

WELCOME TO THE *Magic School of Water!*

Our students **Claude, Flo** and **Seddy** are learning to shine a light on the mysteries of how we transform murky water into clean, drinkable water through science and chemistry. Meet your fellow students:



CLAUDE THE COAGULATOR discovered that by adding special potions called coagulants, the tiny particles in the water group together into bigger blobs. Coagulants, like alum, contain ions that neutralize the charges of particles, allowing them to stick together. Claude's technique speeds up this process using the wonders of chemistry!



FLO THE FLOCCULATOR explored different ways of stirring and mixing until she found a technique that helps the blobs join into even bigger groups called flocs. Flo's gentle mixing brings particles together, forming flocs that can be the size of softballs! The flocs become heavy and start to sink.



Finally, **SEDDY THE SEDIMENTATOR** tested various tanks and developed a method that uses gravity to pull the heavy flocs to the bottom, leaving clear water above. Seddy provides a quiet tank for the flocs to settle in. As Seddy patiently waits, his special sedimentation tank allows the flocs to sink, revealing purified water!

With the help of Claude, Flo and Seddy, the Magic School of Water is able to turn even the muddiest of waters into clean, clear water through the power of coagulation, flocculation and sedimentation!

Claude, Flo and Seddy have discovered the wonders of coagulation, flocculation, and sedimentation - the first steps to purifying water. But there are more students and more mysteries at the School of Water magic for you to shine your lights on.

Be sure to check out **Finn the Filterer**, who uses screens and membranes to remove even tinier particles from the water. Then, make the acquaintance of **Dora the Disinfecter** who uses chemistry to remove germs and pathogens, ensuring the water is clean and safe for everyone to drink.

There is so much exciting magic in how we get clean water. Students, grab your flashlights and come discover all this and more at the Houston Water Works Festival! Talk to real-life water treatment specialists and see their special techniques in action. From coagulation to disinfection and beyond, there are so many friends to make and wonders to explore at the festival.

We hope all of you will continue your journey to learn about the incredible people who work in public health to provide everyone access to life's most precious resource—clean drinking water. There is a whole world of scientific discoveries to uncover behind each sparkling glass!

