



## POLLUTION NEEDS A SOLUTION

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### Materials Needed:

- A large tub filled with clean, drinkable water
- Common fertilizer
- Common cleaner
- Oil
- Plastic
- Rocks
- Paint (acrylic)
- Paint brushes
- Yellow food colouring in water
- Rocks
- Spray bottle with brown/black food colouring water (fossil fuels)
- Hot water (greenhouse effect)

**Step One:** Students will make their own rockfish with acrylic paint

**Step Two:** Create an 'aquarium' for the rockfish and use the teacher script below

### Teacher script:

We are going to make an aquarium for our rockfish. Everyone, please place your rockfish in the tub. This tub isn't any old aquarium, it is actually the world we live in. We need to keep our fish safe, but sometimes, we don't make the best decisions to ensure that our waters stay safe for us and the fish. First off, can we drink the water that is in the aquarium? (Yes - the teacher can take a sip if he/she is comfortable). This is a freshwater lake that we will be using for our aquarium, but is all water freshwater? (No - only 3% is freshwater).

So say, I am going to feed my lawn because I want nice green grass. Does anyone have an idea of what I might use to have nice green grass? Perhaps your parents have used it! (Fertilizer.) So this is a regular fertilizer that I can buy from the store to put on my lawn. How might this get into the oceans or lakes do you think? (Water cycle, runoff from the rain, properties close to the ocean... etc.) **Pour some fertilizer into the tub.**

Now, I've got to clean my car and house! When I clean, I might use a regular cleaner I can find like this to use from the store (show bottle). How might this get into the ocean/lakes (runoff, septic... etc.) **Pour cleaner into the tub.**

**Do you think I can drink the water now? Why not?** (No - chemicals.)

Now, this might not be something that I do, but lots of times, big ships can be on the ocean with lots of oil in it (like gasoline for our cars!) Sometimes, these ships have big spills that can leak into the ocean.

**Pour oil into the tub.**

We've talked about this before, but what is something else that might cause pollution in the ocean? (Plastic.) Yes, sometimes big ships that move garbage to different countries, beach garbage and garbage blowing in the wind can end up in the ocean.

**Put plastic bits into the tub.**

Now, this one is a bit gross so we all need to try not to be too silly. You can laugh but it is inappropriate to go too crazy. Does anyone know where the waste goes from our toilet? It can go into septic tanks underground or treatment facilities further away. Sometimes, there can be runoff into the ocean.

**Put yellow coloured water into the tub.**

**Do you think I can drink the water now? Why not? (No - very unsafe)**

Things don't always absorb into the ocean through the ground. When we use our cars, fossil fuels can get into the air (that's the clear or brown smoke you see coming from the back of vehicles). This can then get absorbed into the ocean.

**Spray black/brown water into the tub**

One thing that you might not think about, is that our world is getting warmer every year from something we called the greenhouse effect. This has to do with many of the things that we talked about with climate change. Why do you think this might cause a problem for our fish? (Some fish or other living things won't be able to survive in warmer water).

**Pour warm water into the tub**

**Do you think I can drink the water? Do you think if these were real fish that they would be happy in this water?**





## ACTIVITY FOLLOW-UP QUESTIONS

What are some causes of water pollution?

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What are some things you think that we can do to limit water pollution?

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Besides just drinking the water and the livelihood of marine life, how does water pollution also affect people?

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