



## Topic: Water Filtration

Optimal Age Groups: Intermediate & Senior

**Water is one of our most important resources.** Our cells need it to survive. In fact, around 60% of the human body is made up of water, and we can only survive a few days without it! But not all water is fit for drinking. In reality, only 1% of the world's water is acceptable and accessible for human consumption. So how can we make unfit water drinkable? One way is through filtration.

**But how do filters work to remove undesirable chemicals and biological contaminants from our drinking water?**

In this session, we will talk about different physical and chemical processes in the purification of water. We will also explore the difference between coagulation, flocculation, filtration, and disinfection. Topics of inquiry include: How do water treatment plants work? What types of filtration are used? What contaminants can filtration remove? Are there some contaminants that filtration can not remove? And more!

Students will then get to put their knowledge to the test by working in teams to build a functional water filter. Using everyday items, we will put your filter to the test by using it to clean some contaminated water. But there is a catch!

Each team will represent a different country, with varying amounts of resources and outside assistance. Which team's filter will produce the clearest water? Students will work together to plan, create, and test their prototype.