

Oil Spill Demo

SUPPLIES

1. Hair and/or fur and or/fleece.
Can be collected from salons, groomers, and farms.
(3 shopping bags full)
2. Women's nylon stockings
(3 pairs)
3. 1 quart used motor oil OR 1 cup vegetable oil and 1/2 tsp dark non-toxic **oil based** paint.
4. Clear Tupperware container, about the size of a cat litter box, w/lid
5. Water - enough to fill Tupperware 1/2-3/4 full
6. Baby wipes
7. Rubber gloves (and surgical mask if using motor oil)
8. Plastic garbage bags
9. Scissors
10. Tray
11. Paper towels

Did you know?

You shampoo your hair because it gets greasy—the hair on your head naturally collects the oil produced by your scalp and pollution in the air. Hair is very efficient at collecting oil of all kinds, whether it is skin oils or the crude oil that winds up in our oceans and waterways. Hair and fur is adsorbent (meaning “clings to”) rather than absorbent (meaning “soaks up.”)

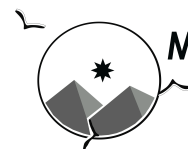
What's a Natural Fiber Boom?

Natural fiber booms are stockings filled with hair and/or fur. When packed tightly, booms are used to circle and contain a spill to protect fragile eco-systems. When packed loosely, they collect oil from the water. You can demonstrate this by pouring oil into a container of water and using a hair boom to remove the oil from the water or to push it from side to side.

We've provide two ways you can do this demo. For a more 'realistic' demo you can use used motor oil, however, we also have a classroom friendly option using vegetable oil and oil based paint.

Check out our how-to-make-fake-oil video on Matteroftrust.org

If you're using our fake oil recipe, please note, it requires you to use *oil* based paint. We found that water-based paint does not float to the top of water like oil based paint does. Rather it mixed together with the water making every thing dark and pigmented.



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Let's get started..

1. Cut the stockings at the top of the thigh so that you have 6 single legs. You want each hair stocking tube to be a bit shorter than the length of your Tupperware bin, but leave enough room so you can tie a knot at the top.
2. Take handfuls of hair and stuff 3 nylon legs loosely so that the oil and water can seep in and get to a lot of hair. It should be floppy. Stuff the other 2 nylon legs tightly so they look like straight hairy legs. They should be firm. You can use as many booms as you'd like for the demo, but save one floppy boom to help with cleanup.
3. Open 2 plastic garbage bags - 1 ready to dump the oily hair stockings. Make sure one is so close it is touching the Tupperware bin so you don't have oily drips when you are throwing away oily booms
4. Pour clear water into the clear Tupperware bin.
5. Put gloves (and mask if using motor oil) and bring out oil on a tray with paper towels. Pour in 1/2 a cup of the oil into the middle of the bin. This create a nice visual effect. Make sure all students can see the oil rise to the top.
6. Put in a loose hair boom on top and gently swish it around to show how it slurps up the oil.
7. Lift up the stocking and show how the oil clings to the hair but clear water sheets off back into the bin.
8. Place oily boom in plastic bag.
9. Repeat the experiment with the other floppy boom if you'd like.
10. Pour another cup of oil in the now clear water.
11. Using the tightly-packed boom this time, push the oil from side to side to show how this kind of boom acts as an oil barrier.
12. Place oily boom in plastic bag and repeat steps if desired.

2 weeks in advance

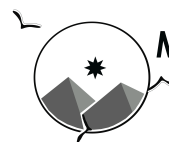
- Go to your local hair salon or pet groomer and ask for clean hair or fur clippings. You will need 1-2 shopping bags worth
- Collect old, washed nylons (ones with runs are ok, since you can double them up with another nylon leg). Stockings cannot have large holes.
- If you are using used motor oil, go to a local mechanic, Jiffy Lube, or oil changer to request 1 qt of use oil.
- Contact your local sanitation dept. to find out how to dispose of used motor oil and /or paint.

How to dispose of oily materials

- Dispose of the oily hair stockings into the garbage bag.
- Use the loose-hair boom you set aside to clean up any excess oil drips. And use the baby wipes for any corners you can't get to.
- Put rubber gloves and oily plastic motor oil bottles in the other garbage bag.
- Put lid on Tupperware full of water.
- Be sure to dispose of Water, oily hair, and other oiled garbage responsibly (including vegetable oil combines with paint). Do not throw it out with the regular trash or dump oil down the drain. Take it to your local garbage facility, or what ever your sanitation department recommends.

****Remember, drains always lead somewhere and 1 quart of oil can contaminate 1,000,000 gallons of drinking water***

****If you're having trouble stuffing the hair into the nylons, please see our video showing how to use a PVC pipe and wood on Matter of Trust .org***



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