



OIL SPILL LAB

NAME:

DATE:

Today we will be making simulated oil spills to see how we can use multiple methods to clean up the spills. We will also see how these spills, and cleanup methods can affect the environment.

Supplies:

- Containers to Put Water In (4)
- Oil (canola or vegetable)
- Measuring Spoons
- Collecting Cups – label with each method (skim, broom, absorb, dispersing)
- Popsicle Stick
- Water
- Cotton Balls/Pads
- Spoons
- Dish Soap
- Straws
- Baster/Syringe
- Cocoa Powder
- Feathers
- Felt

Procedure:

- 1st: Set Up Materials
- 2nd: Make Oil -Place 5 Tbsp of vegetable oil in mug then add 2 Tbsp of cocoa powder. Mix cocoa powder and oil thoroughly with a popsicle stick
- 3rd: Fill each of the 4 water containers with about $\frac{3}{4}$ with water
- 4th: Follow each clean up method.
- 5th: Answer all reflection questions.
- 6th: Clean Up!

Pre-lab Questions:

- What effects do oil spills have?
What method do you think will be best at cleaning up the spill?
Why do you think we are learning this?

Method 1: Skim

Use a spoon and as skim

SLOWLY pour the oil into the water to simulate a spill

Try to skim off the oil of the top of the water and place it in the “skim” cup

Reflection:

Method 2: Broom

Connect 3 straws to make a broken triangle

SLOWLY pour the oil into the water to simulate a spill

Move the broom from one end to the other, carrying the oil

Use a baster or syringe and suck up the oil, put all oil in the “broom” cup

Reflection:

Method 3: Absorber

Use cotton balls/pads as absorbers

SLOWLY pour the oil into the water to simulate a spill

Try to absorb all the oil off the water off the surface with the cotton balls/pads

Place all the dirty cotton balls/pads into “absorber” cup

Reflection:

Method 4: Dispersing

Use dish soap as dispersal agent

SLOWLY pour the oil into the water to simulate a spill

Pour 1Tbsp of dish soap and mix

Watch how the water forms into droplets

Try to skim off the oil of the top of the water and place it in the “dispersing” cup

Reflection:

Effects on Marine life:

With extra oil: Dip feathers or felt into the oil

Then fell how the oil effects the material and how this may effect marine life.

REFLECTION QUESTIONS

Which method of cleaning up the oil worked best? - The fastest?

Are there any other methods you can think of?

How does the dispersion method affect the environment?

Were there any differences in clean up from salt to freshwater?

What other factors can oil spills affect besides our environment?