

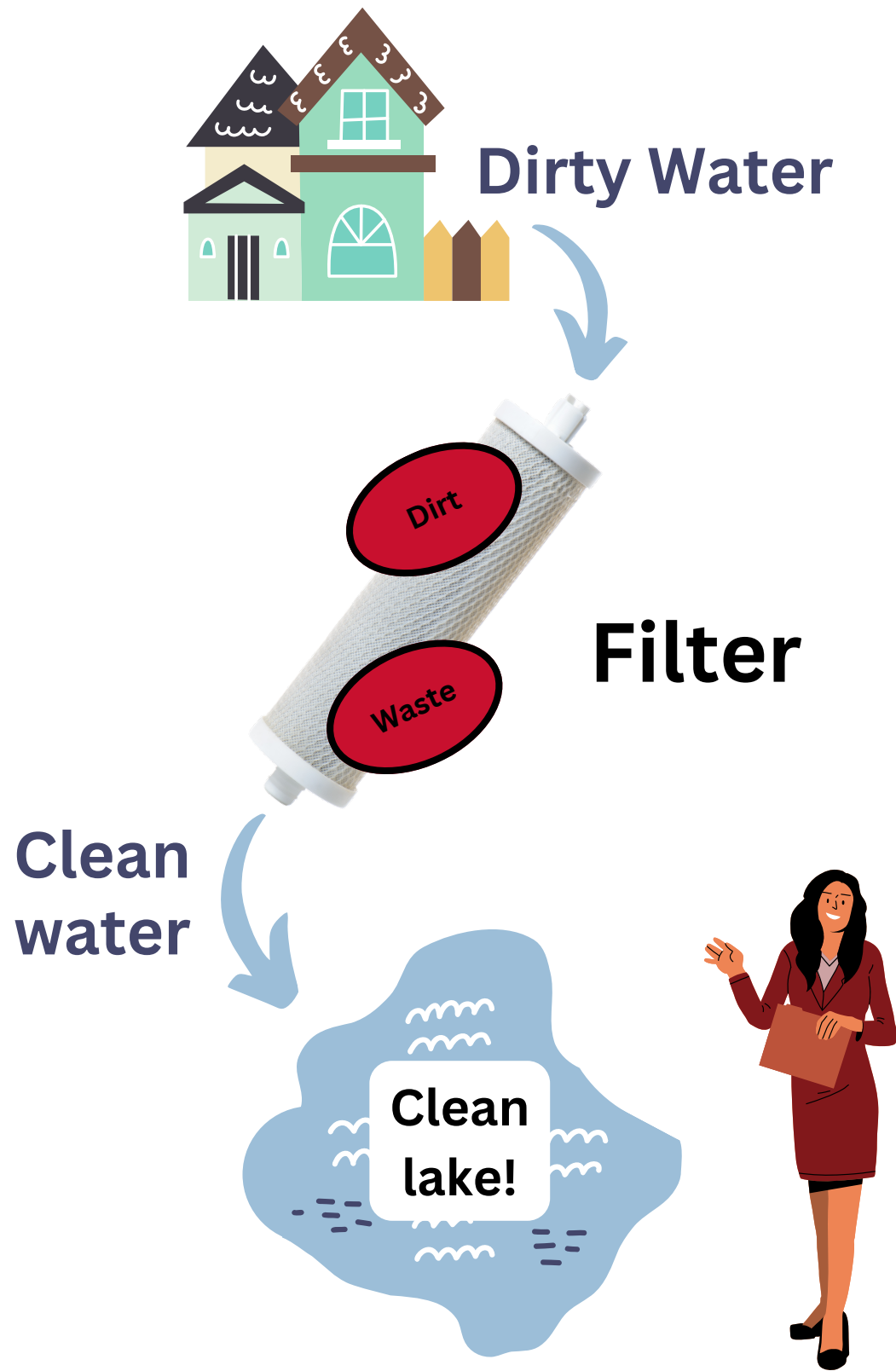
# LIVELY LAKE

**Cleaning Method:** Filter



**How It Works:** Water filters block bad things in water, like dirt or waste. When water reaches a filter, it fits through the small holes in the filter. Things that are too big to fit through the holes are left behind. One example of a filter is using layers of gravel and sand.

**Why It's Used:** Waterville uses a filter to clean the water from the city before it flows into the lake. Filters work well when you need to get rid of dirt and other things that float in water.



# PLAYFUL PARK

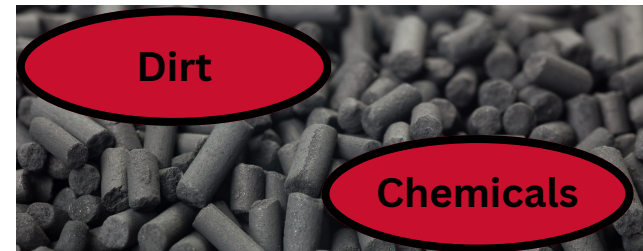
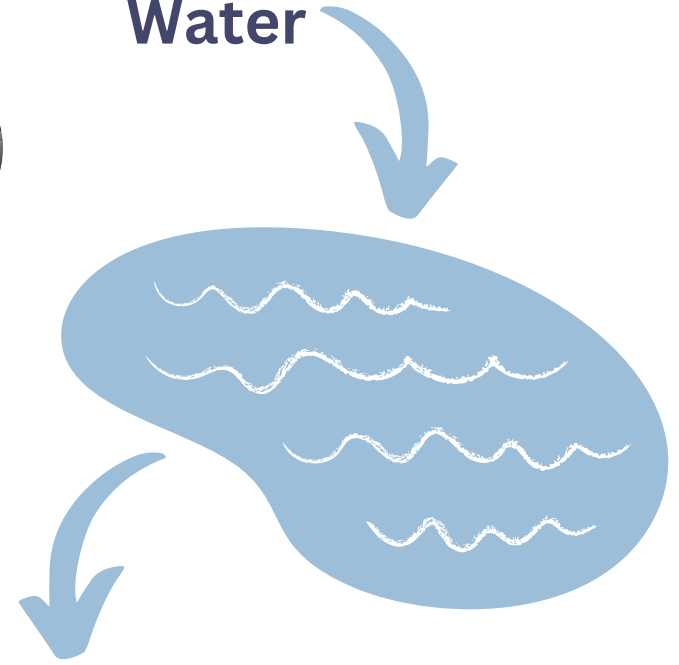
**Cleaning Method:** Activated Carbon

**How It Works:** **Activated carbon** is a useful tool to clean water. The surface of the little black pellets is covered in tiny holes, and these holes work almost like a sponge. As the water flows through the activated carbon, bad things in the water, like dirt or chemicals, get stuck to the surface, and clean water flows away!

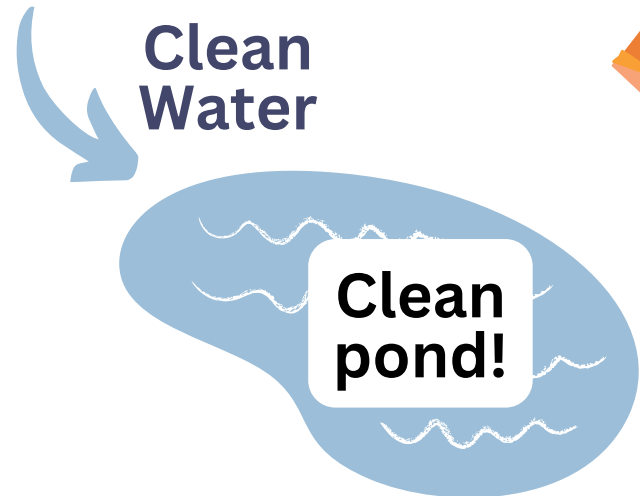
**Why It's Used:** Activated carbon is used to treat water in fish tanks, ponds, and other bodies of water. It's good at removing bad things from water, but it has to be replaced often. It works best in smaller ponds, like the one at Playful Park!



**Dirty Water**



**Clean Water**



# WATERVILLE LAB

**Cleaning Method:** Woodchip Bioreactor

**How It Works:** The Waterville Lab is studying **woodchip bioreactors**. This method puts a pit of woodchips at the end of a farmer's field. The woodchips are good at growing **bacteria**, or germs. These germs are helpful and can change nitrates from fertilizer into a harmless gas. When water flows off of a field, the bacteria grab the nitrates and turn them into gas. The clean water then flows out of the woodchips.

**Why It's Used:** The Waterville Lab thinks that woodchip bioreactors would work well at farms and other places with lots of nitrates. The bioreactors are good at removing nitrates, but aren't as good at removing other things.



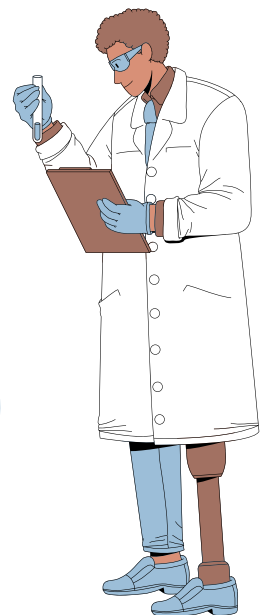
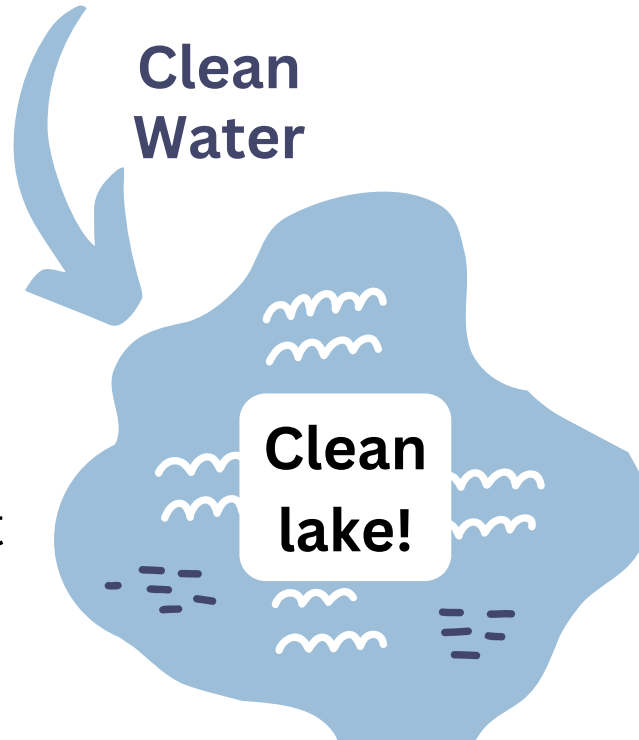
Gas



Dirty Water



Clean Water



# SECRET SPOT

**Cleaning Method:** Distance



**How It Works:** The Secret Spot is really far away from the rest of the town. Without people and buildings around, there is nothing to make the water dirty. Things like chemicals, oil for cars, garbage, or even human waste don't flow into this pond. This is why the Secret Spot has the cleanest water in Waterville.

**Why It's Used:** Sadly, we can't just pick up a lake and move it. Distance from pollution isn't something we can use, but it can help us think about what factors might cause unclean water!

