

LEARN ABOUT OIL SPILLS by Brigid Del Carmen

These days, lots of fourth graders have heard about disastrous oil spills that have occurred when large oil tankers spill their cargo into the ocean. We all know water and oil don't mix, but it's often difficult for students to grasp the difficulty of cleaning up an oil spill. Demonstrate what happens by first placing a few drops of oil in a bowl of water. Challenge your fourth-grader to clean up the oil and watch her light up with ideas. You'll be promoting problem-solving, critical thinking, and environmental awareness right on your kitchen counter!

WHAT YOU'LL NEED:

- two pans of water
- salad oil
- paper towel
- dish soap
- bird feather

WHAT YOU DO:

Begin by asking your fourth-grader what she thinks will happen if you add a few drops of oil to a pan of water. Will they mix or separate from each other? After she makes her prediction, have your child drop a teaspoon of oil into a pan of water. Ask her to observe and describe what happens. Note that oil separates and sits on top of the water, which is particularly dangerous for the majority of sea life which lives near the ocean's surface, especially birds.

Now fill up another pan of clean water. Take a bird feather and put it in the clean pan of water. Note how the feathers repel water, allowing it to float. Now dip the feather in the oil water. What happens to the feather? Put the feather back in the pan of fresh water and note what happens: it should sink to the bottom of the pan because the oily feather can no longer repel water. This is one of the ways oil spills affect marine wildlife. Encourage your child to brainstorm ways to get the oil out of the water. Have her try all of her ideas to determine if she has a solution. Offer her a paper towel to try to soak up the oil. What happens? (The oil breaks up and spreads through the water.)

Have your fourth grader pretend the water in the bowl is the ocean and the oil is from an oil tanker spill. Ask her how she would go about "cleaning up" the water. Have her try all of her ideas to determine if she has a solution. Next, test to see what happens when a few drops of dish soap are added to the oil and water. (The soap breaks it up at first, then just mixes it all together.)

Discuss how the oil and water experiment demonstrates what happens when there is an oil spill in the ocean. How are spills really cleaned up? Often, spills are cleaned with bacteria that break up the oil and kills the toxins.

