

# DEFEND YOUR DRAIN

## BACKGROUND

As the name suggests, microbeads are very small (microscopic) beads of plastic. Microbeads can vary in size between 0.1  $\mu\text{m}$  and 5 mm, depending on the product they are in. They are so small that they pass straight through many wastewater treatment processes and end up directly in the ocean. Scientists have found microplastics in places that you would never expect. From the inside of fish to arctic sea ice to human feces, plastic is everywhere and is wreaking havoc on both marine ecosystems and human health.

Some governments are banning products with microbeads, but in many places around the world microbeads are still found in many household products. These products range from personal hygiene products like toothpaste to household cleaning products.

## MATERIALS

- Mesh laundry bag (small)
- Filter paper (coffee filter)
- Sock
- Tights or stockings
- Body wash or facial cleanser with microbeads
- Water
- Filter funnel
- Rubber bands
- Drinking glass
- Spoon



SNACK-SIZED  
SCIENCE

# DEFEND YOUR DRAIN

## PROCEDURE

1. Today you will be using different filter materials to see how well they filter out microbeads. Make some initial observations on which filter materials (laundry bag, coffee filter, sock, tights/stockings) you think will be able to separate more microbeads throughout the experiment.
2. Add warm water to the body wash/facial cleanser, stir, and then let this sit while you set up the funnels and jars.
3. Cover a filter funnel with the laundry bag fabric on top. Secure with a rubber band. Place filter into a glass and carefully pour the mixture over the filter material.
4. Observe the filter and filtrate (the liquid that collected in the bottom of the beaker) for microbeads.
5. Repeat steps 1-3 for the remaining filter materials. Compare the results for each material to establish which is the best for removing the microbeads.

