

# “In the Water”

## Module 14, Adventure 1

The logo for "EXPLORE IT" is enclosed in a black rectangular border. The word "EXPLORE" is in a bold, sans-serif font, with the letter "O" highlighted in green and the letter "R" highlighted in purple. The word "IT" is in a smaller, regular sans-serif font.

### Prompt:

Oil is used for many things, including fuel for cars and planes, making plastics and other materials, heating homes, and more. To use oil, it has to be processed and prepared for the different things we use it for.

Sometimes oil needs to be transported to new locations, which can be done in different ways, including in ships over water. During transport, there have been spills or leaks from the different ways we transport oil. Some spills are very small, while others are very large. Oil spills are dangerous for the people, animals, and plants that live in and near the water impacted by the spill.

Engineers and scientists have found ways to clean large oil spills and they are continuously trying to find new and better ways to clean oil spills. Of course, the goal is to not harm the environment by not spilling any oil in the first place. But when there is an oil spill, it's very important to be able to clean it up as quickly as possible. We challenge you to clean a mini-oil spill!

### Materials:

- Large bowl, pie pan, or small tin pan
- Vegetable or cooking oil
- Tablespoon
- Paper towels
- Cotton balls
- String or yarn
- Spoon
- Dish soap
- Cup, bowl, or plastic container for the oil
- Explorer Notebook or a piece of paper
- Pencil or pen

- *Optional: Eye dropper, cotton, or cheesecloth*
- *Optional: Food coloring to color the water*
- *Optional: Old plastic tablecloth, tray, or outdoor space*

## **Instructions:**

1. Talk with your grown-up to decide on a good place to do this adventure. You might want to do it on a plastic tablecloth, on a tray, or outside.
2. Fill your bowl or tin pan about halfway with water. There should be at least a few inches or centimeters of water in the pan.
  - a. Optional: Add 2-3 drops of food coloring to the water so it is easier to see the water and the oil.
3. Slowly pour 1 tablespoon of oil into the water.
4. Use the different materials to try to clean the oil from the water, removing as little water as possible. Put the oil into a cup, bowl, or recycled plastic container. Keep track of what materials you use and how they work in your Explorer Notebook or on a piece of paper.
  - a. We recommend trying the other cleaning materials before trying soap.
5. Once you are done, have a grown-up help you dispose of the oil. It should go in the trash, not in a sink. Clean up the rest of the materials and let them dry.
6. Engineers and scientists are still researching and trying out new ways to clean up oil. They have found some of the methods they use are not good for the environment. New ideas and technologies are being worked on around the world. They are also working to find ways we can use other materials besides oil. Maybe you will be able to help one day!

*For explorers using an Explorer Notebook:*

1. Keep track of what materials you use and how they work in your Explorer Notebook.

Check out the last page for a page design idea. You can use this or set up your page however you want!

## **Resources:**

1. People are looking for new and innovative ways to help clean up oil spills. Check out [this TED Ed video](#) to see how hair might be a helpful material.
2. Here is [another video](#) that looks at some ways oil spills are cleaned up and new technologies that are being worked on.

## Extensions:

The following are optional steps you can take if you want to extend this adventure:

1. Look at other materials you have available to use. What else might work to help clean up the oil?
2. Use a measuring cup to measure out the amount of water you start out with. Measure the water at the end of your clean up to see how much water is left. You want to leave as much water as possible, just like when the ocean is being cleaned.
3. Go to the “In the Water” topic on Flipgrid and share your clean up solution!

## Explorer Notebook

You can use this to help you set up your Explorer Notebook!

### Cleaning an Oil Spill Module 14, Adventure 1

Clean Up Notes:

Material	Notes (How does it clean? Does it clean well? Was it easy to use? Was it difficult or did it take a long time?)