



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

learn about oil spills, its impact on the environment, and how to remove oil from water.



Supplies Required:

Graphic organizer
Cotton balls
Container
Sponge
Vegetable oil
Plastic spoon

Plastic cup
Feathers
Leaves
Napkin
Q-tip

Video

Watch this video to learn about oil spills: <https://tinyurl.com/y58yz76r>

Overview

Oil spill is a form of pollution and happens when crude oil is released into the water or on land. A major cause of oil spills is from huge oil tankers or trucks accidentally spilling oil during transportation. Oil affects our marine life, the oil on fur or feathers prevents animals coats from repelling water or keeping warm against cold temperatures which can lead to death because of hypothermia. Engineers are working to figure out the best method to clean up oil spills without removing too much water or further damage to marine life.



Instructions

1. Simulate an oil spill by filling the container halfway with water, then pouring the oil into the container. Add feathers and leaves to represent the animals and plants affected by the spill.
2. **Problem** - What do we want to solve? With materials available, how can we remove the most oil from the water and clean the objects without removing too much water?
3. **Solution** - What are some ways to solve the problem? What materials will be the most effective? Make predictions and talk about your ideas.
4. **Model** - Observe how much oil is in the water at the start and what it looks like. Use the materials that you think will work the best. Try to remove as much oil from the water as you can and clean the materials inside.
5. **Test** - Observe how much oil is left in the water and what it looks like. How much water is left in the container?
6. **Reflect & Redesign** - Did you remove a lot of oil? Were you able to clean the materials in the water? Which materials worked best? Which did not work so well?

Additional Resources

1. Learn about how scientist are using bacteria to clean up oil spills: <https://tinyurl.com/wohr76d>
2. Can human hair be used to clean up oil spills? <https://tinyurl.com/y3m83poj>

Share It Out

Share on social media: Take a video of you testing out how to clean up oil spills and share it! Talk to a friend or family members about oil spills and the impact it has on our environment.

#OilCleanupChallenge
#ProjectExploration
#STEMatHome

For more activities like this one, go to www.projectexploration.org/stemhome. If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634

www.projectexploration.org