

# Lesson Plan Oil Spill, Prevention and Treatment



Lesson Plan Oil Spill, Prevention and Treatment  
Grade 7, Ecosystems  
2 x 30 min Lessons

## PLO's:

Grade 7, Ecosystems / Human activities impact on the environment  
Assess the requirements for sustaining healthy local ecosystems  
Determine the sources of pollutants, and analyse their effects

## Objectives:

To see how human activity can lead to damaging our environment.  
How we can solve these problems and what awareness is needed to prevent spills in the first place.

## Rationale:

Focusing on the impact on wildlife, and how difficult it is to clean up our mess, and restore the environment to its natural state.

This activity shows how hard it can be to clean an oil spill off of a single bird feather. The intention is to create a microcosm of a real oil spill. In a full lesson students will be given more information on the effects of an oil spill and how it can damage marine life.

Students will see how cleaning up the effects after an oil spill is not an easy fix. This lesson is very contextual to issues we see in the news more and more.

Students will realize the importance of the environment around us. Students will begin to look in depth at how the world around us works. They will look at conservation and human impacts, specifically with oil spills. This lesson is driven with scientific inquiry, students must ask questions and come up with solutions to helping the affected animals. It will be hands on and allow students to use all their senses in a multiple intelligence lesson (Kinesthetic: Cleaning the feather. Verbal: Listening to their team, Reading & Writing: While doing their lab reports).

## Materials:

1. Large, clear dish
2. Water
3. Vegetable Oil

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4. Cotton Balls
5. Dish Soap
7. Straws
8. Tissue Paper
9. Q-tips
10. Aluminum Foil
11. White Feather
12. Images of Oil Spills
13. Transparency of Oil Spill Comic

## Teaching Methods:

Discovery Method -Giving students the choice to decide how to clean up after the oil spill  
Inquiry-Based- Students will be using scientific method to produce a lab report on their findings.

We thought this would be a good method to use, because it enforces students to use their own judgement, and make logical ideas through trial and error based to what they already know. Students have to come up with their own conclusion, to solve the issue, and therefore engaged in active learning, enhancing their experimental and analytical skills.

## Introduction / Engagement (10min):

Show students [this](#) video or part of it to deeper understanding of the harm it does to the environment. Briefly discuss what dangers they saw it caused to the environment.  
(<http://www.youtube.com/watch?v=-OVNd6Fa9fg>)

Students will also look at provided photos of oil spills and the damage it creates.

Have the students discuss what an oil spill is and create a KWL (What you Know, What you want to learn and after the lesson)

## Body (20min):

1. Begin by explaining to the students a bit more about oil spills and the harm they can create, emphasizing on wildlife (birds) do not give them the answer to how they are cleaned up the feather, this will be part of the 5E teaching method during the experiment.
2. Have students form groups of 5 (for 5 groups) Tell students it's up to them to discover a way to fix or get rid of the oil that has spilled in the lake (dish) off of the bird feather they are to dip into the oily water.

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3. They must use proper scientific method when creating their report.
4. It is assumed that they already have knowledge in creating a report. Tell them to take their time and use one method at a time and report on how successful it was.
5. Students will have a variety of objects to use that could clean damaged feather, or they can even create their own. Systematically they will test each method.
6. It is required that students attempt more than 2 methods to clean the feather, this is so they involve more scientific method and have a chart on their lab report.
7. After they finish, have them clean up their stations, putting everything away.
8. As a quick conclusion ask for a few brief findings for a wrap-up. This may include one or two groups explaining one finding each.

## Conclusion (Into Part 2 of Lesson 30min):

Students present their finding next class. Ten minutes at the beginning of the class will be given to finish up the report. Each presentation will be 5-8 min. They must include each of their approaches, why they tried it, and what the outcome was (how long it took, or if it worked).

\*It is important to emphasize there are no wrong answers providing they tested their hypothesis and worked through each cleaning method with intention and through steps.

Secondly, as a class discuss why this would be an issue if it happened in the ocean, or other large body of water. How would it affect the rest of the ecosystem, including humans.

This project has a lot of emotional attachment, it is important to have a lesson prior to or after this lesson on why it is important to be aware of environmental issues and how to prevent them, i.e sustainable energy. "So shines a good deed in a weary world" -Shakespeare

## Assessment:

Assessment for this project will be mostly on observation during the groups presentation. Student's should already know about giving a proper oral presentation. Every group member should have a turn speaking about their findings.

## Criteria to address during presentation:

- Were the findings clear
- What struggles did they face and how did they solve these
- Was the project focused
- Did everyone participate