

Pollution Solution Machines

Prerequisite: This activity is designed to be a creative extension after students come to CURB for the “Water Clean Up” field trip. Alternatively, teachers can prep for this activity by providing a lesson on pollution types, causes, impacts, and the challenges with traditional clean-up methods.

Materials:

- Large chart/post-it paper
(Smaller paper or notebooks can suffice if students complete the activity independently)
- Drawing supplies (Markers recommended so other students can clearly see illustrations during a share-out)

Activity:

Begin with a brief recap or introduction on the type of pollutants found in the Hudson River. (Examples: oil, PCBs, household chemicals, sewage, sediment, microplastics, fertilizers and pesticides, Styrofoam).

Encourage students to imagine a scenario with no restrictions on costs and supplies needed for pollution clean-up. Divide students into teams of engineers and task them with designing a machine or process to help reduce one of the pollutants previously discussed. Once teams have agreed on what pollutant they want to tackle and spent a few minutes brainstorming ideas, pass out large sheet paper to each group and ask them to draw their pollution solution. Have students label or describe in a few words the key aspects of their machine and clean-up process that are depicted.

After design time is complete, students should share out with the class the name of their machine, what pollutant it is addressing, and how the machine will function.

Student Examples:

