

ME 200 Team Project 3

Wally the Water Droplet A Journey Through the Rankine Cycle

In a comic book of 13 pages, our third team project follows Wally, a small water droplet new to the Champaign-Urbana area, as he encounters the Abbott Power Plant for the first time. He goes through the Rankine Cycle, stopping to learn about each step along the way. Following his new friend Clausius, who has lots of experience going through the cycle, Wally learns what it takes to power the campus of the University of Illinois Urbana-Champaign.

Wally also learns of the dangers of pollution, as the Abbott power plant relies on unclean fossil fuels to generate power. However, he does manage to discover several ideas for sustainable sources of energy during his journey. In a scene inspired by our real-life experience touring the Abbott Power Plant, ME 200 students based on ourselves help introduce Wally to novel ideas for change. By learning about thermodynamics during his journey, Wally, and our readers, will be better equipped to rise to the challenges we face in engineering such as reducing waste and pollution.

Wally's adventures serve as a warning about the dangers of pollution and the many problems that arise through the use of unclean energy. However, they also demonstrate how we are capable of reducing and even eliminating carbon emissions in the future. Through the ideas discussed by the ME 200 students in the comic as well as the real-life proposals being undertaken today, the Abbott Power Plant and all others like it can become a shining example of clean, renewable energy for the future.

References

Pump drawing: <https://www.pumpsandsystems.com/power-plant-pump-types>

Turbine drawing: <https://fs.illinois.edu/abbott-power-plant>

Abbott Power Plant drawing: <https://fs.illinois.edu/abbott-power-plant>

Condenser drawing:

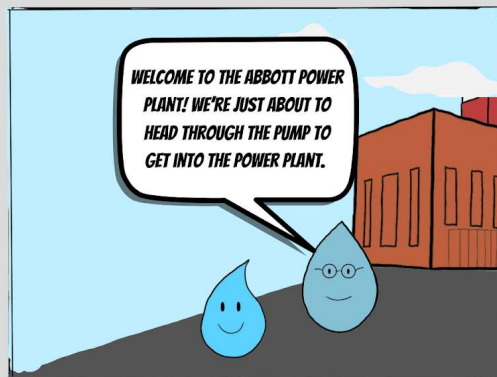
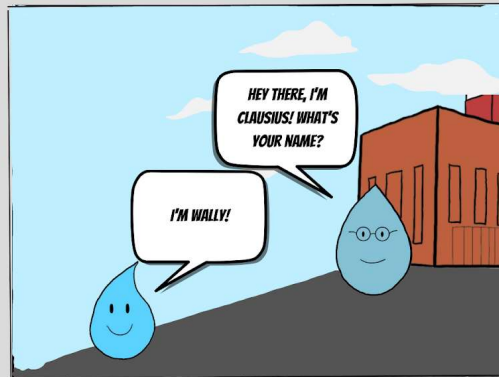
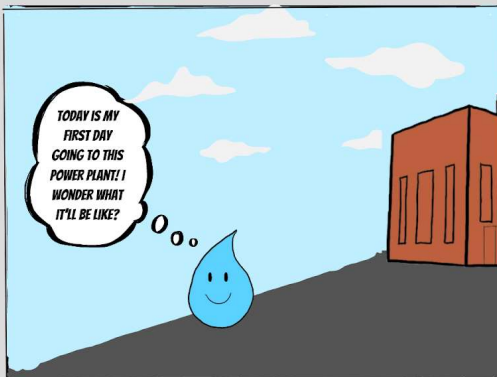
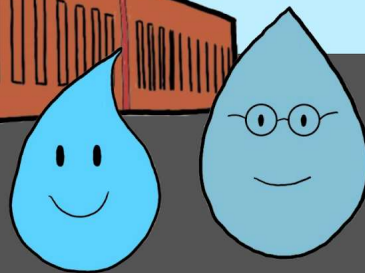
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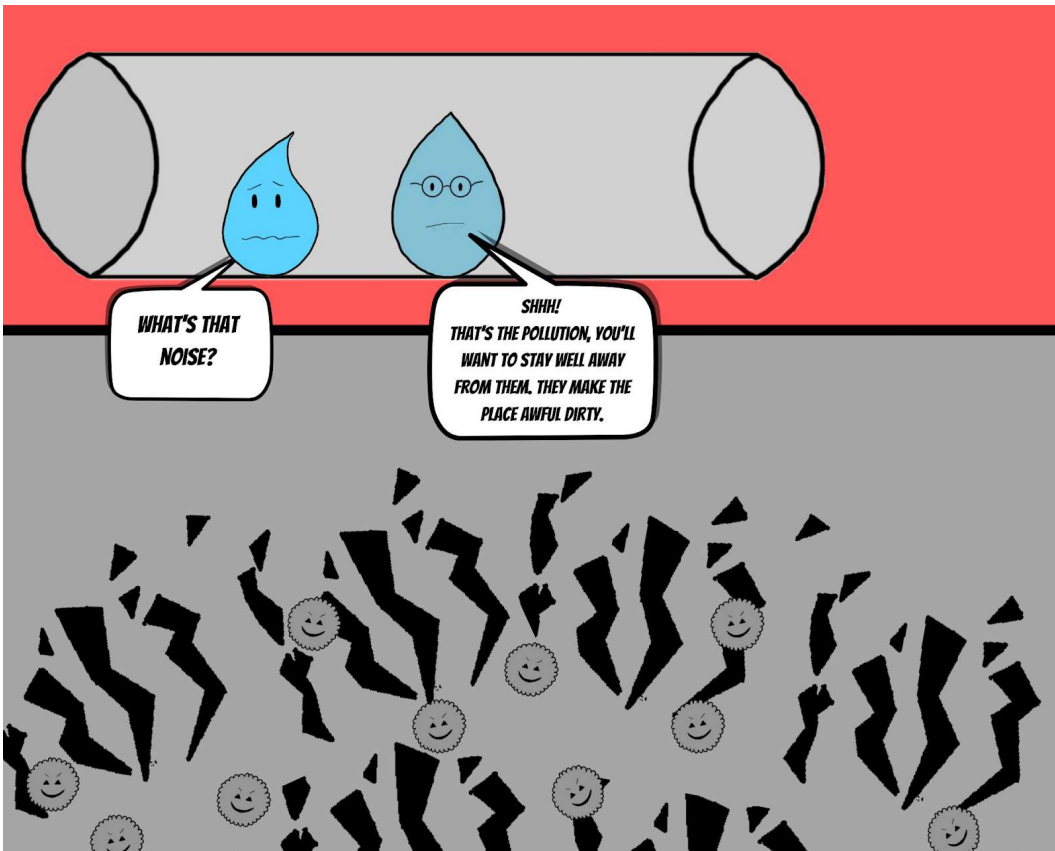
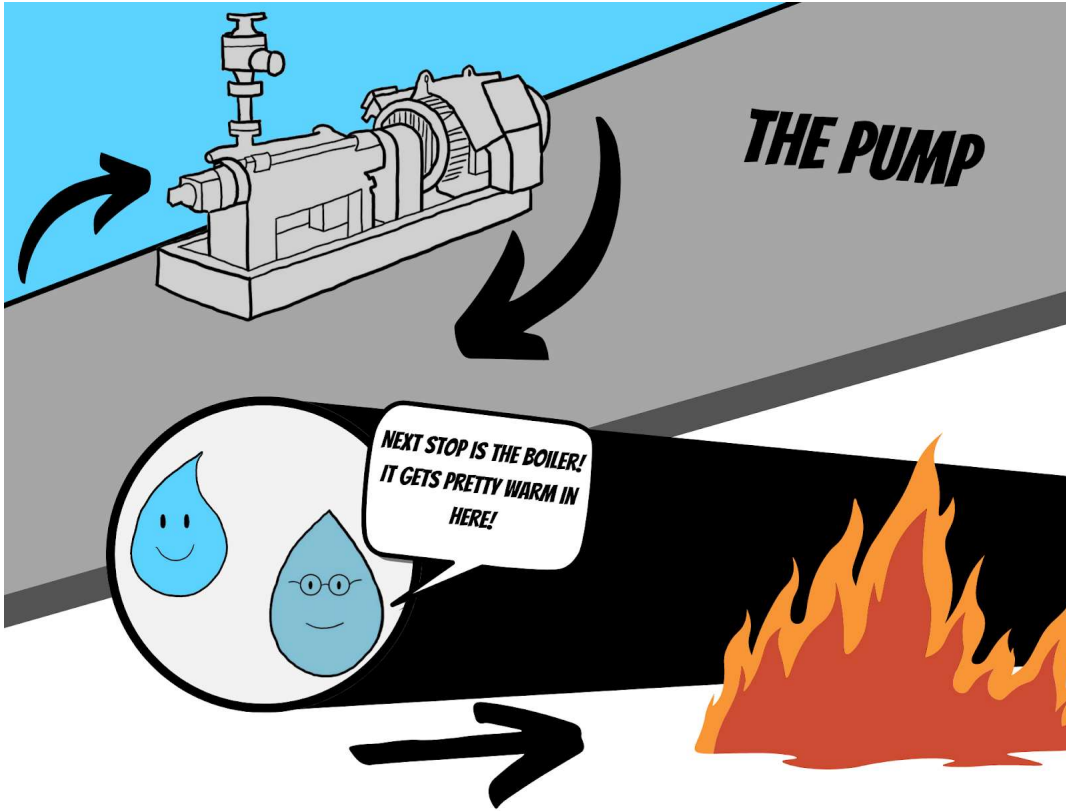
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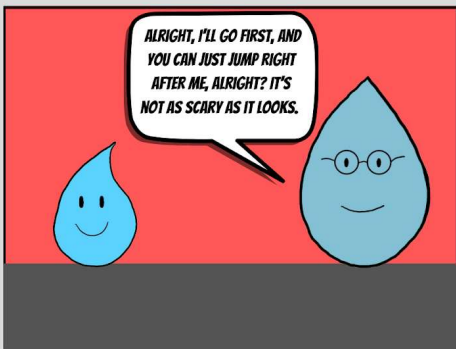
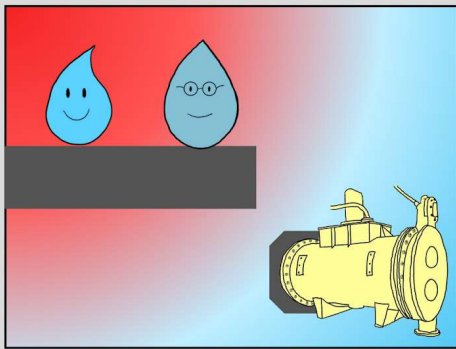
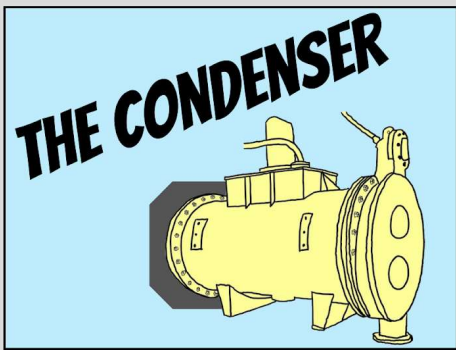
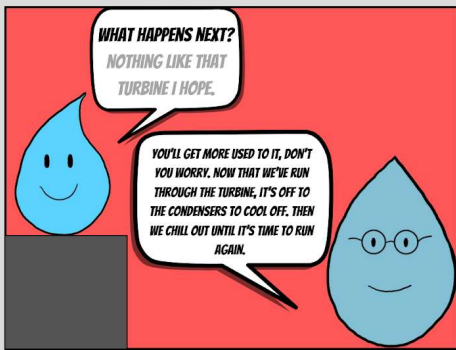
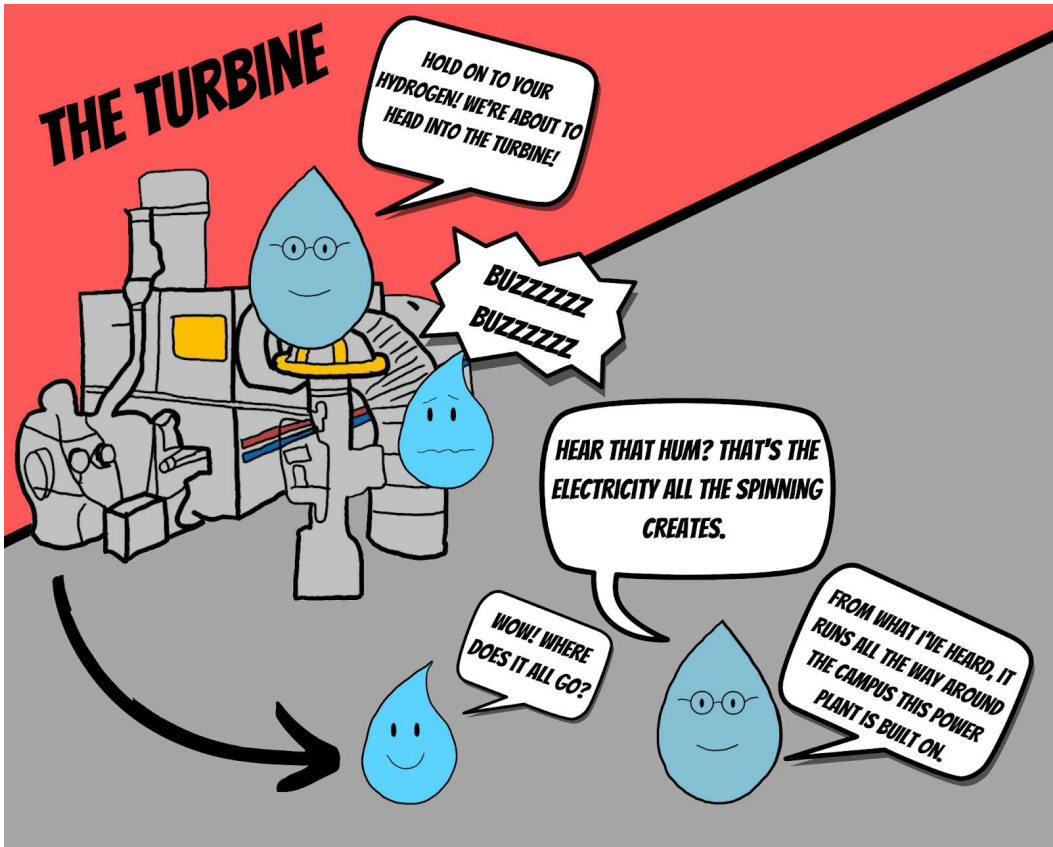
WALLY THE WATER DROPLET

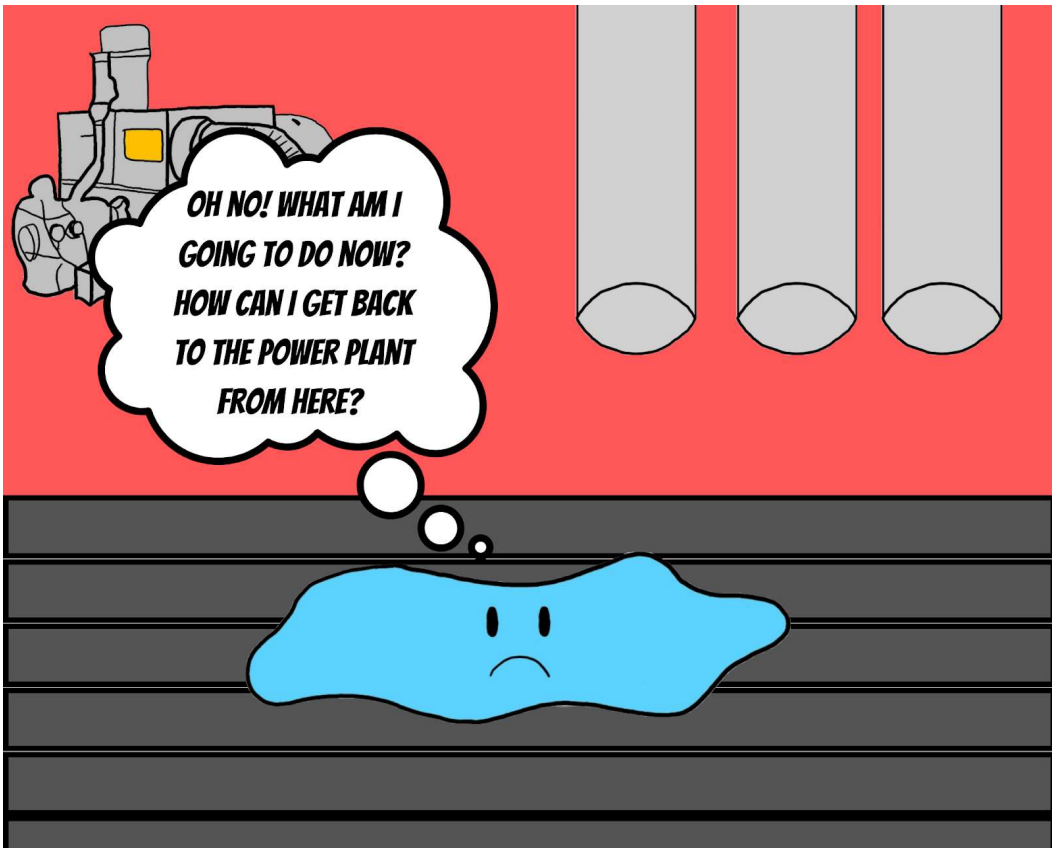
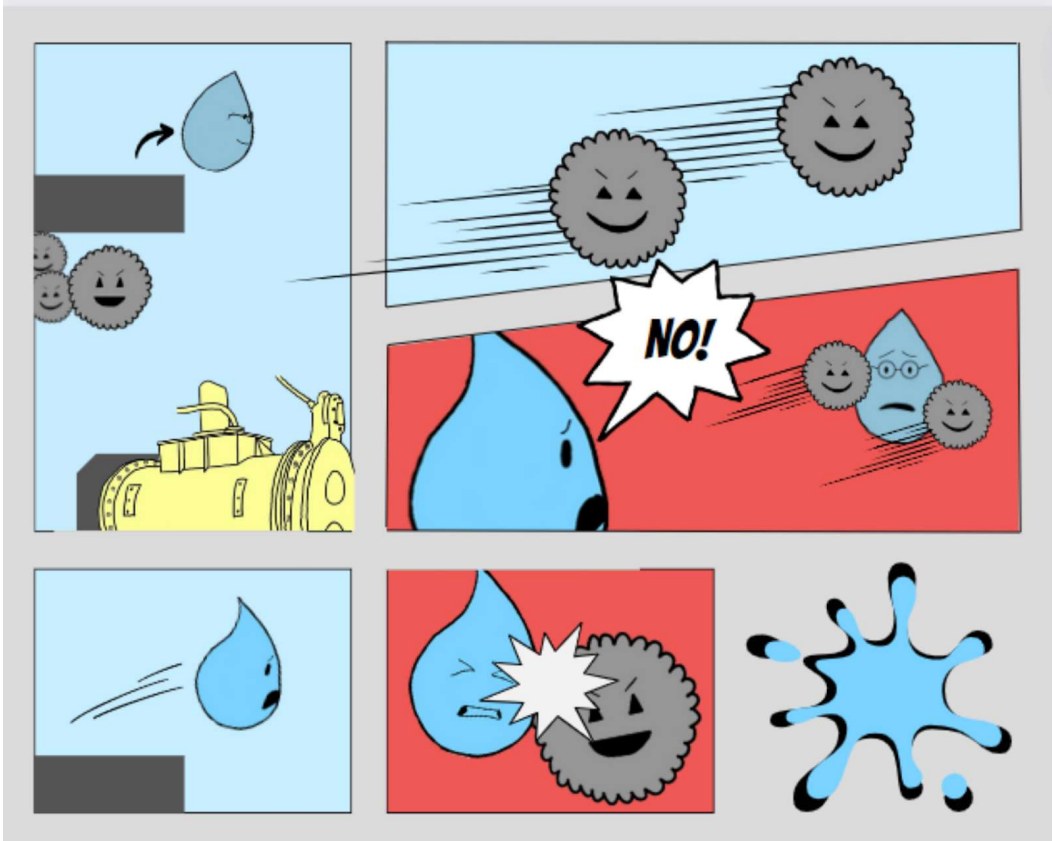
A JOURNEY THROUGH THE RANKINE CYCLE

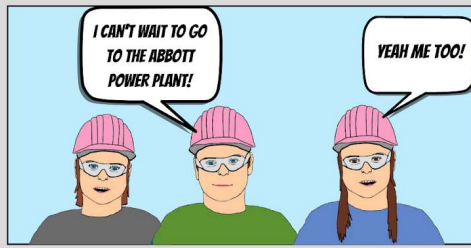
AN ADVENTURE BY
CONOR KELLY
MADISON ROSENBERGER
HAYDEN SCHILLINGER



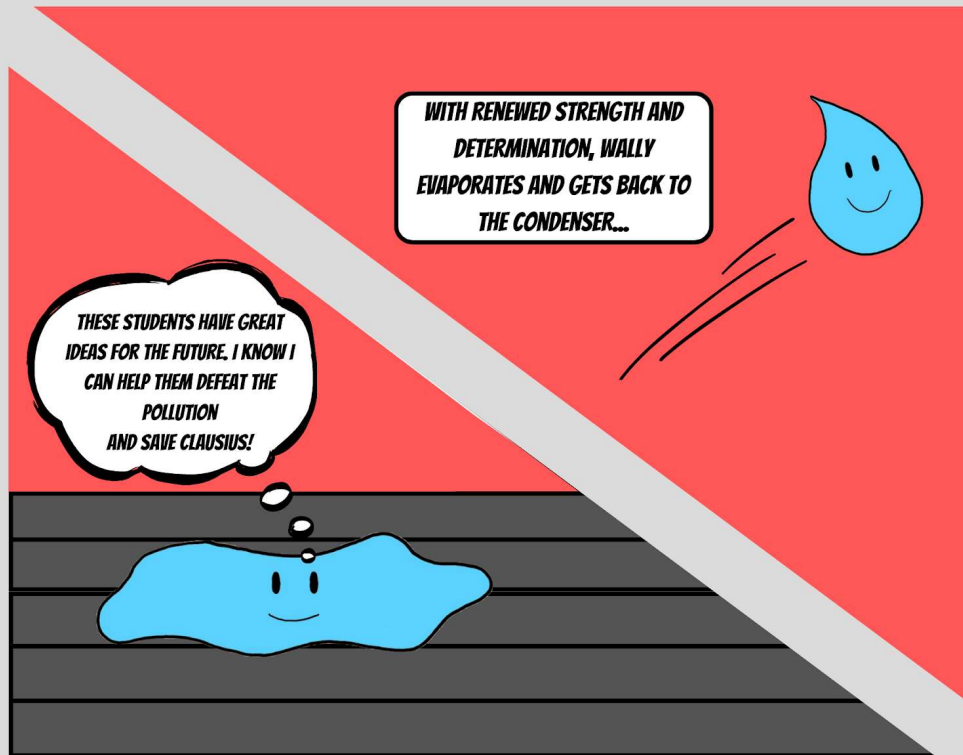
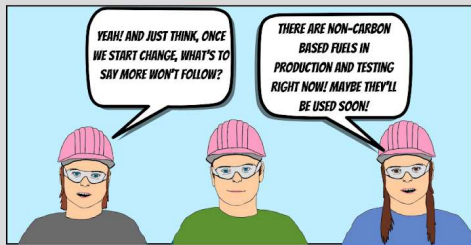
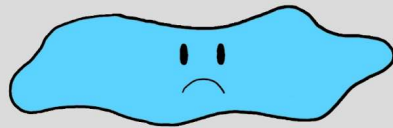


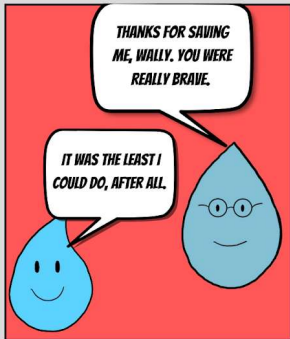
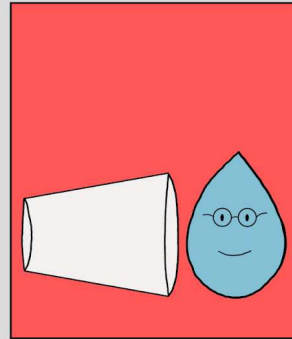
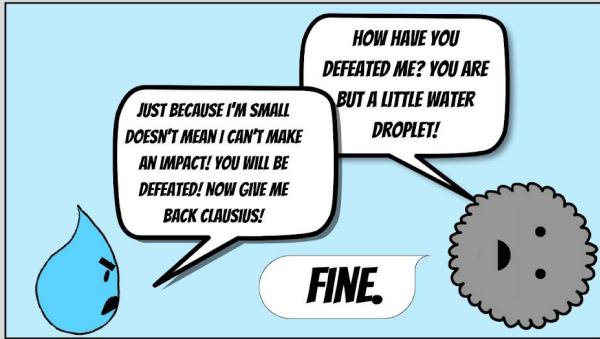
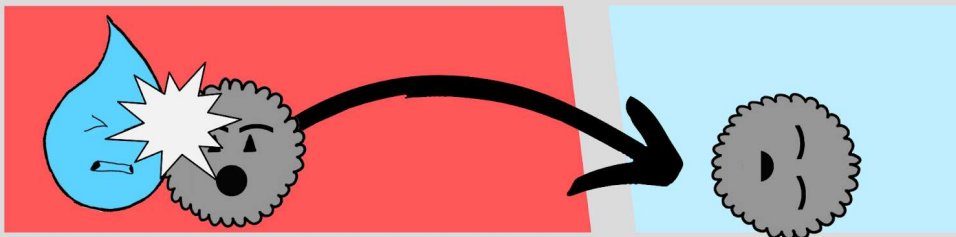
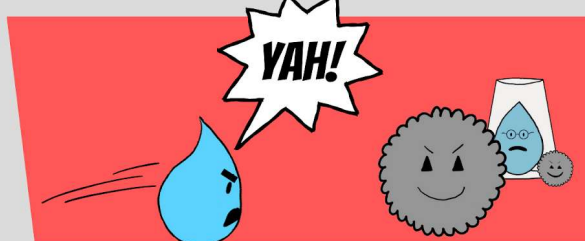
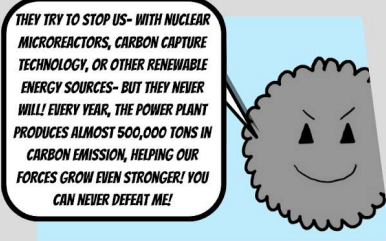
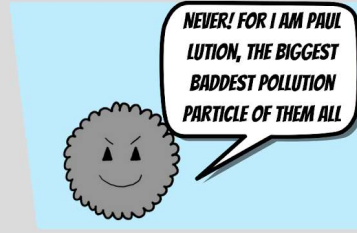
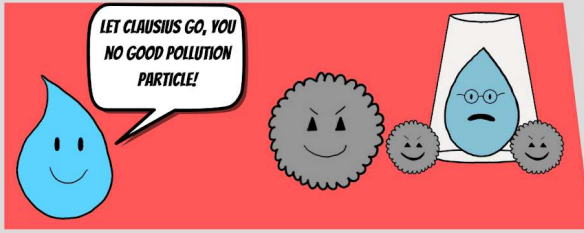


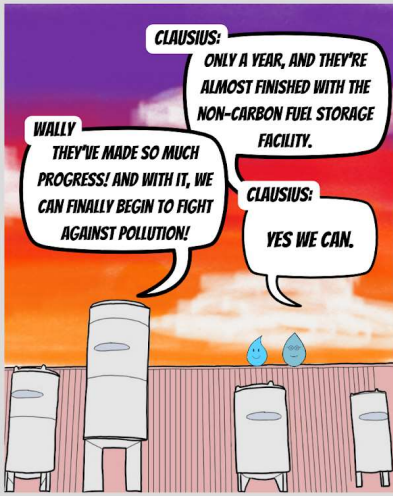




A GROUP OF ME 200 STUDENTS APPROACHES WALLY...







**1 YEAR
LATER**

