

## Lab Sheet: Investigating Oil Spills

<b>Materials needed</b>	<ul style="list-style-type: none"><li>• an aluminum container</li><li>• a large rock that takes up about a quarter of your container</li><li>• a few feathers</li><li>• a plastic spoon</li><li>• a sponge, cotton balls/pads, or scraps of wool/cotton fabric. (You only need one of these materials, but if you have access to more than one, even better!)</li><li>• one to two drops of “grease-fighting” dish soap such as Dawn</li><li>• water</li><li>• a tablespoon of vegetable oil (if possible, colour it darker with food colouring)</li></ul>
<b>Hypothesis</b> – What do you think will happen?  Which oil spill cleanup method you think is going to be the most effective?	

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<b>Procedure</b>	<p>Your objective with this experiment is to keep the oil away from the land (the rock) and determine which method of oil spill cleanup is most effective at removing the majority of the oil from the water.</p> <ol style="list-style-type: none"><li>1. Place the rock to one side of your aluminum container and fill the container with water until it is approximately half full.</li><li>2. Add the oil to your container and observe what happens. Note the movement of the oil in the water.</li><li>3. Drop a feather into the container and observe what happens. Remove the feather after about 30 seconds. Record your observations of the feather.</li><li>4. Use your spoon and try to <b>skim</b> (not scoop) the oil off the surface of the water. Record your observations on how much oil you were able to remove with this method. chart.</li><li>5. Use the sponge/cotton/fabric to <b>absorb</b> the oil. Record your observations on how much oil you were able to remove with this method. If possible, use more than one of the absorbent materials.</li><li>6. Stir in 1-2 drops of the dish soap (this is a <b>dispersant</b>). Record your observations on how much oil you were able to remove with this method.</li></ol> <p><b>Optional:</b> If you have access to extra dish soap, try rubbing it into the feather that you removed from the oil and rinsing it under running water. Record your observations on how effective this was at removing any oil.</p>
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Observations	What happened when...	My Observations
*Remember observations can be recorded with pictures, numbers and/or words!	...you added the oil to the container?	
	...you dropped the feather into the container?	
	...you removed the feather after 30 seconds?	
	...you skimmed the oil with the plastic spoon?	
	...used the absorbent material on the oil?	
	...you added the dish soap (dispersant) to the oil and water?	

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<b>Observations</b>  *Remember observations can be recorded with pictures, numbers and/or words!	(Optional) ... you rubbed the dish soap onto the feather and then rinsed it?	
<b>Conclusions</b>		

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### Questions

1. How successful were you at keeping the oil away from the land?

2. Which method did you find most effective? Why?

3. Do you think it would be possible to remove all traces of the oil from the water? Why or why not?

4. Recall when the feather was taken out of the oil. Based on your observations, what connections can you make with the impact of oil spills on birds?