the ocean, allowing the plastic to break down slowly and creating microplastics. When I would go on vacation to the beach, I would either see trash floating on the shore or if I used my goggles, I would see trash on the floor. In this essay I will be talking about how microplastics harm sea animal life, how microplastics harm us, and how to stop it.

In this paragraph I will be talking about how microplastics harm sea life. According to the article “Marine animals directly consume microplastics by mistaking them for food” (Marine ecosystems: The impact of microplastic pollution) in paragraph 2. But many other sea animals eat a lot of microplastics and mistaking it for the food they eat. Predators that eat prey that already have microplastic in them, now they also have microplastic in them. Blue whales often mistake microplastic as krill, leaving them to eat a bunch of microplastic each time.

In this next paragraph I will be talking about how microplastic harms our lives. Everything or almost anything that is in our house, schools, and jobs are plastic. When we drink from soda bottles or water bottles, we get microplastic in our stomach. When we touch plastic

tubs, our phones, or when adults touch cigarettes. We get microplastic on our skin and it is very hard to avoid. Some of our clothing contains polyester which is a type of plastic, and it touches skin which outs microplastic on us. Microplastic have been proven to be in our blood, lungs, and stomach.

In my last paragraph I will talk about how to stop causing harm to marine animal life and our lives. To stop putting harm to sea animals is to stop throwing trash into the ocean. We can also recycle our plastic or anything that we already use. One beneficial way to help out the ocean and sea animals is to pick up as much trash as you see on the shore. A few ways you can stop getting so many microplastics in your body is to stop letting ourselves and our kids chew on bottle caps. Also, we should try not to buy polyester clothing or cheap clothes.

In conclusion people should start recycling as much as they can and we need to stop buying cheaper clothing and we need to stop touching as much plastic as we can.

Justyce A.

Did you know that microplastics could eradicate our marine life or even us? Microplastics are a threat to our marine life. Microplastic pollution is more serious than what we are aware of. There is one solution that scientists have found to help our microplastic pollution. In this essay I will further explain how microplastics are a threat to our marine life, the seriousness of it and the solution scientists have found.

Microplastics in our oceans are rapidly increasing. Our oceans are heavily polluted with microplastics. There are 14 million tons in microplastics in our oceans. An additional 12.5 to 14 million tons enter our oceans each year. The amount of microplastics entering our oceans is at a concerning level (Passage A 1).

Furthermore, Microplastics is devastating our marine life. Microplastics affect our marine life in many ways. In the article it mentions that Microplastics are magnets for toxic chemicals concentrating harmful substances and introducing them into the food chain. Microplastics affect our marine life in multiple ways. Marine animals directly consume

microplastics and predators consume microplastics by eating prey that have directly consumed microplastics (Passage A 1.

Fortunately, Scientists have found a way to fight against microplastic pollution. In the article it mentions that scientists have found a plastic eating bacterium. The bacterium is called Idenoella Sakaiensis. Idenoella Sakaiensisis is capable of breaking down a plastic called Polyethylene Terephthalate. Idenoella Sakaiensisis can break down Polyethylene Terephthalate within weeks (Passage B 2.

In conclusion, microplastics are polluting our oceans at a rapid pace. Companies are using Idenoella Sakaiensisis to clean polluted areas in our oceans (Passage B 2). Idenoella Sakaiensisis has given us a fighting chance against microplastic pollution and save our marine life. We now have hope that microplastics won't eradicate our marine life or even us.

Lucky J.

Microplastic Pollution

Did you know that those plastic particles that are smaller than 5 millimeters (about 0.2 in) called microplastics are a widespread environmental concern? Because of their potential health impacts like how "Microplastics act like magnets for toxic chemicals in the water". And concentrating harmful substances and introducing them into the food chain. According to the Article there are approximately 14 million tons of microplastics and if only this much is causing this much problem in the ecosystems just imagine if this number kept increasing and it kept getting worse and worse. In this essay I will be talking about the

potential risk and health consequences of microplastics in the ecosystem and steps we can take to prevent microplastics from spreading and or getting worse.

The way we can reduce plastic consumption is by switching to reusable materials instead of materials that are just used once and thrown away. Because most people are not switching to reusable materials as listed in the article “12.5 to 14 million tons of microplastics enter the ocean each year” so in theory its likes “a garb age truck dumping a full load of plastic into the ocean every minute of the day”. We can change this by using reusable materials and stopping this problem completely or little by little until it is not a problem anymore.

Another way we can reduce microplastic pollution is to buy plastic free cosmetics. Because most cosmetics or things we use for daily life contain microplastics. And by throwing them away as previously mentioned in the article “We are introducing those harmful substances into the marine food chain.” And by doing so “Marine life can mistake it for food and eat it resulting in them being introduced into the marine food chain” as stated previously in the Article.

Contrarily we can reduce all this microplastic pollution by recycling. The most common reason trash ends up in the wrong place is people not recycling properly or not recycling at all. Even picking up the tiniest bit of trash still helps whether you think so or not. Recycling properly could provide additional challenges for marine ecosystems since as listed in the article “the distribution of microplastics in the ocean is not uniform.”

In conclusion the ways we could Adress Micro Plastic Pollution is by 1. switching to reuseable materials 2. buying plastic free cosmetics, and 3. by recycling properly. And with the help of people, we can stop microplastic pollution for good or until it is no longer a problem in all ecosystems.

Mary-Anne T.

How Microplastics Are Affecting Earth, And How We Can Stop It.

We have had problems with pollution before, but the threat of microplastics has the ability to take out the human race. Microplastics have been a growing threat, but it has been getting out of hand as of late. When I went to Virgnia Beach, I saw absurd amounts of plastic either in huge piles or hidden within the sand. Microplastics are already taking out

large masses of marine life, if we allow this to spread much further then humankind might not be so far behind. In this essay I will tell you about microplastics by explaining how microplastics affect the ecosystem, how microplastics get into the environment, and what some solutions scientists are finding to prevent microplastics are.

What are some ways microplastics affect the ecosystems? Microplastics affect the ecosystems by harming animals. Animals ingest microplastics by eating them directly or eating another animal that has ingested microplastics. Microplastics can cause the animals to die earlier than they would have if they had not eaten them. This causes animal species to be in higher decline than normal.

How do microplastics enter the ecosystems? Microplastics are mostly caused by humans. Humans pour their waste into nature, including the sea, therefore spreading microplastics and pollution across the face of the earth. “To help understand the scale of this problem, imagine a garbage truck dumping a full load of plastic into the ocean every minute of every day” (Passage A). We were the cause of microplastics and microplastics will be the cause of our extinction.

What are some solutions scientists are finding to help prevent or get rid of microplastics? Scientists have been developing several ways to help with the microplastic crisis. Scientists have developed filter systems, biodegradable materials, and even a bacterium that eats plastic. If you would like to live past 2040 then I suggest you invest in some of these solutions.

Given these points, we can safely say that microplastics impact the environment in more than one way. Microplastics are a huge threat to nature. Microplastics are consumed by animals, causing early graves. Humans are the main reason microplastics are put into the environment. Scientists have developed several solutions to confront this crisis. Microplastics are a huge threat that continues to destroy our marine ecosystems, but we can still work to prevent any more environmental destruction.

David I-C.

Microplastics, The Ocean Destroyer.

14 million tons…. 14 million tons currently and expected to happen yearly. This is the amount of plastic in our oceans that constantly harms our

ecosystems. I've had experience with this pollutant in the past in a beach named Myrtle Beach, when I arrived at the beach, I saw many pieces of plastic both small and large. So today I will discuss what these pollutants are, what harm does it cause to our ecosystems and how, and as well as how we can prevent further damage.

What are Microplastics? A question you're probably asking yourself since I have provided no evidence of what it is. Microplastics are the broken-down pieces of larger plastics such as water bottles, certain clothing, personal care products, and much more. These microplastics measure around 5mm or up to less than 1 nanometer in diameter making it impossible to detect with the naked eye. This also makes it very difficult to determine if it has reached a certain fish. Which leads to our next question.

How do microplastics harm our ecosystems as well as the oceans overall?

There are 2 main types of exposure to this pollutant. Direct exposure, and indirect. For example, if a fish is directly exposed to microplastics, it is probably confusing it with food, like our poor turtles or small micro-marine life such as zooplankton and others directly consuming these by mistaking them as food. Indirect is when it is consumed by another animal, like a shark eating a fish that has consumed plastic.

But there is still hope, we can still stop any further harm these microplastics have caused. But how? There are many simple ones like recycling more often, preventing yourself from throwing away any plastic or swimming with anything that has plastic in our oceans, and picking up the already existing trash in our beaches and rivers. There are also other ways that scientists are using like a certain type of bacteria that eats plastic called ideonella sakaiensis,it is especially good at breaking down a common plastic known as polyethylene

terephthalate or P.E.T. “this is the plastic used in most water bottles and food containers, these bacteria can turn harmful plastics into harmless natural materials in a laboratory within weeks” (Passage B paragraph 2).

Further boosting our chances to stop microplastics consuming our oceans and maybe even us.

Finally, to summarize all I have gone over today. Microplastics are the breakdown of larger pieces of plastic making them hard to detect without special equipment. As well as them harming our ecosystem by contaminating ecosystems with large amounts of plastic, estimated to be “approximately 14 million tons”. of microplastics in our oceans as stated in Passage A. You can start today helping us clean up our oceans and our Earth altogether by taking trash from rivers which lead to oceans, using fewer plastic items daily, and picking up trash on beaches as well. I hope you enjoyed my essay but hated the pollutant, remember to clean up the place you live in for you and me. Thank you.

Orion R.

Microplastics

Oh microplastics, the land filler, the ocean polluter, and the air's death smell. Over the years, microplastics has been a extreme concern. With there rising levels that grow day by day, but this could sadly end us. The use of all these plastic products is the main increase in microplastics, caused by melting and friction, which raises the amount of microplastics more. Still with all these tons of microplastics, scientists still work on lowering them, wanting to even stop microplastic rates. But allow me to explain, in this essay, I'll explain all the insane amounts of microplastics, going along with their hotspots, and perhaps are last hope, polyethylene.

The heavy amounts of microplastics have affected us for years now, being up for 14 million tons (Passage A, paragraph 3). But that's just on the ocean floor, we have so much more all over the place. All these microplastics can affect most animals in the ocean, with 100% of marine turtle species affected (passage A, paragraph 3). This means any animal that eats marine turtle's gains microplastics, spreading microplastics even more. With all these microplastics everywhere, the sea isn't safe at all, especially these turtles.

Even with all these microplastics, they have there own homes, being microplastic hotspots. Microplastics in there "homes" can be up by 27X of microplastics! (passage A, Paragraph 4). In these areas, its made it very deadly for sea life there, being able to directly harm ecosystem health (Passage A, paragraph 4). With all these dangers of these microplastics and their "homes", what could you do to stop them?

A war of bacteria vs plastic, ideonella sakaiensis, a plastic eating bacteria. These little fellas were able to break down plastic in a span of 4 weeks, making it a natural resource. (Passage B, paragraph 2). These bacteria might be are only hope at heavy destroying of microplastics. Theres a problem with

them though, we don't know if they are harmful for the ocean (Passage B, paragraph 3). Scientists are taking it careful, and making sure the bacteria is safe for the ocean

In my conclusion, with the heavy amounts of microplastics, as along with their hot spots. What I call their “homes”, we could use ideonelia to remove these microplastics. Letting future generations have a free ocean of water.

Joseph A.

Microplastics need to be stopped

Did you know that there are at least 14 million metric tons of microplastics in our ocean right now? I personally believe that microplastics are terrible for our oceans and their ecosystem's. In this essay I will discuss how microplastics harm our oceans and what we can do to stop them.

The extent of microplastic pollution in our oceans has reached alarming levels. There are 4.5 billion tons of microplastics in our ocean. According to Passage A “environmental scientists have calculated that approximately 14 million tons of microplastics currently lie on the ocean floor”.

Fortunately, scientist and engineers are developing various solutions to address this Enviromental crisis. According to Passage A. “one approach focuses on preventing microplastics from entering waterways through improved wastewater treatment systems.

Another strategy involves creating biodegradable alternatives to synthetic materials.

Recent technological advances have created promising opportunities. Engineers at the environmental solutions Labatory have created new filtration system capable of removing small particles as tiny as one micrometer from wastewater.

According to Passage B. “biotechnology companies are developing innovative materials that maintain plastics durability while being fully biodegradable in marine environments.”

In conclusion, we should work together to reduce the amount of microplastics in our oceans and their ecosystems.

Angel Q.

TINY PLASTIC, BIG PROBLEM

Did you know that by the year 2050 there will be microplastics in all our foods? I believe that immediate action should be taken to reduce or eliminate the microplastics in our ecosystems. New types of materials should be made available that do not contaminate our ecosystems through microfibers or micro beads. In my essay I will discuss the threat of microplastics in our ecosystems, we will talk about what microplastics are, what dangers and problems microplastics caused, and what can we as a civilization do to reduce and hopefully stop the threat of microplastics.

Microplastics are not just one thing but many distinct types of things that over time became so small that cannot be seen with the naked eye. Microplastics are these little specks of plastic that originally came from larger stuff like larger plastic debris, micro-beads from personal care products, and synthetic fibers from clothing. According to the article *Marine Ecosystems* (page 1), these microplastics tend to be less than 5 millimeters (about 0.2 in) in length. Microplastics come from many things, and they tend to be small but just because they are small does not mean that they cannot cause great danger to our ecosystems.

The impact of microplastics on our ecosystems is devastating and almost impossible to reverse. Most microplastics are so small that many marine animals consume them without even realizing it. According to the article *Marine Ecosystems* (page 1), marine animals eat microplastics directly, and then predators indirectly ingest them when they eat prey that has already consumed microplastics. As lead researcher Dr. Sarah Chen explains in the article, microplastics act like magnets for toxic chemicals in the water. They collect harmful substances and bring them into the food chain. Even though microplastics are

extremely dangerous and ridiculously hard to remove, there is still hope. There are things we can do to help reduce the problem.

As a species, we should all work together to reduce and eventually eliminate microplastics, and here is how we can and are already beginning to do so. With our current technology we are still working on ways to get rid of the current microplastics in our ecosystems, but we are making progress. As said in the article *Marine Ecosystems* (page 2), biotechnology companies are developing innovative materials that keep plastic's durability while being fully biodegradable in marine ecosystems. Furthermore, the article *Bacteria vs. Plastics* (page 2) reveals that scientists have discovered plastic-eating bacteria capable of eliminating microplastics and now companies are working on using these plastic eating bacteria to clean up polluted ocean areas. Together, these advancements offer hope for a cleaner future where our ecosystems thrive free of microplastic pollution.

In conclusion, microplastics are becoming a severe problem in our ecosystems, and we need to reduce and eliminate them. In this essay, we learned what microplastics are, the dangers they cause to our ecosystems and the food chain, and how innovative solutions like biodegradable plastics and plastic-eating bacteria are giving us hope. If everyone works together, including scientists, companies, and everyday people, we can protect the planet and create a cleaner, healthier future for all.

Jaquavis W.

Have you ever swum inside of microplastic polluted water? Little do you know you've been swimming inside of it your whole life! My whole life I've been swimming inside of polluted water without even knowing it. In this essay i will discuss what could be done to prevent microplastics from harming the ecosystems. The three main topics that will be discussed includes Microplastics growing rapidly increasing, Scientist discovering that improving wastewater treatment systems could prevent microplastics from entering waterways, and Humans using a biodegradable synthetic material instead of synthetic plays a huge role in this crisis.

Microplastics are increasing rapidly in our oceans. There are over 4.5 billion microplastics as of right now in our oceans. For example, (passage A) scientists discovered that an additional 12.5 to 14 billion microplastics enter the ocean each year.

(passage A) Scientists have discovered that improving **wastewater treatments** would clean waterways. Scientists focus on various solutions for this crisis in particular. For example, (passage A) Microplastics have been found inside waterways improving this would prevent microplastics from entering them in the future.

Scientists suggest humans switch to an **alternative biodegradable Synthetic clothing**. Synthetic clothing is a huge problem and contains many microplastics which harm our oceans. For example, one microplastic is the breakdown of synthetic materials and clothing which is very harmful.

In conclusion, Microplastic pollution is a specific type of pollution because it affects marine life. However, humans can step in and help prevent pollution from growing by creating **biodegradable alternatives for synthetic materials**. Scientists and Engineers play a big role in this crisis. They are creating ways to prevent microplastics pollution from spreading and even existing such as. Improving **wastewater treatments** to stop pollution from entering **waterways**. And finding a plastic eating bacteria (P.E.T) Called *Ideonella Sakaiensis*. As we continue to fight this pollution we have to think about the future, and the present of the planet's oceans and ocean life.

Nani T.

How are Microplastics harmful to the ecosystems? Well, here is what I know about Microplastics. In this essay I will discuss bacteria AKA bad plastic. My three key points are animals are eating Microplastics, Microplastics are overwhelming the ocean, and the solution for this issue is bacteria.

Animals are eating Microplastics, because they are mistaking it for food and the effects are that many fish or any sea life could die, get sick. Even more troubling is that an additional 12.5 to 14 million tons enter the ocean each year. To understand this problem, imagine a garbage truck dumping a full load of trash into the ocean.

Microplastics are overwhelming the ocean and people are making it worse by increasing and getting worse over time. The impact of Microplastics on marine life is particularly devastating because these particles affect animals in multiple ways. Some ways that Microplastics are affecting the animals is by killing them when they eat them or just making a fish sick and then a bigger fish will eat that fish that is sick and it will just continue repeatedly until it happens so much all the fish will die.

A solution to this problem is bacteria. Areas that have Microplastics show a 40% decrease in Microplastics. Scientists have found something surprising in the fight against plastic pollution bacteria. This discovery gave them a new idea for cleaning up any tiny pieces of plastic polluting our ocean. One type of bacteria called Ideonella Sakiensis is especially good for breaking down a common plastic known as polyethylene terephthalate also known as P.E.T.

In conclusion, plastic isn't always safe for anybody, animals or humans. There are many reasons why plastic isn't safe. There is much sickness in the ocean from plastic and many bacteria. These plastics/bacteria are bad and overwhelming the ocean. The solution for this issue is bacteria. Microplastics are hurting the animals, the ocean, and humans. I hope this passage will make you rethink how u use plastics and throw them away.

Kamyiah L-D.

Have you ever wondered about the impact on microplastic? If you did, I will be telling you about how microplastic impacts animals and how microplastic makes a terrible impact in the ecosystems. Microplastic pollution has become a major concern for scientists. Our microplastic pollution in oceans has reached alarming levels, researchers found microplastic in 100% of marine turtle species, 66% of marine mammal species, and 50% of seabird species studied. Environmental scientists have calculated that 14 million tons of microplastics currently lie on the ocean floor. First animals are eating microplastic. Animals are getting hurt from microplastic and this microplastic could lead them to death, animals are getting sick and mistaking microplastic as food. For example, predators indirectly ingest these particles when they eat prey that has already consumed

microplastics. Second microplastics are overwhelming the ocean. Trash pollutions are increasing more and more, for example microplastics levels can be up to 27-time higher than summoning water, Dr. Chens research team has found a direct correlation between these hotspots and decreased biodiversity. Third, a solution for this issue is bacteria. A real that have the microplastics shows a 40 decrease. For example, scientists made a type of bacteria called ideonella sakiensis. This bacteria breaks down common plastics. In conclusion, with all the information that I have been given I do agree that microplastics is harmful to our oceans. Now I will tell you how animals harm us, they harm us because when they eat things in the ocean, they spare it us when we eat them. Microplastic has been overwhelming the ocean and trash pollution has increased. A solution for all of this is a bacteria that can eat plastic, these bacteria can help the ocean a lot with decreasing microplastic pollution. I think people should care about microplastic because you can harm yourself is you're not being careful, and you will also have plastic in your system

Michele P-R

Microplastic Pollution

Do you believe that it can be possible to consume microplastics just by eating sea creatures? If not, you might want to, since consuming these particles can be as simple as breathing air in. Microplastic pollution is becoming a main concern in the ocean for scientists, even though the ocean and its marine life has many issues & concerns these particles are becoming a worldwide crisis. In my essay I will discuss sea creatures consuming microplastics, microplastics

overwhelming the ocean, and lastly plastic eating bacteria which could possibly be a solution in correlation with both passages.

Imagine that you're a fish in the ocean eating algae that you don't know is infected with tiny particles that now you have consumed as well. The name of these particles is microplastics, sea creatures typically consume these particles by confusing them with food and predators mistaking them for prey. The impact microplastics are having on ocean health is upsetting due to them being harmful to the ocean environment along with their sea creatures. A reason of why they're harmful is due to these plastic particles focusing "harmful substances & introducing them into the food chain" as mentioned in passage A (2). Secondly, ocean creatures worldwide are being impacted negatively by these particles, not only that but microplastic pollution has reached dreadful levels for scientists.

Do you believe that oceans & its sea life can get overwhelmed like a human? Well, not quite but in a sense it can. You might be wondering why, and the reason is microplastics. These tiny plastic particles measure less than 5 millimeters in length but are causing a much bigger issue than their length might make you think. "Scientists have calculated approximately 14 million tons of microplastics lying on the ocean floor worldwide" (3). Research teams have discovered "microplastic hotspots" which contain about 27 times higher microplastics levels than surrounding waters.

Imagine you had tiny plastic particles in your body, and you didn't believe there was a concrete cure until you came across a plastic eating bacteria that can be the solution to your problem. This plastic eating bacteria is called Ideonella Sakaiensis. These bacteria can "turn plastic into harmless natural materials within weeks" as mentioned in passage B (2). Areas in which professionals have tried these bacteria within infested microplastic pollution have showed about 40% less plastic pollution in the last six months. Without the bacteria scientists assume it would take hundreds of years for natural degradation to break down in the ocean.

In conclusion, after all the points have been stated do you believe that plastic eating bacteria will help the ocean get rid of microplastics pollution? Due to microplastics infesting the ocean & its sea creatures consuming them, when we eat these sea creatures we're also taking in the microplastics the creature may have consumed as well. A solution to this issue can be the plastic eating bacteria mentioned prior due to it being efficient at breaking down P.E.T (polyethylene terephthalate) which is a common plastic found in many water bottles/foods. The main concern

for professionals isn't just that sea creatures are consuming these particles but also that according to Dr. Sarah Chen “these particles act like magnets for toxic chemicals” and contaminate the ocean along with its sea life. Even though this plastic eating bacteria can be a solution to get rid of these particles, if it affects sea life even more in a negative way it can become an even bigger problem to the ocean.

Zikhiya S.

Do you know when you eat fish it might be plastic? Micro plastic is in the lake if you go swimming you must likely swimming in plastic. In my essay, I will discuss animals eating

more Mirco plastic, Mirco plastic is overwhelming the ocean and the solution for this problem is bacteria, In correlation both passes.

Animals are eating micro plastic you could die, Animals are getting sick mistaking it for food, while many people are familiar with the damage caused by visible plastic waste.

Micro plastics are overwhelming the ocean; Trash pollution is increasing. “Scientists have calculated that approximately 14 million tons of Mirco plastic”. Mirco plastic is very dangerous it can kill humans & animals some fast food places are starting to let their costumers bring their own jar for their food.

Fortunately, scientists and engineer are developing various solution to adress this environmental, A solution for this problem is bacteria, A reason that have micro plastic is low 100%, Companies are now working to use less plastic pollution after six months. “Microplastics act like magnets for toxic chemicals in the water concentrating harmful substances”.

In conclusion do you believe that micro plastic is bad, I have discussed again how animals is eating Micro plastic the solution for this problem is bacteria, “the scientist noticed that certain bacteria lived off plastic’’, According to the article, after reading this essay do you like Mirco plastic?

Kanaria S.

Did you know this about microplastic issues? Here is what i know about microplastic. Microplastic can harm us as humans and also our animals. Microplastics is just plastic that can be in our food. Also, we can also die from microplastic. And areas treated with that bacterium showed much less plastic pollution. Areas that have microplastic show 40% decreases.

In my essay I will discuss what scientists should and should not worry about in correlation with both passages.

In conclusion, Microplastics are over whaling the ocean, how? Because humans are throwing plastics into the ocean. Marine animals directly consume microplastic are mistaking for food. The concerning aspect is not just that animals are consuming these particles, but they also died from them. While this is happening how much microplastics. Do you think microplastic is in your body? And how can we help our planet by getting rid of microplastic.

Leon R-S.

YOU LIKE SEA ANIMALS? WELL, YOUR GONNA THINK THIS IS INSANE THE TOPIC IS MICRO PLASTICS

How are micro plastics harming sea ecosystems?

Firstly, and foremost animals are eating them, and becoming sick or DEAD

They eat them not on propose they eat them when they try and eat food there so much micro plastics in the sea that about 26% of fish have eaten micro plastics and have become sick, that dosent seem like a lot but think of how much fish youve seen inthr ocean and multiply a big number, if you got it right you shouldve gotten 3,500.000.000.000 but if you didnt thats okay but 26% of that large number is a lot,

Also another thing that comes with micro plastics is polluton the ocean is overwelled with trash polluton and its a big problem, imagin about 100 trash trucks dumped trash into the ocan that probley wouldny even amount to how much trash is in the ocan right now, also fun fact when your in a air plan flying ober the ocan look down the white ¨waves¨ arent actully waves they are most likely trash, now thats a lot of trash but as we speak there are 14 million micro plastics currently living on the ocane floor now whats a lot.

A soloution that sinentist are working on for the micro plastic problem is plastic eating bactrera but it could easly backfire

Zamiyah H.

Do you want microplastics in your body? No because it could get you sick and maybe worse. Did you know that animals eat plastic? Animals eat plastic because they think its food and get confused and eat it or they can get a piece of plastic wrapped around their necks. How much trash is in the ocean? There is a lot of trash in the ocean animals often mistake it for food and they get stuck in it or they often eat it and they often bring their family to eat it. Do you think you can solve this? you can solve it by not putting trash in the ocean so the animals wont die and so they can live happily. Microplastics hurt our world because animals eat it and die so one thing you can do is keep the ocean clean for the animals.

Brandon K.

You are unknowingly consuming microplastics. I will give you my knowledge and information I have gathered. I've seen these plastics in the ocean affecting marine animals such as turtles and fish. They are consuming microplastics by mistaking them for food and straws going into turtles noses. This causes us to consume microplastics when we consume fish that are in the ocean. This causes the fish to die and get sick.

Microplastics are too much for the ocean Studys says over 8 million pieces of plastics are getting dumped in the ocean every day Studys suggest that 100 million marine animals die each year from plastic waste alone. Every day about 2,000 garbage trucks are getting dumped in the ocean. The more we dump in the ocean the more alarming it gets and more fishes dies.

Every day scientists are trying to find a solution to this problem like trying to make a filtration system and trying to develop innovative removal technology so the ocean can be clearer than it was days ago. In conclusion, according to the information given in the article, animals consuming microplastics at an alarming rate were consuming these fishes which causes us to ingest a little bit of microplastics. This is why we should reduce the plastics were putting in the ocean.

David A-S.

In my essay i will be talking about how scientist is ruining the ocean and killing *marine* life. First is they are polluting the ocean with chemicals and their marine life can become sick. Some people eat marine life as well and they can pass the chemicals to us. 2 Is the plastic and trash that people are throwing into the ocean we can also end up eating that. Also, scientists could just make sustainable particles instead of throwing endangering chemicals into the ocean. They could at least put in some cleanup efforts. Do they even care about the health of marine life. And if they did why would they continue throwing stuff into the ocean. Also, a way you could help is doing stuff like recycling or even picking up trash. The reason you would want to pick up trash is because of the microplastics. Microplastics aren't just affecting marine life, microplastics could also harm us. Because microplastics go in the air and you can get them in by inhaling them or even eating or drinking something that has microplastics in them, what I mean by that is the microplastics are so small they end up getting carried away by the air currents and end up in food and in drinks. So there really isn't anything you could do because they are so small. But you can prevent microplastics from getting on food by actually recycling. And back on marine life if the scientist really care about them why do they throw plastics and particles into the ocean, they could also help by putting filters in the water or on the land for the particles/microplastics. But that would take some time to put all the filters everywhere, but I feel like it would be worth it. After reading all of this would you continue to eat marine life knowing that there is a probability of microplastics being in them? And if you are going to continue to eat marine life, at least remember that you might also be eating microplastics.

Kiree D-R.

How many pounds of plastic do you think we've eaten due to pollution? When we eat plastic, it goes into the ocean. Then animals eat it, and they choke and die. In my essay I will discuss why plastics are harmful because the animals eat them, the ocean is becoming overwhelmed with plastic and how bacteria can solve this issue. How are microplastics harmful to the ecosystem Animal are eating microplastics could Die animals are getting sick mistaking as food while many people are familiar with the damage caused by visible plastic waste.

Microplastics are overwhelming the ocean. Trush pollution is increasing. Fortunately, scientists and ecosystem. A solution for this issue bacteria. areas that had microplastics should decrease 40%.

One type of bacteria called id Onella salaries is especially good at breaking down a common plastic polyethylene terephthalate. Do you think we should keep plastics? So, with all this plastic evading the ocean, do you think you should still be using plastic? Then with all this plastic in the ocean animals are eating the plastic and dyeing. How many pounds of plastics do you think we've eaten due to pollution?

Ty-Sean K-G.

Do you know how dangerous the ocean is? From my experience microplastics harm the ocean and the animals also the animals mistake microplastics for food. In my essay, I will discuss animals eating microplastics, microplastics are overwhelming the ocean, and a solution for this plastic-eating bacteria. Animals are eating microplastics. Microplastics are overwhelming the ocean. A solution to this issue is microplastic eating bacteria. In conclusion, I don’t like microplastics because the turtles are getting hurt. Ocean species are getting harmed because of microplastics. The solution to get rid of microplastics is to keep the microplastic eating bacteria. With this solution we can

reduce the amount of plastic in the ocean. That is why we should get rid of microplastics.

Dakota M.

Do you know the impact microplastics have on the ecosystem? Microplastic particles are measure in less than 5 millimeters is a major concern for scientists and environmentalists worldwide. In my essay, I will discuss the problems microplastic cause on ecosystems, how microplastic get in the oceans, and how can we fix the problem of microplastic pollution in correlation with both passages

Foremost to solve the problem we need to know how microplastic gets in the water. The ways microplastic get in water is “breakdown of lager plastic debris, microbeads from personal care products and synthetic fibers from clothing”. The problem is so bad that the article states “to help understand the scale of this problem, imagine a garbage truck dumping a full load of plastic into the ocean every minute of every day.

Then we need to know how does microplastic affect ocean life as a whole. ocean life is exposed by two main ways “First, marine animals directly consume microplastics by mistaking them for food. Second, predators indirectly ingest these particles when they eat prey that has already consumed microplastic”. The article states that “The concerning aspect is not just that animals are consuming these particles, but that microplastic act like magnets for toxic in the water, concentrating harmful substances and introducing them in the food chain.” research also, showed that”100% of marine turtle,66% of marine mammal species and 50% of sea birds” all have microplastic inside of them

Finally, we need to know how to fix the problem of microplastics in our oceans. There are many ways to solve the problem of microplastics, but the most efficient way is to keep the microplastics out of the ocean. There are many ways we can do this. For example, is to stop the microplastics from entering the waterways by improving the wastewater treatment we can also create biodegradable plastics and alternatives to synthetic materials but, scientist also found a species of bacteria that can eat plastic. The bacteria are so affect the bacteria can clean the plastic up in weeks compared to the 100 years that it takes the plastic to naturally degradation

In conclusion, to solve the problem of microplastics we as a community need to step. By focusing on stopping the problem with advanced technology, biodegradable, alternatives to synthetic material and bacteria eating plastic.

Mattie A.

Microplastic is all in the ocean and is affecting the ecosystem. In my essay i will discuss how microplastic affects the food chain, how to solve the issue and how plastic eating bacteria will help with microplastic all in the ocean. Lots of fish and predators are eating microplastic. Some examples of microplastic being in the ocean includes breakdown of larger plastic, synthetic fibers from clothes, and microbeads from personal care products.

Microplastic is all in the ocean and causes lots of fish to eat plastic. Multiple examples of fish that eat plastic are zooplankton, crabs, and larger predators. Researchers have found about 100% of microplastic in turtles, 66% in marine mammals, and 50% in seabirds.

Scientists have calculated about 14 million tons of microplastic is on the ocean floor currently. About 12.5 to 14 million tons enter the ocean floor each year.

But how can we solve the issue? We can cut back on using plastic like plastic bottles. We can also attempt to help clean the ocean. We can also try to reuse the plastic such as remaking water bottles with old plastic. We can also recycle plastic instead of throwing it away.

In addition to, microplastic bacteria can help clean the ocean by eating the plastic. Without this plastic it would take hundreds of years for natural degradation to break it down. Within 6 months of using the plastic eating bacteria it cleaned the ocean 40% more. However, we don't know if this plastic can harm the animals in the ocean.

In conclusion, microplastic affects the food chain, how to solve the issue, and the plastic eating bacteria. Lots of fish eat microplastic and lots of predators eat fish that eat microplastic. There's microplastic all over the ocean floor and all on the planet. The bacteria can eat the plastic and can clean the ocean. How will you help with microplastic in the ocean?

James G-F.

The mess in the ocean

Marine ecosystems have been severely affected by one of the most serious but tiniest threats, they are currently known as microplastics. Microplastics are one of the tiniest threats but don't let their size fool you, they can crumble marine life all around us as we know it. Microplastics can come from any products that use plastic, some examples of these are hair products and fibers from clothing. As microplastics continue to pollute the

ocean we can all learn how to prevent microplastics from entering the ocean and potentially ending microplastics forever. In this essay we'll discuss how microplastics affect ecosystems, how more microplastics appear in the ocean every day, and what is the most effective way to prevent microplastics from appearing again.

How do microplastics affect food chains around the world? Article A clearly states, “marine animals directly consume microplastics by mistaking them for food. Second, predators indirectly ingest these particles when they eat prey that has already consumed microplastics”. This affects the ecosystem because even if prey eat microplastics, predators could accidentally consume microplastics and get sick, which could affect us if we eat them. If we continue to dump microplastics the effects of being sick will eventually catch up to us too.

Microplastics are continuously being dumped into the ocean everyday affecting multiple ecosystems and us too. The effect of dumping microplastics everyday into multiple lakes, oceans, and rivers will severely affect multiple ecosystems and habitats. According to article A “an additional 14 million tons enter the ocean every year”. The habit of using plastic products every day will never stop affecting marine life and creatures if we don't stop using plastic products. Additionally adding more microplastics into the ocean will continue affecting marine life if not affecting them more.

There are multiple ways to try to prevent marine life from getting sick or dying from microplastics. Scientists have found multiple ways to try to prevent microplastics from affecting marine life. Article B states “One type of bacteria called *Ideonella sakaiensis* is especially good at breaking down a common plastic”. Article A also states, “engineers at the Environmental Solutions Laboratory have created new filtration systems capable of removing extremely small particles”. If scientists continue to improve ways to prevent microplastics from entering oceans and we can stop using products that contain plastic,

we will eventually stop microplastics all together and marine life won't have to face the problem anymore.

In conclusion, we can solve the growing crisis that marine life faces if we all work together to stop the microplastic problem. By learning what effects microplastics have and how many microplastics are added we can eventually figure out how to permanently end the microplastic problem, helping marine life. Permanently ending microplastics will be difficult but the effects will be permanent if we can solve it.

Adi B.

Microplastic essay

In my essay I will talk about how microplastics are dangerous to our planet. Microplastics are a danger to our planet for various reasons, some being they heavily pollute our earth, harm our marine and land animals, as well as humans. The article states that microplastics pollute our land and sea, expressing that there's so much microplastic pollution that it's as if there's a garbage truck dumping waste into the sea every minute.

To add to my previous statements, microplastics are extremely harmful to our ecosystem, as expressed in the article by the NOAA, microplastics are causing mass pollution and damage to aquatic life, both first and secondhand. The article explains that Sealife may mistake plastics for food and consume them, or predators may ingest a smaller animal who has eaten plastics, harming the second animal as well.

The article has information supporting my beliefs, such as referring to it as an “environmental crisis” numerous times. The article has also expressed that they are working on possible solutions to this microplastic challenge, for example, they have discovered a plastic eating bacteria that may help remedy the pollution issue. Scientists have also created a new filtration system to aid the microplastic issue. The microplastic crisis can also be slowly solved by working

together as a community and finding ways to reduce microplastic use.

To conclude, reducing the effects of microplastic pollution can be achieved by working together as a community and finding environmentally friendly solutions instead of products with tons of plastics and products that are harmful to our aquatic life and our oceans as a whole.

Emporia C.

There are many threats in our world that we fail to talk about and one of the greatest threats is microplastic pollution. Microplastic pollution is very harmful to our environments and is making it's way into the diet of marine animals. In my essay, I will discuss microplastics threatening our marine ecosystems, having tons of microplastics in our oceans, and how scientists plan on solving this issue.

Microplastics are a huge threat to marine ecosystems. Marine animals consume large amounts of microplastics each day. Marine animals consume these microplastics which act as magnets for toxic chemicals which concentrate harmful substances and adds them to the food chain (Sarah Chen pg.2). Predators are unknowingly consuming these microplastics by eating prey that already consumed microplastics. Scientists have found microplastics in 50% of sea bird species, 66% of marine mammals, and 100% of turtles (passage a pg.3).

In addition, there are millions of tons of microplastics in our oceans. Scientists have calculated around 14 million tons of microplastics on the ocean floor (passage a pg.3). That amount of microplastic could equal up to approximately 20 junkyards. An additional 12.5 million tons enter our oceans each year and the bigger problem is they're not added in uniform so the microplastics are scattered everywhere (passage a pg.4). Ocean currents and gyres concentrate these particles into specific areas called "microplastic hotspots" and researchers have found that in these regions, the levels of microplastic could reach up to 27 times higher than the surrounding waters (passage a pg.4).

Fortunately, scientists are coming up with ways to solve these issues. Scientists have discovered a species of bacteria that can help with microplastic pollution by turning plastic into harmless natural materials (passage b pg.2). Scientists are also working with engineers to develop improved wastewater treatment systems (passage a pg.5). Additionally, they're considering biodegradable alternatives to the synthetic materials we use (passage a pg.5). Biotechnology companies are also developing materials that can maintain plastic's durability while remaining fully biodegradable in marine environments (passage a pg.6).

In conclusion, microplastics are very threatening to our marine animals. Although, with scientists and engineers working together to create improved wastewater treatment systems, we may have a possible solution alongside the biodegradable alternatives. By

continuing to work together to help our marine life we would be creating a better space for future generations. With the millions of tons of microplastics in our waters, our unity and compliance is needed desperately.

Will L.

In this ease I'm talking about why microplastic is bad for the ocean like make the fish sick or worse they die, and there bad for sea plants and it's bad for the sea food chain Microplastic because if a fish eats a fork or a plastic bag it could die and then if bigger

fish comes and eats that fish the bigger fish could choke on the bag and die. Or it could contaminate the water and make the fish sick, but not just fish there, it is also bad for plantes and if all the sea plants die it could cause extinction for all a lot of animals.

How do we solve the problem well can solve this problem if everyone goes out and picks up some trash and did some community service but also there are some scientist out trying to solve the problem already by developing new technologies to remove them from water sources exploring biodegradable alternatives to plastic and creating more effective recycling and waste management systems

and they have one type of bacteria called ideonella sakaienisis is especially good at breaking down a common plastic known as polyethylene terephthalate. P.E.T is the same type of plastic used in many water bottles and food containers. These bacteria can turn plastic into harmless natural materials within a week. Without the bacteria, plastic would take hundreds of years for natural degradation, to break.

Companies are now working to use these plastic-eating bacteria to clean up pollution ocean areas in their first test areas treated with the bacteria showed much less plastic pollution after six monts-40% less.

Jimmy L.

How are microplastics harmful to our ecosystem and how do we solve it?

Microplastics are affecting the food chain harshly. For example, if one fish eats the microplastics and dies, what will the predators eat? Firstly, the smaller fish directly eat the microplastics by mistaking them for food. Secondly, the predators indirectly consume these plastics when they eat prey that has already ingested the microplastics.

Microplastic pollution levels are insanely high. The article states that "approximately 14 million tons of microplastics currently lie on the ocean floor. That is equal to a garbage truck dumping a full load of plastic into the ocean every minute of every day." In addition to this widespread of microplastics, marine animal researchers have examined that 100% of marine turtle species, 66% of marine mammal species, and 50% of seabird species have been found with microplastics inside their systems.

Scientists are experimenting with various solutions to this worldwide catastrophe. The article says, "engineers at the Enviornmental Solutions Laboratory have created new filtration systems capable of removing extremely small particles-as tiny as one micrometer-from wastewater." Another solution is ideonella sakaiensis. This is a type of bacteria that can eat and break down plastics. The article states that "ideonella sakaiensis is especially good at breaking down a common plastic known as polyethylene terephthalate, is the same type of plastic is used in water bottles and food containers."

In conclusion, we have found multiple ways to fight against microplastic pollution. The article states that "While we can implement various cleanup strategies, the most efficient approach is to stop microplastics from entering our oceans in the first place." For example, "engineers at the Enviornmental Solutions Laboratory have created new filtration systems capable of removing extremely small particles-as tiny as one micrometer-from

wastewater.” In addition to this statement, scientists have tested the plastic-eating bacteria and have found that 40% less bacteria were found in those testing areas.

Raquel M.

I’ve always wondered what was going on underwater and how do we as people affect it. I’ve always known that the ocean was in danger, from coral reefs to oil spills and pollution. As a kid I always liked sea animals and was fascinated by the ocean and wanted to be around it, now that I know of the growing microplastic crisis I'm a bit wary of going into the ocean. In this essay, I will discuss how microplastics in our ocean ecosystem can be extremely damaging to the ocean food chain, how it can destroy the plants and habitats in the ocean and how we can solve the growing issues of microplastics.

How do microplastics actively affect the food chain? In “Marine Ecosystems:” (2). It talks about how the ocean food chain is being exposed to which goes across the food chain, that then can be transferred to humans that eat fish and other seafood. The primary consumers like crabs and smaller fish eat zooplankton and other small producers that have already ingested microplastics, and the larger fish that people eat ingest those smaller fish. It's not just eating microplastics that’s the problem, it can also cause health problems for those fish through contamination. Microplastics that have been transferred have toxic chemicals in them that are toxic to not only fish, but also us.

In addition, not only is consuming the chemicals harmful it kills and destroys the ocean habitats as well. In marine ecosystems they point out that “Environmental Scientist have calculated that approximately 14 million tons of microplastics currently lie on the ocean floor”. Microplastics constantly in the ocean habitats, things like coral reefs can die out and can stop certain plants from growing and provide food and shelter for the many fish who use it to survive and eat.

To solve the ongoing issue of microplastics, I believe that the bacteria “Ideonella” is the best choice to reduce microplastics in the ocean. Ideonella is a type of bacteria that works relatively quickly to break down plastics, with Ideonella small plastics can be turned into natural resources for the ocean. In “Bacteria Vs. Plastics” (2). Ideonella is especially good at breaking down common plastic known as P.E.T. P.E.T is in most of the things that we use daily like plastic water bottles, containers, and packaging. With ideonella it helps break down the tons of microplastics in the ocean.

In conclusion, the idea of removing the mass amounts of microplastics from the ocean is still something we together must work towards. By recognizing the mass microplastics, discussing how they are so damaging to our ocean habitats, and actively trying to stop and find ways to stop the negative effects of microplastics in the ocean we today can secure the future of our beautiful ocean ecosystem. Products of mass microplastic pollution are damaging ocean food chains and destroying habitats. If people worldwide put in some effort to help our ocean, we could be a little closer to battling the microplastic in the ocean.

Sherisse A.

Microplastic pollution is a very huge threat in our ocw5ean today, it is affecting our nature’s food chain, when predators consume prey, they are consuming the microplastic that the prey consumed. It’s affecting me because it could be in my water, food etc. In my essay, I will discuss how microplastics affect our ocean, microplastics covering our ocean, and how scientists are finding ways to clean our ocean.

The impact of microplastics on marine life has gotten worse over the past years, it has reached alarming levels, approximately 14 million tons of microplastics currently cover the ocean floor. “An additional 12.5 to 14 million tons are dumped into the ocean each year.” “Research teams have discovered in some areas (microplastic hotspots) microplastic levels can be up to 27 times higher than surrounding waters.”

Microplastics are also affecting our food chain day by day. When fish consume microplastics, (mind you they are not seen) and when predators consume prey, they are also eating the microplastics that come with it. It’s concerning because they are not just consuming plastics, they act as “magnets for toxic chemicals in the water, concentrating and breaking down harmful substances, and introducing them into the food chain.”

Lucky, scientists have found a way to clear up our oceans, by preventing “microplastics from entering waterways through improved wastewater treatments.” They have also found plastic-eating bacteria called “ide - Onella sakei -ensis” After six months of using this

plastic-eating bacteria, “areas treated with these bacteria have showed much less plastic about 40%.”

In conclusion, fixing microplastic pollution will take a lot of effort. By finding plastic-eating bacteria, organizing cleanup crews, and recycling, these efforts will put in place what the future looks like. Fixing microplastic pollution will take time, but with good efforts it will make a change.

Sephira M-M.

Microplastic are harmful to our planet

Did you know the impact of microplastics on marine life is particularly devastating because these particles affect animals in multiple ways. Microplastics harm the mammals in the ocean by the mammals ingesting the microplastics and make marine ecosystems face numerous threats. In this essay I will discuss how microplastics make the animals in the ocean die way faster than they normally would. Also, microplastics harm the food chain, scientists are trying to prevent microplastics from entering waterways. There are some bacteria that eat stuff that can help the ocean.

Microplastics affect the food chain. Let's say one fish eats microplastics and then another eats the fish that ate the microplastics. Now that fish have microplastics then more fish eat the fish so now almost all the fish have microplastics in their system. Basically, the distribution of microplastics in the ocean is not uniform which created additional challenges for marine ecosystems. That does not help the ecosystem.

There is a way to prevent microplastics. The way is preventing microplastics from entering waterways. One way to stop microplastics is to improve wastewater treatment systems.

Another strategy involves creating biodegradable alternatives to synthetic materials. Dr. Michael Torres said, “While we can implement various cleanup strategies, the most efficient approach is to stop microplastics from entering our oceans in the first place.”

Scientists have found something suprising in the fight against plastic pollution: bateria that can eat plastic. While researching waste facilites, scientists noticed that certain bateria lived off plastic waste. This gave them a new idea for cleaning up the tiny pieces of plastic polluting our oceans. There is one type of bateria called Ideonella sakaiensis. This bacteria is really good at breaking down a common plastic known as polyethylene terephthalate or is also P.E.T. It is the same type of plastic used in many water bottles and food containers.

Futhermore, microplastics harm our oceans and our animals in the ocean. The distribution of the microplastics in the ocean is not uniform, which does not help the mammals, it makes more challenges for the marine ecosystem. Which makes the bacteria help the oceans with the animals inside from eating microplastics.

McKayla M.

Ever wonder what plastic is doing to our oceans? Microplastic pollution is plastic that our marine animals are eating and are dying because of it. For example, a predator will eat prey and that prey has eaten that microplastic pollution, then that predator has died due to the microplastic. In this essay I will discuss microplastic pollution impacts our ecosystem, the extent of microplastic pollution in our oceans, and how scientists and engineers are developing various solutions.

First, I will discuss microplastic pollution impacts our ecosystem. The big fish will eat the smaller fish that have eaten that microplastic pollution. And sometime the bigger fish will eat the microplastic pollution directly. Dr. Sarah Chen lead researcher at Woods Hole, explains, “The concerning aspect is not

just that animals are consuming these particles, but that microplastics act like magnets for toxic chemicals in the water, concentrating harmful substances and introducing them into the food chain. (Paragraph A)”

Secondly, I will discuss the extent of microplastic pollution in our ocean. It's not just people on the beach throwing trash; there are some fishermen throwing fishing line and leaving it. Imagine a garbage truck dumping a full load of plastic into the ocean every minute of every day (Paragraph A).

Thirdly, I will discuss how scientists and engineers are developing various solutions. We are still developing solutions to microplastics, but one thing we could do to help it from further spreading in the ocean is put recycling bins by the beaches and have cleanup crews to clean up plastic from the beaches. Dr. Micheal Torres of the Marine Conservation Institute emphasizes prevention over cleanup stating, “While we can implement various cleanup strategies, the most efficient approach is to stop microplastics from entering our oceans in the first place. (Paragraph A)”

In conclusion, microplastics are harming our oceans and wildlife. We can focus on the impacts of microplastic pollution, the extent of microplastic pollution in our oceans, and how scientists and engineers are developing various solutions. So, in theory we could try to lower the chances of it getting into the ocean, but it's still harming the oceans today.

Cass S.

How are microplastics harmful to the ocean/ecosystems and how do we solve it?

In my essay I will discuss why animals are eating microplastics, how microplastics are overwhelming the ocean and how plastic eating bacteria can help the ocean

Animals can eat microplastics in two ways, the first way is that they mistake microplastics as food and directly digest it, the second way is when the animals eat another animal that had the microplastics in their system. For example, passage 2 (first marine animals directly consume microplastics by mistaking them as food, second predators indirectly ingest these particles when they eat prey that has already consumed the microplastics)

The microplastics are overwhelming the ocean and trash is polluting the ocean, passage 3 (environmental scientists have calculated that approximately 14 million tons of microplastics currently lie on the ocean floor)

The solution to this problem is plastic eating bacteria, the areas treated with the plastic eating bacteria show 40% less microplastics on the ocean floor in that area, passage b, 3 (companies are now working to use these plastic eating bacteria to clean up polluted ocean areas

In conclusion, addressing plastic pollution before something happens is better than noticing it afterward. By focusing on learning how to protect the environment and to learn how to help people with cleaning up the environment. Working together can create a better life for the ecosystem and us. The fight against microplastic pollution begins with one person helping and leading a group of people to create a better life for us and the ecosystem and make the world a better place

Makenzi S.

Imagine your drowning in a sea full of plastic material. People like us constantly litter and most of the plastic material we use ends up in the ocean. This can cause sea animals to eat the plastic resulting in death. Microplastic harm the ecosystem because sea animals eat it, the ocean is filled with it. And it doesn't break down easily resulting in it being hard to get rid of.

First, microplastic harms marine animals. Fish often mistake plastic for food. Then bigger fish or predators eat those fish that had the plastic inside of them resulting in death.

Microplastics act like magnets for toxic chemicals in the water. Chemicals poison the fish we eat, which can affect us causing viruses.

Second, the ocean is filled with plastic material. 14 million tons of microplastic live on the ocean floor. Lotion bottles, clothing fibers, water bottles, plates, straws are all types of plastics that live on the ocean floor. Additionally, 12.5 to 14 million tons enter the ocean each year. So, we as people need to do better at recycling plastic and not leaving it just anywhere.

Lastly, plastics do not break down easily. It takes hundreds of years for plastic to break down. Scientists are finding a bacterium that can break down plastic easier. In which scientists are creating bacteria that can break it down, instead of just finding one. So, creating bacteria will make it easier to get rid of microplastic.

In conclusion, we as people can inform others about microplastic and the damage it causes. And how we can fix it like using plastic less and finding other materials that we can use. And it'll impact the health of marine life, human life, and our oceans and rivers all around. And overall, we can just watch what we throw out and optionally use recycling bins and not just throw our trash in normal trash bins, or just on the ground. So basically, we can find other ways not to have our microplastics end up in the ocean.